Contents

Welcome Message

On behalf of the Organizing Committee, we are very much honored and delighted to welcome you to the International Conference on Neutron Scattering 2017 (ICNS 2017) which is held at the Daejeon Convention Center, Daejeon, the Republic of Korea from July 9 to 13, 2017.

The ICNS 2017 is the largest international platform for sharing and exchanging the latest exciting advances in neutron scattering science, which brings together scientists from a wide range of disciplines including physics, biology, chemistry, materials science, engineering materials, earth science, and neutron sources and instrumentations.

The ICNS 2017 has received over 700 abstracts including distinguished invited papers from all over the world, which makes an excellent scientific program for ICNS 2017. The ICNS 2017 has also received supports from many sponsors and exhibitors, which greatly help to make the ICNS 2017 successful. We would like to take this opportunity to express our deepest appreciation for your participations and supports for the ICNS 2017.

Daejeon, the host city of the ICNS 2017, is known as the City of Science which has been a powerhouse of the most exciting scientific and technological advances in Korea over the last 30 years with more than 30 government and industrial research institutes which have state-of-art facilities such as HANARO Neutron Facility. Daejeon is also very close to ancient capital cities and only about 50 minutes away from Seoul, the capital city of Korea, by high-speed train. This will allow you to experience various Korean cultures as well as Korean science and technology.

Once again, we sincerely welcome you all and appreciate your participations and supports for ICNS 2017. We hope your attendance of the ICNS 2017 is enjoyable and memorable as well as scientifically fruitful.

Thank you very much.

Sincerely yours,

The Organizing Committee of ICNS 2017
co-Chair, In-Cheol Lim (Vice President of KAERI)
co-Chair, Sung-Min Choi (President of KNBUA)

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  - Korea Atomic Energy Research Institute (KAERI)
  - Korea Neutron Beam User Association (KNBUA)
- Supported by
  - The Korean Nuclear Society
  - The Korean Physics Society
  - Daejeon Metropolitan City
  - Korea Tourism Organization
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International Neutron Scattering Associations

Conference Information

Registration

Registration fee for the conference includes admission to all technical sessions, entrance to the Exhibition and Welcome Reception, Conference Dinner as well as a copy of the Conference Program.

** Hanaro Tour will only be available for those who have applied in advance.

Registration Hour

Date	July 9 (Sun.)	July 10 (Mon.)	July 11 (Tue.)	July 12 (Wed.)	July 13 (Thu.)
Time	15:00~18:00	08:00~17:00	08:00~18:00	08:00~18:00	08:00~18:00

Onsite Registration fee

Category	On-site Registration
Regular	USD 750
Student	USD 450
Retired	USD 450
Companion / Spouse	USD 250

Receipt of registration
You can find receipt on the back of your name tag. If you need paper receipt with Stamp, please visit Registration desk to get it.

Certificate of Attendance
If you need a certificated of attendance, please write your name and registration number at the registration desk. You will be able to pick up on the next day.

Access to Abstracts to the web
All the abstracts (Oral and Poster) can be accessible via mobile ICNS website at http://icns2017.org/m/. A PDF abstract book will be also available for download via ICNS2017 website after the conference at http://www.icns2017.org as well.

ICNS 2017 Special Issue in Physica B (Elsevier)

All prospective authors are invited to submit your research results to the journal "Physica B". Submitted manuscripts will be peer-reviewed and will be published in the ICNS 2017 Special Volume in 2018.

The scope of the special issue in Physica B comprises all themes presented in the ICNS 2017, including both experimental and theoretical work. However, format and artwork must meet the guideline. (Please find guideline from the ICNS 2017 Website) All manuscripts submitted to Physica B should be original, and the manuscript must be submitted via Physiaca B submission system, under Special Issue of ICNS 2017.

The deadline of the proceeding is Aug. 9, 2017.

Requirements & Notes

- Papers will be submitted to Physica B website as regular paper submission. You need to register to create your account, if necessary.
  Please select "ICNS 2017" at the submission page.
- One manuscript submission per presentation will be allowed.
- There is no page limit per paper. However maximum 5 pages per paper is highly recommended.
- No additional processing fee for authors.

Proceeding submission procedure

1. Access the Physica B homepage.
2. Create login information in Author Information.
3. Choose "submit paper" in the main menu.
4. In new submission, please select article type "SI: PHYSB – ICNS 2017.
5. Follow the necessary information provided by Journal Submission System.

The scope of Physica B comprises all condensed matter physics, including both experimental and theoretical work. Papers should contain a new experimental, calculated, or theoretical result of which the physics is properly discussed.

SpringerNature Best Poster Awards SPRINGER NATURE

During the Conference, the Selection Committee will select the best poster presented during the poster session. The judges evaluate the posters according to the following criteria:

- quality of the research in terms of theoretical and methodological aspects
- originality of the work presented
- Quality of poster presentation.

The winner of the Best Poster Award is announced during the closing ceremony. The presenter will be given a 100 € Boucher, kindly supported by Springer-Nature Company. An official certificate will also be awarded.

Transportation (From DCC to Incheon International Airport)

1. By Express Train (KTX)

[Time Table]

TRAIN TYPE	FROM	TO	DEP. TIME	ARR. TIME
KTX	Daejeon	Incheon Airport	05:55	08:00
KTX	Daejeon	Incheon Airport	05:55	08:00
KTX	Daejeon	Incheon Airport	06:47	08:45
KTX	Daejeon	Incheon Airport	08:49	10:45
KTX	Daejeon	Incheon Airport	08:49	10:45
KTX	Daejeon	Incheon Airport	09:48	11:42
KTX	Daejeon	Incheon Airport	13:38	15:40
KTX	Daejeon	Incheon Airport	15:53	17:47
KTX	Daejeon	Incheon Airport	18:07	19:58

- If you need to book a ticket in advance, please visit here: www.korail.com. Or, please ask our staff member to help you to book a ticket.
- From the venue to Daejeon station, we recommend taking taxi. It will cost about 10,000 KRW which is around 10 dollars.
- Please show the Korean message below to taxi driver. He/she will drive you to the Station.

대전역으로 가 주세요.
(Please take us to Daejeon Train Station)

- If you need to call a taxi, you can come to the registration desk for the service.

2. By Airport Limousine

[Time Table]

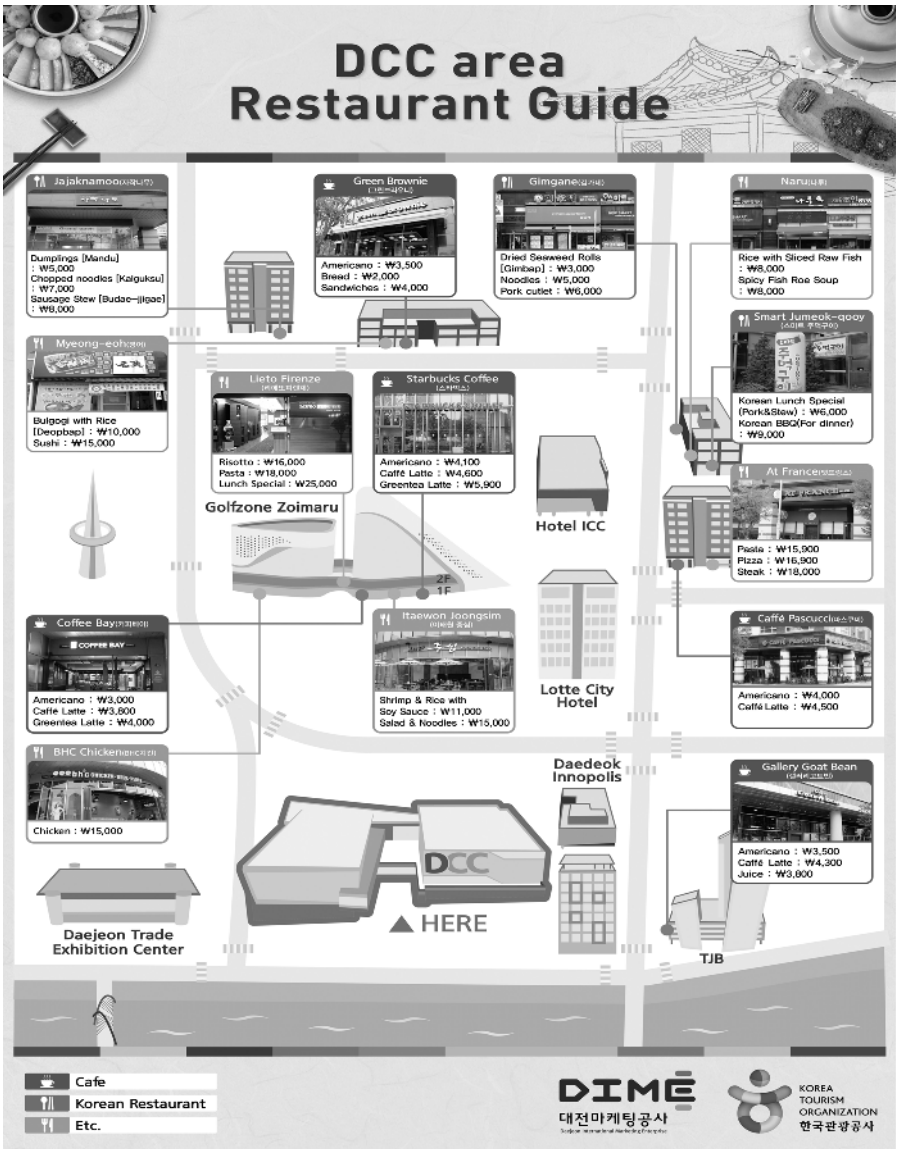
Departure Time from Daejeon Government Complex (Daejeonchengsa)					
3:29	4:45	6:55	9:45	13:15	15:55
3:34	4:55	7:05	10:25	13:35	16:05
3:39	5:05	7:15	10:45	13:45	16:15
3:44	5:15	7:35	11:15	14:05	16:45
3:49	5:25	7:55	11:35	14:15	17:15
3:54	5:35	8:15	11:55	14:25	17:45
4:15	5:45	8:35	12:15	14:35	18:15
4:20	5:55	8:45	12:35	14:55	18:35
4:25	6:15	8:55	12:45	15:15	18:55
4:35	6:35	9:25	12:55	15:35	19:25

- If you need to book a ticket in advance, please visit here: https://txbuse.t-money.co.kr/. Or, please ask our staff member to help you to book a ticket.
- From the venue to Daejeon Government Complex (Daejeonchengsa), we recommend taking taxi. It will cost about 5,000 KRW which is around 5 dollars.
- Please show the Korean message below to taxi driver. He/she will drive you to the Station.

대전청사로 가 주세요
(인천공항 가는 버스를 탑니다.)
(Please take us to Daejeon Government Complex Terminal)

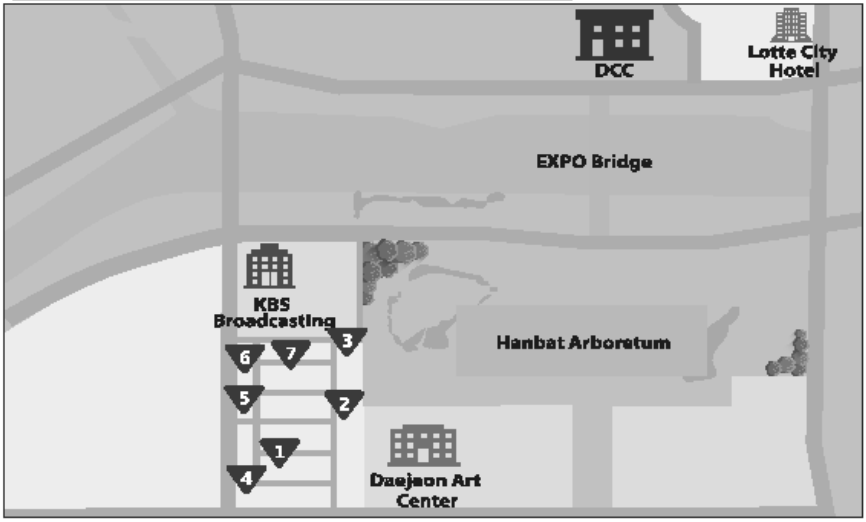
- If you need to call a taxi, you can come to the registration desk for the service.

Restaurants - DCC Area



Restaurants-Government Complex Area

Within 20 – 30 minutes by Walk and Bus



No.	Name	Type	QR Code	Tel.	Menu
1	Gulbin Dolsot bab	Korean Restaurant		82-42-488-3040	Bibimbap (bowl of warm white rice topped with namul and gochujang, soy sauce or doenjang)
2	Seorak Chick Naengmyun	Korean Restaurant		82-42-489-5252	Korean noodle dish (long and thin handmade noodles made from the flour and starch of various ingredients)
3	Teenyewon Hanjeongsik	Korean Restaurant		82-42-863-9781	Korean Set Meal (full-course Korean meal with an array of savory side dishes)
4	Gyeongbokgung (2F)	Korean Restaurant		82-42-488-5055	Korean Set Meal
	Sapporo (2F)	Japanese Restaurant		82-42-482-7766	Japanese Set Meal
	Sweet Beijing (1F)	Chinese Restaurant		82-42-489-1014	Chinese Food
5	Coulie Bread	Coffee and Bakery		82-42-483-4040	Coffees, Cakes, Sandwiches
6	SuRaMyeonOk	Korean Traditional Restaurant		82-42-484-1032	Korean Barbeque, Gal bi, Bulgogi
7	Pyeongyang Ok	Korean Restaurant		82-42-489-0720	Korean Health Food (Samgye-tang, Boiled Pork)

Accommodations

No.	Hotel	Distance from Venue
H1	Lotte City Hotel	3 min. on foot
H2	Hotel ICC	5 min. on foot
H3	Hotel Riviera	18 min. by car
H4	Yousung Hotel	18 min. by car
H5	Hotel Interciti	16 min. by car
B1	Toyoko Inn	10 min. by car
B2	Graytone Hotel	10 min. by car
B3	Good morning Resident Hue	15 min. by car

Social Programs

Welcome Reception

We are welcoming you all to the Welcome Reception on the day of beginning. Come and mingle with your old and new friends!

- Date and Time: Sunday, July 9 / 18:00
- Place: Crystal Ballroom (1F, Lotte City Hotel)

Conference Dinner

Dinner for you to discuss among your colleagues and coworkers. We will have a meal along with a performance called Nanta. Nanta is a South Korean non-verbal comedy show that incorporates traditional samul nori rhythm.

- Date and Time: Wednesday, July 12 / 19:00
- Place: Grand Ballroom (2F, DCC)

HANARO Reactor Tour at Korea Atomic Energy Research Institute

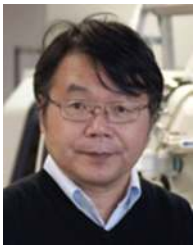
- Date and Time: Tuesday, July 10 / 16:00
- Place: HANARO Reactor, Guide Hall

* Tour participants should get on the designated bus which is written on your name tag.

On Tuesday afternoon, a tour of the HANARO Reactor will be conducted for pre-registrated participants. In 1995 KAERI launched HANARO, a 30 MW, multi-purpose research reactor with a world-class high neutron flux, and it has made every possible effort to safely and effectively operate it until now. KAERI is making considerable efforts to install new equipments as well as a facility refurbishment while strengthening efforts to provide the support activities to meet the ever growing needs of the HANARO users. Participants will tour the newly opened cold neutron Guide Hall.

Plenary Speakers

Plenary I



Hideo Hosono
Tokyo Institute of Technology, Japan

Title
Hydrogen-substituted Iron-Based Superconductors and Relevant Compounds

Session Chair: Je-Geun Park (Seoul Nat'l Univ., Korea)

Abstracts

Hydrogen is the simplest bipolar element on the periodic table. The valence state varies from +1 to -1, depending on the local environment. I think it was a kind of consensus that the charge state of hydrogen is +1, i.e., proton in oxide materials.In this talk I present the importance of H-ion in oxide materials by taking iron-based superconductors (IBSCs) which was first discovered in 2006 and 2008. The primary feature of IBSCs is a rich variety of materials and dominant glues of the pairing [2]. In this talk I review the advancements of heavily hydrogen-doped $REFeAsO_{1-x}H_x$ superconductors in which neutron scattering has played a critical role. The concrete subjects are ;

(1) Synthesis and characterization [3,4]
(2) Two-dome structure of Tc is common in 1111 [3]
(3) The phase transition and magnetic structure of the second parent phase with x=~0.5 [5,7,8]
(4) Is nominally oxygen-deficient REFeAsO1-x real? [4]

[1] Y. Kamihara et al. J. Am. Chem. Soc., 128, 10012 (2006); 130, 3296 (2008).
[2] H. Hosono and K. Koroki, Physica C, 514, 399 (2015).
[3] S. Iimira et al. Nat. Comm. 3, 943 (2012).
[4] H. Hosono and S. Matsuishi, Current Opi. In Solid State and Mat. Sci. 17,49 (2013).
[5] M. Hiraishi et al., Nature Physics 10, 300 (2014).
[6] Y. Muraba et al., Inorg. Chem. 54, 11567 (2015).
[7] S. Iimira, S. Matsuishi, and H. Hosono, Phys. Rev. B, 94, 024512 (2016).
[8] S. Iimura et al., PNAS in press.

Biography

He received his Ph. D at 1982 in Applied Chemistry from Tokyo Metropolitan University, and became a Professor at Research Laboratory for Frontier Materials, Tokyo Institute of Technology in 1999 via associate professors of Nagoya Institute of Technology, National Institute for Molecular Science and Tokyo Tech. Dr. Hosono was appointed to the founding director of Materials Research Center for Element Strategy on August 1, 2012. He is now a member of Science Council of Japan. Dr. Hosono proposed a design concept for transparent amorphous oxide semiconductors (TAOSs) with large electron mobility in 1996 and reported IGZO (InGaZnOx)-thin film transistors in 2003 and 2004. IGZO-TFTs have been applied to state of the art displays of new iPad, smart phones, and large sized OLED-TV as the backplane to drive them. In addition, he and his group have realized several key oxide semiconductor materials such as transparent p-type materials and p-channel /CMOS TFTs. In 2008 he and his collaborators discovered an Iron-pnictide superconductor which was chosen as a breakthrough of the year 2008 by the Science Magazine. He is also known as a pioneer of materials science and application of electride materials in which electrons serve as anions. He has received various awards including a medal with purple ribbon (2008), Bernd. T. Matthias Prize, Thomson Reuters Citation Laureate in Physics (2013), APS McGroddy Prize (2015), the Imperial Prize & the Japan Academy Prize (2015) and the Japan Prize (2016).

Plenary II

Tim Lodge
University of Minnesota, USA

Title
Time-Resolved SANS Quantifies the Dynamics of Single Chain Exchange in Block Copolymer Micelles

Session Chair: Kookheon Char (Seoul Nat'l Univ., Korea)

Abstracts

Block copolymers provide a remarkably versatile platform for achieving desired nanostructures by self-assembly, with length scales ranging from a few nanometers up to several hundred nanometers. In particular, block copolymer micelles in selective solvents are of great interest across a range of technologies, including drug delivery, imaging, catalysis, lubrication, and extraction. While block copolymers generally adopt the morphologies familiar in small molecule surfactants and lipids (i.e., spherical micelles, worm-like micelles, and vesicles), one key difference is that polymeric micelles are typically not at equilibrium. The primary reason is the large number of repeat units in the insoluble block, Ncore, which makes the thermodynamic penalty for extracting a single chain ("unimer exchange") substantial. As a consequence, the critical micelle concentration (CMC) is rarely accessed experimentally; however, in the proximity of a critical micelle temperature (CMT), equilibration is possible. We are using time-resolved small angle neutron scattering (TR-SANS) to obtain a detailed picture of the mechanisms and time scales for chain exchange, for systems at or near equilibrium. One model system is poly (styrene-b-(ethylene-alt-propylene)) (PS-PEP), in the PEP-selective solvent squalane (C30H62). Equivalent micelles with either normal (hPS) or perdeuterated (dPS) cores are initially mixed in a blend of isotopically substituted squalane, designed to contrast-match a 50:50 hPS:dPS core. Samples are then annealed at a target temperature, and chain exchange is revealed quantitatively by the temporal decay in scattered intensity. A second system consists of poly(n-butyl methacrylate)-b-poly(methyl methacrylate) in immidazolium-based ionic liquids. The rate of exchange as function of concentration, temperature, Ncore, Ncorona, and chain architecture (diblock versus triblock) will be discussed.

Biography

Tim Lodge graduated from Harvard in 1975 with a B.A. cum laude in Applied Mathematics. He completed his PhD in Chemistry at the University of Wisconsin in 1980, and then spent 20 months as a National Research Council Postdoctoral Fellow at NIST.

Since 1982 he has been on the Chemistry faculty at Minnesota, and in 1995 he also became a Professor of Chemical Engineering & Materials Science. In 2013 he was named a Regents Professor, the University's highest academic rank.

In 1994 he was named a Fellow of the American Physical Society (APS). He received the Arthur K. Doolittle Award from the PMSE Division of the ACS in 1998, and in 2004 he received the APS Polymer Physics Prize. He was elected to Fellowship in the American Association for the Advancement of Science, and he received the International Scientist Award from the Society of Polymer Science, Japan, in 2009. He was the recipient of the 2010 Prize in Polymer Chemistry from the ACS, and was also elected a Fellow by the ACS in 2010. In 2012 he received the Minnesota Award from the Minnesota Section of the ACS, and the Postbaccalaureate, Graduate and Professional Education Award from the University of Minnesota. He was honored with the Hermann Mark Award of the Division of Polymer Chemistry, American Chemical Society, in 2015, and in 2016 he was elected to the American Academy of Arts and Sciences.

Since 2001 he has been the Editor of the ACS journal Macromolecules. In 2011 he became the founding Editor for ACS Macro Letters. He has served as Chair of the Division of Polymer Physics, APS (1997-8), and as Chair of the Gordon Research Conferences on Colloidal, Macromolecular and Polyelectrolyte Solutions (1998) and Polymer Physics (2000). Since 2005 he has been Director of the NSF-supported Materials Research Science & Engineering Center at Minnesota. He has authored or co-authored over 350 papers in the field of polymer science, and advised or co-advised over 65 PhD students. His research interests center on the structure and dynamics of polymer liquids, including solutions, melts, blends, and block copolymers, with particular emphases on self-assembling systems using rheological, scattering and microscopy techniques.

Plenary III

Jean-Marie Tarascon
The College de France, France

Title
Reaction Mechanisms in Electrode/Battery Systems via Advanced Operando Techniques

Session Chair: Takashi Kamiyama (KEK, Japan)

Abstracts

Research's progresses in rechargeable batteries are driven by ever increasing demands for portable electronic devices as well as for powering electric vehicles and providing load-leveling for mass storage of renewable energy. This will ever increase over years to come with new business players challenging today's traditions. Whatever, Li-ion batteries are the systems of choice for the aforementioned applications, but they performances still need to be improved. Materials have been essential for improving any energy related technologies including batteries. Identifying new phases and understanding their electrochemical reactivity towards Li or Na, via the help of evolving analytical techniques, has contributed to the success of the Li(Na) ion technology. This will be illustrated during this lecture through a few examples dealing with Li(Na)_ion batteries based on either polyanionic or layered compounds or on Li(Na)-O_2 batteries. Regarding the layered compounds, besides mentioning the in-operando study of full $LiNi_{1/3}Co_{1/3}Mn_{1/3}O_2$ / C cells, we will focus on how complementary in situ analytical techniques (XPS, EPR, Microscopy and neutrons) have enabled to unravel anionic redox activity as the source of the exacerbated capacity in Li-rich layered oxides $Li[Li_{0.2}Ni_xCo_yMn_z]O_2$. This finding represents a transformational approach for creating advanced energy materials not only for energy storage, but also for other energy-related applications. Turning to the Na-ion technology the synthesis of a new $Na_4V_2(PO_4)_2F_3$ phase whose structure was defined by neutron diffraction will be presented. Lastly, the nucleation/growth of superoxide in Li(Na) air systems via in situ TEM experiments will be presented to stress further .the importance of real time monitoring in battery systems. Will pursuing the same way of battery monitoring be sufficient to meet tomorrow's highly evolving demands linked to automotive mobility and others? This is what the conclusions will address by entering into a personal prospective mode in which new trends and new ideas will be offer.

Biography

Jean-Marie Tarascon is Professor at the College de France holding the chair "Chemistry of solids - Energy". But much of his early career was spent in the United States where he developed (1994) the plastic Li-ion technology. Back to France in 1995, he created the European network of excellence ALISTORE-ERI of which he was head until 2010 when he took over the direction of the new LABEX "STORE-EX". In 2011 he became in charge of the recently created French network on electrochemical energy storage (RS2E). The general scheme of his research focuses on the synthesis, characterization, and determination of structure/property relationships of electronic, superconductor and rechargeable battery materials for solid state electronic devices. Presently his activities are more devoted to Li-ion, Na-ion batteries and other chemistries developing new eco-efficient synthesis processes and focusing on new reactivity concepts. and focusing on new co for enhancing sustainability. He is the author of more than 600 scientific papers, and detains about 80 patents. During his life, he received many honours, with among the latest being the ENI in 2011, the ABAA in 2013 prior to come foreign member of the royal society in 2014 and receiving the 2015 centenary prize of the royal society of chemistry.

Plenary IV

Peter Müller-Buschbaum
Technical University Munich, Germany

Title
GISANS - Basics, Challenges and Possibilities

Session Chair: Rex Paul Hjelm (Los Alamos National Laboratory, USA)

Abstracts

The investigation of nanostructures at surfaces, interfaces and in thin films requires dedicated analytical techniques, which provide information from a molecular to a mesoscopic scale [1]. Grazing incidence small angle neutron scattering (GISANS) overcomes the limitations of conventional small-angle neutron scattering with respect to extremely small sample volumes in the thin film geometry by the use of the reflection geometry [2,3]. GISANS involves a combination of two techniques, GID (grazing incidence diffraction), which uses a reflection geometry to obtain surface and near surface sensitive scattering, and SAS (small angle scattering), which measures structures of 1 - 100 nm length in normal transmission mode. It is a non-destructive structural probe and does not require a special sample preparation. GISANS yields excellent sampling statistics (averages over macroscopic regions to provide information on nanometer scale) and provides information on particle geometry, size distributions and spatial correlations. In GISANS experiments, however, the high demand on collimation requests the use of high flux sources.
After a basic introduction to the GISANS technique, several different examples of thin nanostructured polymer films are presented, to illustrate the possibilities and challenges of GISANS. In addition, the challenges and potentials of time-of-flight GISANS (short TOF-GISANS), which will be of high interest for the upcoming neutron sources such as ESS, are discussed in detail [4-6].

References:

[1] A.Hexemer, P.Müller-Buschbaum, IUCrJ **2**, 106-125 (2015).
[2] P.Müller-Buschbaum, J.S.Gutmann, M.Stamm, R.Cubitt, S.Cunis, G.von Krosigk, R.Gehrke, W.Petry, Physica B **283**, 53 (2000).
[3] P.Müller-Buschbaum, Polymer Journal, **45**, 34-42 (2013).
[4] P.Müller-Buschbaum, G.Kaune, M.Haese-Seiler, J.-F. Moulin, J. Appl. Cryst., **47**, 1228-1237 (2014).
[5] S.Guo, B.Cao, W.Wang, J.-F.Moulin, P.Müller-Buschbaum, ACS Appl. Mater. Interfaces **7**, 4641-4649 (2015).
[6] Y.Yao, E.Metwalli, M.Opel, M.Haese, J.-F.Moulin, K.Rodewald, B.Rieger, P.Müller-Buschbaum, Adv. Mater. Interfaces **3**, 1500712 (2016).

Biography

Peter Müller-Buschbaum is professor at Technical University Munich, heading the chair of Functional Materials in replacement of Professor Petry, since 2006. He is heading the keylab 'TUM.solar', which focuses on research of solar energy conversion and storage based on nanomaterials. He is heading the 'Network for Renewable Energies' (NRG) of the 'Munich School of Engineering' (MSE) and he is the German representative at the 'European Polymer Federation' (EPF) for polymer physics. He is associate editor of the journal "ACS Applied Materials & Interfaces". His research focus is on polymer and hybrid nanostructures with special emphasis on advanced scattering experiments such as for example grazing incidence small angle neutron scattering (GISANS).

Plenary V

Victoria Garcia-Sakai
ISIS Neutron and Muon Source
Science and Technology Facilities Council, UK

Title
Life on the Fast Lane - Importance of Motions at the Nanoscale

Session Chair: Kell Mortensen (Univ. of Copenhagen, Denmark)

Abstracts

Science in the 21st century is based around understanding life in tomorrow's world by deconstructing complexity. In this quest, neutrons play a key role as they are able to give important insights into the properties and behaviour of complex systems. Albeit structural characterization being the initial step to understanding soft condensed matter including bio-related systems, ultimately many of their macroscopic properties such as viscosity, conductivity or enzymatic activity are related to motions in the picosecond and nanosecond timescales. Using examples from soft matter and life sciences, I will give a personal perspective on what neutron spectroscopy has achieved up to date and what we might expect for the future.

Biography

Dr. Victoria Garcia-Sakai joined ISIS as an instrument scientist for the neutron backscattering spectrometers IRIS and OSIRIS, in 2007. Prior to this she was an instrument scientist at the NIST, Center for Neutron Research in MD, USA. A chemical engineer by training at Imperial College London, she has concentrated my scientific career on understanding the behaviour of macromolecules, throughout her PhD at Imperial, her postdoc at Pennsylvania State University and her time at neutron facilities. Her research focuses on the exploitation of combining different neutron scattering techniques with different time and spatial scales, with molecular dynamics simulations, to better understand the dynamics in Soft Matter systems. Neutron scattering is an ideal tool since it is non-destructive, neutrons are highly penetrating, and probes atomic/molecules length scales and timescales which overlap with that from simulations. More specifically I am interested in the dynamics of polymeric and biological systems.

V García Sakai, C. Alba-Simionesco, S.-H. Chen [Eds.], Dynamics of Soft Matter, Springer, New York, 2012.
V García Sakai and A. Arbe, Quasielastic neutron scattering in soft matter, Current Opinion in Colloid & Intefrace Science 14 (2009) 381-390.

Plenary VI

Pengcheng Dai
Rice University, USA

Title
Electron-Lattice-Magnetism Interactions in Iron-based Superconductors

Session Chair: Toby Perring (ISIS,UK)

Abstracts

In this talk, I will present a summary of the recent progress in neutron scattering studies of iron-based superconductors. Using uniaxial pressure as a probe, we can study magnetism in iron pnictides in detwinned state and the effect of uniaxial pressure on their properties. We find that unaixial pressure necessary to detwin the sample can also increase the ordered moment near optimal superconductivity. In addition, spin waves in a ~100% mechanically detwinned sample are quite different from the description of a simple Heisenberg Hamiltonian. Finally, neutron spin resonance in antiferromagnetically ordered underdoped sample seems also to occur at the antiferromagnetic ordering wave vector in a detwinned states. These results put considerable constraints on theories of magnetism, spin waves, resonance and the origin of superconductivity in iron based superconductors.

Biography

Over the past 20 years, Pengcheng Dai has used neutron scattering techniques to make fundamental contributions to our understanding of the magnetic properties of highly correlated electronic materials, particularly in the case of iron-based superconductors. Dai made important discoveries in the magnetic properties of copper oxide high-temperature superconductors.
Dai's investigations provided foundational insight into the interplay between magnetism and superconductivity in iron- and copper based superconductors. His group was first to establish that superconductivity in iron-based compounds emerges from an antiferromagnetic state, with many similarities to the cuprates suggesting an unconventional pairing mechanism involving spin fluctuations. Dai received his PhD form the University of Missouri in 1993. He then moved to Oak Ridge National Laboratory, first as postdoc before becoming Staff Member in the Solid State Division. He then became Associate and Full Professor of Physics at the University of Tennessee and in 2008 was awarded the Chair of Excellence from the Joint Institute for Advanced Materials. Since July 2013, he is Professor of Physics at Rice University. Dai is elected Fellow of the American Association for the Advancement of Science, the American Physical Society, and the Neutron Scattering Society of America. He received the U.S. Department of Energy Outstanding Scientific Accomplishment Award in 1998, and is a winner of Sustained Research Prize of Neutron Scattering Society of America in 2016.

Invited Speakers List

No.	Name	Affiliation	Country
1	Mitsuhiro Shibayama	The Univ. of Tokyo	Japan
2	Vinod Aswal	BARC	India
3	Kell Mortensen	Univ. of Copenhagen	Denmark
4	Yun Liu	NIST	USA
5	Arantxa Arbe	Centro de Física de Materiales	Spain
6	Giorgio Schiro	CNRS	France
7	Myung Chul Choi	KAIST	Korea
8	Luke Clifton	ISIS	UK
9	Marite Cardenas	Malmö Univ.	Sweden
10	Dustin A Gilbert	NIST	USA
11	Seung-Hun Lee	Univ. of Virginia	USA
12	Sungdae Ji	POSTECH	Korea
13	Bella Lake	HZB	Germany
14	Young Lee	Stanford Univ.	USA
15	Marc Janoschek	Los Alamos Na'l Lab.	USA
16	Michel Kenzelmann	PSI	Switzerland
17	Patrick Woodward	Ohio State Univ.	USA
18	Yo Tomota	NIMS	Japan
19	Xun-Li Wang	City Univ. of Hong Kong	Hong Kong
20	Matthias Ballauff	HZB	Germany
21	Vanessa Peterson	ACNS	Australia
22	Ashfia Huq	ORNL	USA
23	Yusheng Zhao	Southern Univ. of Sci. and Tech.	China
24	Christian Gruenzweig	PSI	Switzerland
25	Takenao Shinohara	JAEA	Japan

No.	Name	Affiliation	Country
26	Valery Shvetsov	JINR	Russia
27	Charles Dewhurst	ILL	France
28	Margarita Russina	HZB	Germany
29	Anton Khaplanov	ESS ERIC	Sweden
30	Eddy Lelièvre-Berna	ILL	France
31	Toshiji Kanaya	J-PARC MLF	Japan
*32	Thomas E. Mason	ORNL	USA
*33	Jeffrey W. Lynn	NIST	USA
*34	Sunil K. Sinha	Univ. of California San Diego	USA
*35	Gabriel Aeppli	PSI	Switzerland
*36	Pengcheng Dai	Rice Univ.	USA

* Special Tribute Session to Herb Mook

Walter Hälg Prize Ceremony and Lecture

Walter Hälg Prize

The Walter Hälg prize was first made available to the European Neutron Scattering Association (ENSA) by a donation from the late Professor Walter Hälg who was the founder of neutron scattering in Switzerland. His wife Madeleine Hälg-Degen continues to sponsor the highly prestigious ENSA prize in his name. The Prize is awarded biennially to a European scientist for outstanding, coherent work in neutron scattering with long-term impact on scientific and/or technical neutron scattering applications.

Prize Lecturer: Professor Juan Colmenero
Affiliation: University of Basque Country, Spain
Title: POLYMERS, NEUTRONS & COMPUTERS. A guided tour through the relaxation map of polymers
Date and Time: Wednesday, July 12 / 16:15-17:00
Place: Grand Ballroom (2F)

Citation: The most outstanding contribution of Juan Colmenero in the field of neutron scattering on complex materials such as polymers or soft matter in general was the creation of a pioneering, unique and robust scientific methodology based on the combination of neutron scattering with different spectroscopic methods and molecular dynamics (MD) simulations. He was one of the first to recognize that in intricate soft matter systems often neutrons alone are not enough to tell us, “where the atoms are and what they do” and that neutron scattering and MD simulations are natural partners.

Juan Colmenero graduated from the University of Navarra, Spain, In 1979 he took a postdoctoral position in the Minsterio de Trabajo, Spain. Thereafter he went to the University of the Basque country in San Sebastian, where he started as an assistant professor. In 1989 he was appointed full professor at the faculty of chemistry and became the director of the Materials Physics Department. From 1999 to 2013 he was director at the of the “Donostia International Physics Center” that promotes international collaboration around neutron scattering techniques and provides a meeting point in San Sebastian for scientists from all over the world. From 2001 to 2011 he was the director of the Materials Physics Center (CFM), CSIC-UVP/EHU. Juan Colmenero has significantly contributed to raise the profile of neutron scattering in Spain. He was one of the founders of the “Sociedad Española de Técnicas de Neutrones (SETN)” and its first chairman. He is recipient of the “Xabier María de Munibe” Prize in Science and Technology (1998) of the Basque Parliament, the Euskadi Price (2000) of the Basque government and the gold medal of the Royal Spanish Physical Society (2003).

AONSA Prize Ceremony and Lecture

AONSA Prize

The Asia-Oceania Neutron Scattering Association (AONSA) awards the AONSA Prize every two years to a person or persons to recognize his/her or their outstanding research career with a significant impact or contribution to the use or development of neutron science and technology in the Asia-Oceania Region. The first three Prizes were awarded to Prof. Noboru Watanabe (KEK) in 2011, Prof. Balebail Anantha Dasannacharya (BARC) in 2013 and Prof. John William White in 2015.

Prize Lecturer: Professor Nobuo Niimura
Affiliation: Ibaraki University, Japan
Title: Toward a New Epoch of Neutron Protein Crystallography.
– My life of '50 Neutron Diffraction. –
Date and Time: Wednesday, July 12 / 17:00-17:45
Place: Grand Ballroom (2F)

Citation: "For his continuous contributions to the instrumental development and practical use of neutrons from Tohoku Linac, KENS, JRR-2 and 3 to J-PARC, especially the invention of the neutron imaging plate which opened a new paradigm in neutron protein crystallography all over the world including Asia-Oceania region, and for his devoted mentoring of young scientists in the community of neutron science."

Nobuo Niimura received Ph.D from University of Tokyo in March 1970 and in December, became a Research Associate of Faculty of Science Tohoku University. In the Faculty, he first met Professors Motoharu Kimura and Noboru Watanabe who initiated the construction of pulsed neutron source using an electron linear accelerator (Tohoku Linac). Nobuo also participated in the construction and in the utilization pulsed neutron beam for material science. (One of his pioneering works done in Tohoku University is a time-dependent pulsed neutron scattering study on ferroelectric material under high electric field.) In Tohoku University he accepted and grew many young scientists who later on played important roles for the construction and utilization of spallation neutron sources at KEK(KENS) and at J-PARC. Soon after he became a Professor of Tohoku University, he moved to Japan Atomic Energy Research Institute (JAERI) in Tokai and became a Prime Scientist in 1998. After the retirement of JAERI he moved to Ibaraki University and became a Professor of Graduate School in 2003 and Special Research Professor in 2008, Specially Assigned Research Fellow in 2013. In Ibaraki University, he also grew many young scientists and played an important role for the establishment of the Frontier Research Center for Applied Atomic Sciences, which accepts undergraduate and graduate students who study neutron scattering technique using pulsed neutron beam in J-PARC.

Scientific Programs

Presenter and Chair Information

Oral Sessions

All contributed and invited speakers must report to the session chairs prior to the beginning of the session.

The allocation for each Contributed Oral presentation is 15 minutes.

a) 12 minutes for the presentation

b) 3 minutes for Q & A

The allocation for each Invited Oral presentation is 30 minutes.

a) 25 minutes for the presentation

b) 5 minutes for Q & A

Guideline for Oral Session Chairs

The Chair of each oral session is expected to arrive at the session room at least 10 minutes prior to the session. All Contributed/Invited speakers will have 15/30 minutes for presentation and discussion. Please ring the bell once in 10/20 minutes after start, and twice in 12/25 minutes. It is recommended to save the last 3/5 minutes for discussion.

- Session rooms will be ready with laptop computers installed with MS PowerPoint, which the speakers are encouraged to use for their presentations in order to avoid delays in schedule.
- The speakers are advised to bring their PowerPoint presentation files on USB memory sticks AND be also ready with a backup version of their presentations. Please transfer the file to the laptop computer in the session room during the break between the sessions
- If you are a Mac user, please bring your Mac-to-VGA adapter.
- Speakers should arrive in the session room 15 minutes BEFORE the start of their sessions to report to the session chair.

Poster Sessions

Poster session will be held at the Exhibition Hall (1F) on July 10~12. The board size 1 m (width) by 2 m (height) will be provided for the display of each paper. Each paper's code will be shown on the board and tapes will be provided in the poster presentation area. All presenters are required to preside at their poster panels during the session for discussion with participants.

Place: Exhibition Hall (1F)	Poster Session I	Poster Session II	Poster Session III
Date	July 10 (Mon.)	July 11 (Tue.)	July 12 (Wed.)
Put-up Time	08:00~16:00	08:00~12:00	08:00~12:00
Presentation Time	16:30~18:30	12:30~14:30	
Take-down Time	18:30~19:30	16:00~18:00	

Access to Abstracts to the web

All the abstracts (Oral and Poster) can be accessible via mobile ICNS website at http://icns2017.org/m/. A PDF abstract book will be also available for download via ICNS2017 website after the conference at http://www.icns2017.org as well.

Monday, July 10, 2017

09:15-09:45	**Opening Ceremony** (2F, Grand Ballroom)
09:45-10:30	**Plenary I Hideo Hosono** "Hydrogen-substituted Iron-Based Superconductors and Relevant Compounds" (2F, Grand Ballroom)
10:30-11:00	**Coffee Break**
11:00-12:30	**Oral Sessions** MoA1 (Room A) Superconductors I MoB1 (Room B) Neutron Facilities I MoC1 (Room C) Thin Films & Nano Magnetism I MoD1 (Room D) Polyelectrolytes and Polymer Gels MoE1 (Room E) Biological System I MoF1 (Room F) Sample Environment and Software I
12:30-14:00	**Lunch Break**
14:00-16:30	**Oral Sessions** MoA2 (Room A) Special Tribute to Herb Mook MoB2 (Room B) Inelastic Scattering Instrumentations MoC2 (Room C) Thin Films & Nano Magnetism II MoD2 (Room D) Soft Matter Interactions and Self Assembly MoE2 (Room E) Biological System II MoF2 (Room F) Industrial Applications I
16:30-18:30	**Poster Session I** (1F, Exhibition Hall)

* Complete abstracts are accessible on-line at

Session Title	[MoA1] Superconductors I
Date and Time	July 10 (Monday) / 11:00-12:30
Place	Room A (1F)
Session Chair	Jitae Park (TU Munchen, Germany) Jeffrey Lynn (NIST Center for Neutron Research, USA)

MoA1-1 **11:00-11:15**

a-b Anisotropy of the Intra-Unit-Cell Magnetic Order in $YBa_2Cu_3O_{6.6}$

Lucile Mangin-Thro[1,2], Yuan Li[3,4], Yvan Sidis[1], and Philippe Bourges[1]
[1]LLB, France, [2]ILL, France, [3]Max Planck Inst., Germany, [4]Peking Univ., China

MoA1-2 **11:15-11:30**

Field-Induced Electronic Phase-Separation in a Critically Doped High-Tc Superconductor

Linda Udby[1], Sonja L. Holm[2], Jacob Larsen[3], Barrett O. Wells[4], Martin Boehm[5], Astrid Schneidewind[6], Christof Niedermayer[7], Tatsuo Goko[8], Jean-Claude Grivel[9], and Kim Lefmann[10]
[1]Univ. of Copenhagen, Denmark, [2]Univ. of Aarhus, Denmark, [3]TU Denmark, Denmark, [4]Univ. of Connecticut, USA, [5]ILL, France, [6]JCNS at MLZ, Germany, [7]PSI, Switzerland, [8]Laboratory for Muon Spin Spectroscopy, Switzerland, [9]Department of Energy Conversion and Storage, Switzerland, [10]Univ. of Copenhagen, Denmark

MoA1-3 **11:30-11:45**

Development of Spin-Wave-like Dispersive Excitations below the Pseudogap Temperature in the High-Temperature Superconductor $La_{2-x}Sr_xCuO_4$

Masato Matsuura[1], Shou Kawamura[2], Masaki Fujita[2], Ryoichi Kajimoto[3], and Kazuyoshi Yamada[4]
[1]CROSS, Japan, [2]Tohoku Univ., Japan, [3]JAEA, Japan, [4]HEARO, Japan

MoA1-4 **11:45-12:00**

Combining Neutron Scattering and Imaging to Investigate Domain Structures in Superconductors

Alexander Backs, Tommy Reimann, Michael Schulz, Sebastian Mühlbauer, Tobias Neuwirth, and Peter Böni
TU Munich, Germany

MoA1-5 **12:00-12:15**

Temperature and Field Dependence of the Magnetic Structure in Weak Ferromagnetic Superconductor $Tb_{0.47}Y_{0.53}Ni_2B_2C$

Misato Takahashi[1], Hiroyuki Takeya[2], Adam Aczel[3], Tao Hong[3], Masaaki Matsuda[3], and Hazuki Furukawa[1]
[1]Ochanomizu Univ., Japan, [2]NIMS, Japan, [3]ORNL, USA

Session Title	**[MoB1] Neutron Facilities I**
Date and Time	July 10 (Monday) / 11:00-12:30
Place	Room B (1F)
Session Chair	Shane Kennedy (ESS, Sweden) Chang-Hee Lee (KAERI, Korea)

MoB1-1 (Invited) **11:00-11:30**

Endurance: Modernizing the ILL's Instrument Suite and Infrastructure

Charles Dewhurst and Charles Simon

ILL, France

MoB1-2 **11:30-11:45**

Present Status of Neutron Instrumentation at Reactor IR-8 at NRC "Kurchatov Institute"

V. T. Em, V. A. Somenkov, and V. P. Glazkov

Kurchatov Institute, Russia

MoB1-3 **11:45-12:00**

China Mianyang Research Reactor (CMRR): A New Operating Neutron Scattering Platform

Jian Gong and Guangai Sun

China Academy of Engineering Physics, China

MoB1-4 **12:00-12:15**

The Argentinean Neutron Beams Laboratory Project

Javier Santisteban, Florencia Cantargi, Miguel Vicente Alvarez, Aureliano Tartaglione, Gabriela Aurelio, Karina Pierpauli, and Rolando Granada

Argentine Atomic Energy Commission, Argentina

MoB1-5 **12:15-12:30**

New Instrumentation in the JEEP II Reactor at IFE, Kjeller: Norwegian Center for Neutron Research - NcNeutron

Bjørn C. Hauback, Stefano Deledda, Christoph Frommen, Geir Helgesen, Kenneth D. Knudsen, Isabel Llamas-Jansa, and Magnus H. Sørby

Inst. for Energy Tech., Norway

Session Title	**[MoC1] Thin Films & Nano Magnetism I**
Date and Time	July 10 (Monday) / 11:00-12:30
Place	Room C (1F)
Session Chair	Valeria Lauter (ORNL, USA) Dustin Gilbert (NIST, USA)

MoC1-1 **11:00-11:15**

Magnetism and Superconductivity in Double Delta-Doped Transition-Metal-Oxide Structures Grown by Oxide Molecular Beam Epitaxy

Gideok Kim, Yury Khaydukov, Georg Cristiani, Gennady Logvenov, and Bernhard Keimer
Max Planck Inst. for Solid State Research, Germany

MoC1-2 **11:15-11:30**

Proximity Effects Across the Hybrid Oxide Interfaces of Superconductor-Insulator-Ferromagnet Heterostructure

Amitesh Paul[1], C. L. Prajapat[2], Surendra Singh[2], Debarati Battacharya[2], G. Ravikumar[2], and Saibal Basu[2]
[1]TU Munich, Germany, [2]BARC, India

MoC1-3 **11:30-11:45**

Emergence of Novel Multiferroicity in Epitaxially Strained $REMnO_3$(RE = Gd-Lu) Thin Films

Saumya Mukherjee[1,2], Kenta Shimamoto[1], Sebastian Manz[2], Yoav Windsor[1], Jonathan White[1], Morgan Trassin[2], Mahesh Ramakrishnan[1], Sergii Parchenko[1], Urs Staub[1], Laurent Chapon[3], Bachir Ouladdiaf[3], Thomas Lippert[1,2], Michel Kenzelmann[1], Manfred Fiebig[2], Christof Schneider[1], and Christof Niedermayer[1]
[1]PSI, Switzerland, [2]ETH Zurich, Switzerland, [3]ILL, France

MoC1-4 **11:45-12:00**

Electric Field Control of Magnetism within an All-Oxide Hybrid Heterostructure of Multiferroic EuO/BaO

Jingfan Ye[1], Sina Mayr[1], Rainer Held[2], Jochen Stahn[3], Amitesh Paul[1], Jochen Mannhart[2], and Peter Böni[1]
[1]TU Munich, Germany, [2]Max-Planck-Inst. for Solid State Research, Germany, [3]PSI, Switzerland

MoC1-5 **12:00-12:15**

Time Change of Spatial Magnetization Distribution in Nanospheres Investigated by Small-Angle Neutron Scattering

Dominika Zákutná[1,2], Jan Vlček[3], Michael Smik[4], Daniel Nižňanský[5], Dirk Honecker[1], and Sabrina Disch[2]

[1]ILL, France, [2]Univ. of Cologne, Germany, [3]Univ. of Chemistry and Tech., Czech, [4] JCNS at MLZ, Germany, [5]Charles Univ. in Prague, Czech

MoC1-6 **12:15-12:30**

Spin Structures of Antiferromagnetic Nanoparticles Studied with Polarized Neutron Powder Diffraction

Erik Brok[1], Kim Lefmann[1], Gøran Jan Nilsen[2], Mathias Kure[3], Pascale P Deen[4], Bente Lebech[3], Henrik Jacobsen[1,5], Lukas Keller[6], and Cathrine Frandsen[3]

[1]Univ. of Copenhagen, Denmark, [2]ISIS, UK, [3]Technical Univ. of Denmark, Denmark, [4]ESS ERIC, Sweden, [5]Univ. of Oxford, UK, [6]PSI, Switzerland

Session Title	**[MoD1] Polyelectrolytes and Polymer Gels**
Date and Time	July 10 (Monday) / 11:00-12:30
Place	Room D (1F)
Session Chair	Kell Mortensen (Univ. of Copenhagen, Denmark) Max Wolff (Uppsala Univ., Sweden)

MoD1-1 (Invited) — **11:00-11:30**

Small-Angle Neutron Scattering on Advanced Polymer Gels

Mitsuhiro Shibayama

The Univ. of Tokyo, Japan

MoD1-2 — **11:30-11:45**

Gel Phase Formation in Dilute Triblock Polyelectrolyte Complexes

Samanvaya Srivastava[1], Marat Andreev[1], Adam Levi[1], Vivek Prabhu[2], William Heller[3], Juan de Pablo[1], and Matthew Tirrell[1]

[1]The Univ. of Chicago, USA, [2]NIST, USA, [3]ORNL, USA

MoD1-3 — **11:45-12:00**

Thermoresponsive Hydrogel Nanocomposites with Tuneable Deswelling Kinetics

Barbara Berke[1,2], Lionel Porcar[1], Orsolya Czakkel[1], and Krisztina Laszlo[2]

[1]ILL, France, [2]Budapest Univ. of Tech. and Economics, Hungary

MoD1-4 — **12:00-12:15**

Dynamics of PNIPAM Microgels at High Concentrations

Marco Zanatta[1], Elena Buratti[2,3], Monica Bertoldo[2], Emanuela Zaccarelli[4], and Andrea Orecchini[5,6]

[1]Università di Verona, Italy, [2]CNR-IPCF, Italy, [3]Università di Pisa, Italy, [4]Università "La Sapienza", Italy, [5]Università degli Studi di Perugia, Italy, [6]Università di Perugia, Italy

MoD1-5 — **12:15-12:30**

Aqueous Polyelectrolyte/Surfactant Mixtures: Effect of Salt on the Adsorption at the Air/Water Interface Investigated by Neutron Reflectometry

Larissa Braun[1], Richard Campbell[2], and Regine von Klitzing[1]

[1]TU Darmstadt, Germany, [2]ILL, France

Session Title	**[MoE1] Biological System I**
Date and Time	July 10 (Monday) / 11:00-12:30
Place	Room E (2F)
Session Chair	Selma Maric (Malmö Univ., Sweden) Tae-Hwan Kim (Chonbuk Nat'l Univ., Korea)

MoE1-1 (Invited) — **11:00-11:30**

Protein Dynamical Transition in Hydrated and Water-Free Proteins

Giorgio Schiro[1], Antonio Cupane[2], Yann Fichou[3], Douglas Tobias[4], and Martin Weik[5]
[1]CNRS, France, [2]Univ. of Palermo, Italy, [3]Univ. of California Santa Barbara, USA, [4]Univ. of California Irvine, USA, [5]CEA, France

MoE1-2 — **11:30-11:45**

General Protonation Analysis of Histidines using 10 Neutron PDBs of Glucose Isomerase

Masamichi Kimiyama and Ichiro Tanaka
Ibaraki Univ., Japan

MoE1-3 — **11:45-12:00**

Structure and Water Permeability of CNS and PNS Myelin Investigated by Steady State and Time-Resolved Neutron Diffraction

Andrew R. Denninger[1], Bruno Demé[2], Viviana Cristiglio[2], and Daniel A. Kirschner[1]
[1]Boston College, USA, [2]ILL, France

MoE1-4 — **12:00-12:15**

Neutron Cyocrystallography Reveals the Nature of Ferryl Heme Intermediates in Peroxidases

Hanna Kwon[1], Jaswir Basran[1], Cecilia Casadei[1,2], Alistair Fielding[3], Tobias Schrader[4], Andreas Ostermann[5], Juliette Devos[2], Pierre Aller[6], Matthew Blakeley[2], Peter Moody[1], and Emma Raven[1]
[1]Univ. of Leicester, UK, [2]ILL, France, [3]The Univ. of Manchester, UK, [4]JCNS, Germany, [5]TU Munich, Germany, [6]Diamond Light Source Ltd, UK

MoE1-5 — **12:15-12:30**

Invisible Deuterated Detergents for Membrane Protein SANS Investigations

Tamim Darwish[1], Soren Midtgaard[2], Elliot Gilbert[1], and Lise Arleth[2]
[1]ANSTO, Australia, [2]Niels Bohr Inst., Denmark

Session Title	**[MoF1] Sample Environment and Software I**
Date and Time	July 10 (Monday) / 11:00-12:30
Place	Room F (2F)
Session Chair	Toshiya Otomo (KEK, Japan) Yong Nam Choi (KAERI, Korea)

MoF1-1 (Invited) — **11:00-11:30**

Effective, Efficient and Innovative Sample Environments

Eddy Lelièvre-Berna

ILL, France

MoF1-2 — **11:30-11:45**

New Sample Environment Projects and Developments at the Australian Centre for Neutron Scattering

P. Imperia, N. Booth, T. M. D'Adam, G. Davidson, S. Lee, and A. G. Manning

ANSTO, Australia

MoF1-3 — **11:45-12:00**

McStas Union Components for Multiple Scattering in Complex Sample Environments

Mads Bertelsen and Kim Lefmann

Univ. of Copenhagen, Denmark

MoF1-4 — **12:00-12:15**

Simulation Tools for Detector and Instrument Design

Kalliopi Kanaki[1], Thomas Kittelmann[1], Xiao Xiao Cai[1,2], Esben Klinkby[2], Erik Bergbäck Knudsen[2], Peter Willendrup[1,2], and Richard John Hall-Wilton[1,3]

[1]ESS ERIC, Sweden, [2]DTU, Denmark, [3]Mid-Sweden Univ., Sweden

MoF1-5 — **12:15-12:30**

Mantid at the European Spallation Source

Michael Wedel[1], Simon Heybrock[1], Lamar Moore[2], Owen Arnold[2], and Jonathan Taylor[1]

[1]ESS ERIC, Denmark, [2]ISIS, UK

Session Title	**[MoA2] Special Tribute to Herb Mook**
Date and Time	July 10 (Monday) / 14:00-16:30
Place	Room A (1F)
Session Chair	Jaime A. Fernandez-Baca (ORNL, USA)

MoA2-1 (Invited) **14:00-14:30**

Reflections on Herb Mook's Contributions: Neutrons and Tennis Around the World

Thomas E. Mason

ORNL, USA

MoA2-2 (Invited) **14:30-15:00**

Highly Correlated Electron Systems-Half a Century of Progress

Jeffrey W. Lynn

NIST, USA

MoA2-3 (Invited) **15:00-15:30**

Exploring the Interactions Between Magnetism and Superconductivity with Herb Mook

Sunil K. Sinha

Univ. of California San Diego, USA

MoA2-4 (Invited) **15:30-16:00**

Hot and Cold Neutrons with Herb Mook - Going Beyond NMR and Optics to Understand Pairing in Superconductors

Gabriel Aeppli

PSI, Switzerland

MoA2-5 (Invited) **16:00-16:30**

Neutron Spin Resonance in Unconventional Superconductors: From Copper Oxides to Iron Pnictides and Heavy Fermions

Pengcheng Dai

Rice Univ., USA

Session Title	**[MoB2] Inelastic Scattering Instrumentations**
Date and Time	July 10 (Monday) / 14:00-16:30
Place	Room B (1F)
Session Chair	Bella Farago (ILL, France) Kenji Nakajima (J-PARC, Japan)

MoB2-1 (Invited) — **14:00-14:30**

Upgrade Project NEAT'2016 at Helmholtz Zentrum Berlin - What Can Be Done at Medium Flux Source

Margarita Russina[1], Gerrit Guenther[1], Verinika Grzimek[1], Lars Drescher[1], Moritz-Casper Schlegel[1,2], Ramil Gainov[1], Toralf Kaulich[1], Werner Graf[1], Annette Daske[1], Kerstin Grotjahn[1], Rolf Hellhammer[1], Guido Buchert[1], Heinrich Kutz[1],Lutz Rossa[1], Olaf-Peter Sauer[1], and Michael Fromme[1]
[1]HZB, Germany, [2]Federal Inst. for Materials Research and Testing Berlin, Germany

MoB2-2 — **14:30-14:45**

Mushroom - A New Type of Spectrometer

Robert Bewley
ISIS, UK

MoB2-3 — **14:45-15:00**

Towards Design and Construction of MIRACLES, the TOF-Backscattering Instrument at the European Spallation Source

Iñigo Herranz[1,2], Paula Luna[1,2], Heloisa N Bordallo[3,4], Melissa Sharp[4], Jorge Aguilar[1,2], Miguel Magan[1,2], Tomas Mora[1,2], Fernando Sordo[1,2], Marita Mosconi[1], Ander Serrano[1], Estefania Abad[1], Jose Manuel Perlado[2], and Felix J Villacorta[1]
[1]Consorcio ESS-Bilbao, Spain, [2]Inst. de Fusión Nuclear-UPM, Spain, [3]Univ. of Copenhagen, Denmark, [4]ESS ERIC, Sweden

MoB2-4 — **15:00-15:15**

The ILL NSE Upgrades and First Results

Bela Farago, Peter Falus, Peter Fouquet, and Orsolya Czakkel
ILL, France

MoB2-5 — **15:15-15:30**

Design and First Year-Operation Results from EMU, the High-Resolution Backscattering Spectrometer at ANSTO

Nicolas R de Souza
ANSTO, Australia

MoB2-6 15:30-15:45

A Test of TOF-MIEZE Reflectometry for Study of Nanomagnetic Dynamics

Masahiro Hino[1], Tatsuro Oda[1], Hitoshi Endo[2], Norifumi Yamada[2], Hideki Seto[2], and Yuji Kawabata[1]
[1]Kyoto Univ., Japan, [2]KEK, Japan

MoB2-7 15:45-16:00

BIFROST Anin-Plane Spectrometer for The European Spallation Source

Rasmus Toft-Petersen[1,2], Jonas Okkels Birk[3], Liam Whitelegg[1,2], Kim Lefmann[3], Rodion Kolevatov[4], Philippe Bourges[5], Niels B. Christensen[1], Martin Olsen[3], Mads Bertelsen[3], Marton Marko[6], Christof Niedermayer[7], and Henrik Ronnow[8]
[1]TU Denmark, Denmark, [2]ESS ERIC, Sweden, [3]Univ. of Copenhagen, Denmark, [4]Inst. for Energy Tech., Norway, [5]LLB, UMR[12] CEA-CNRS, CEA Saclay, France, [6]Wigner Research Centre for Physics, Hungary, [7]PSI, Switzerland, [8]EPFL, Swaziland

MoB2-8 16:00-16:15

BAMBUS: a New Inelastic Neutron Multiplexed Analyser for the Cold Neutron TAS Panda, MLZ

Alexandre Bertin[1], Astrid Schneidewind[2], Petr Cermak[2], Herbert Freilbach[2], Jacqueline Peetz[2], Joshua Lim[1], Rasmus Toft-Petersen[3], Felix Groitl[4], Thomas Brückel[2], and Dmytro Inosov[1]
[1]TU Dresden, Germany, [2]JCNS at MLZ, Germany, [3]DTU, Denmark, [4]PSI, Switzerland

MoB2-9 16:15-16:30

Exploring Correlated Electron Systems on the Cold Triple-Axis Spectrometer ThALES@ILL

Martin Boehm[1], Paul Steffens[1], Jiri Kulda[1], Milan Klicpera[2], and Vladimir Sechovsky[2]
[1]ILL, France, [2]Charles Univ., Czech

Session Title	**[MoC2] Thin Films & Nano Magnetism II**
Date and Time	July 10 (Monday) / 14:00-16:30
Place	Room C (1F)
Session Chair	Sungkyun Park (Pusan Nat'l Univ., Korea)

MoC2-1 (Invited) — **14:00-14:30**

Mapping Inside Magneto-Ionic Devices with Neutron Reflectometry

Dustin A Gilbert
NIST, USA

MoC2-2 — **14:30-14:45**

Artificially Designed Magnetic Domain Patterns Investigated by Neutron Scattering

Thomas Saerbeck[1], Nina-Juliane Steinke[2], Henning Huckfeldt[3], Iris Koch[3], and Arno Ehresmann[3]
[1]ILL, France, [2]ISIS, UK, [3]Univ. of Kassel, Germany

MoC2-3 — **14:45-15:00**

Fe-Layer Induced Ferromagnetism in Polycrystalline Pd Studied using In-Situ Polarised Neutron Reflectometry

Sina Mayr[1], Jingfan Ye[1], Jochen Stahn[2], Oliver Klein[3], Andreas Schmehl[3], Thomas Mairoser[3], Alexander Herrnberger[3], Amitesh Paul[1], Björgvin Hjörvarsson[4], Jochen Mannhart[5], Manfred Albrecht[3], Peter Böni[1], and Wolfgang Kreuzpaintner[1]
[1]TU Munich, Germany, [2]PSI, Switzerland, [3]Univ. of Augsburg, Germany, [4]Uppsala Univ., Sweden, [5]Max Planck Inst. for Solid State Research, Germany

MoC2-4 — **15:00-15:15**

Reconfigurable Magnetic States in Multi-Layered Synthetic Antiferromagnets

Nina-Juliane Steinke[1], Amalio Fernández-Pacheco[2], Alexander Welbourne[2], Shin-Liang Chin[2], Dhishant Mahendru[2], Rhodri Mansell[2], Dorothee Petit[2], Sean Langridge[1], and Russell Cowburn[2]
[1]ISIS, UK, [2]Univ. of Cambridge, UK

MoC2-5 — **15:15-15:30**

Depth Control of Ferromagnetism in $FePt_3$ Films by Ion-Irradiation

G. L. Causer[1,2], D. L. Cortie[1], H. Zhu[2], M. Ionescu[2], G. J. Mankey[3], and F. Klose[2]
[1]Univ. of Wollongong, Australia, [2]ANSTO, Australia, [3]Univ. of Alabama, USA

MoC2-6 **15:30-15:45**

Polarized Neutron Reflectometry Applied to In-Situ Thin Film Growth

Wolfgang Kreuzpaintner[1], Sina Mayr[1], Jingfan Ye[1], Birgit Wiedemann[1], Amitesh Paul[1], Thomas Mairoser[2], Andreas Schmehl[2], Alexander Herrnberger[2], Jochen Stahn[3], Jean-Francois Moulin[4], Panagiotis Korelis[3], Martin Haese[4], Matthias Pomm[4], Peter Böni[1], and Jochen Mannhart[5]

[1]TU Munich, Germany, [2]Universität Augsburg, Germany, [3]PSI, Switzerland, [4]HZG, Germany, [5]Max-Planck-Institut für Festkörperforschung, Germany

MoC2-7 **15:45-16:00**

Evidence for Ferromagnetic Ordering in the MAX Phase($Cr_{0.95}Mn_{0.05}$)2GeC

Oleg Rivin[1,2], El'ad N. Caspi[2], Asaf Pesach[2], Hagai Shaked[3], Andreas Hoser[1], Robert Georgii[4], Quanzheng Tao[5], Johanna Rosen[5], and Michel W. Barsoum[6]

[1]HZB, Germany,[2]Nuclear Research Centre - Negev, Israel, [3]Ben-Gurion Univ. of the Negev, Israel, [4]FRM II, Germany. [5]Linköping Univ., Sweden, [6]Drexel Univ., USA

MoC2-8 **16:00-16:15**

The Role of Surface and Interfaces in Affecting the Magnetization of Fe_4N Thin Films

Mukul Gupta[1], Nidhi Pandey[1], Rajeev Rawat[1], Syed Mohd Amir[2], Sabine Pütter[2], Jochen Stahn[3], and Ajay Gupta[4]

[1]UGC-DAE Consortium for Scientific Research, University Campus, India, [2]JCNS at MLZ, Germany, [3]PSI, Switzerland, [4]Amity Univ., India

MoC2-9 **16:15-16:30**

Proximity Effects in Topological Insulator Heterostructures

Valeria Lauter

ORNL, USA

Session Title	**[MoD2] Soft Matter Interactions and Self Assembly**
Date and Time	July 10 (Monday) / 14:00-16:30
Place	Room D (1F)
Session Chair	Yun Liu (NIST, USA) So Youn Kim (UNIST, Korea)

MoD2-1 (Invited) — **14:00-14:30**

Nanoparticle-Protein Interactions and their Resultant Structures

Vinod Aswal

BARC, India

MoD2-2 — **14:30-14:45**

Liquid Crystals with Hierarchical Ordering

Liliana de Campo[1,2], Minoo Moghaddam[3], Anna Sokolova[1], Christine Rehm[1], Rainer Mittelbach[4], Trond Varslot[1], Toen Castle[5], Chris Garvey[1], Nigel Kirby[6], and Stephen Hyde[2]

[1]ANSTO, Australia, [2]Australian Nat'l Univ., Australia, [3]Nanomed, Australia, [4]ACARA, Australia, [5]Univ. of Pennsylvania, USA, [6]Australian Synchrotron, Melbourne, Australia

MoD2-3 — **14:45-15:00**

Monitoring of Protein Interactions in Frozen and Freeze-Dried Solution States using Small Angle Scattering Techniques

Viviana Cristiglio[1], Maria Monica Castellanos[2,3], Isabelle Grillo[1], Joseph E. Curtis[3], and Evgenyi Shalaev[4]

[1]ILL, France, [2]Inst. for Bioscience and Biotechnology Research, USA, [32]NIST, USA, [4]Allergan Inc., USA

MoD2-4 — **15:00-15:15**

Solubility Enhancement of Aromatic Amino Acids and Peptides in Aqueous Solution of Divalent Transition-Metal Cations - QENS Study

Dehong Yu[1], Guosheng Shi[2], Richard Mole[1], and Haiping Fang[2]

[1]ANSTO, Australia, [2]CAS, China

MoD2-5 — **15:15-15:30**

Synergistic Use of Computer Simulations in Neutron Scattering Investigations of Soft Materials

Changwoo Do[1], Jan-Michael Carrillo[1], Suk-kyun Ahn[2], and Gregory S. Smith[1]

[1]ORNL, USA, [2]Pusan Univ., Korea

MoD2-6 **15:30-15:45**

Self-Assembly of Unilamellar Vesicles: Insight into the Bilayer Structure from Employing Different Contrast Conditions

Anja F. Hörmann[1], Katharina Bressel[1], Sebastian Bayer[1], Theyencheri Narayanan[2], Jérémie Gummel[2], Sylvain Prévost[3], and Michael Gradzielski[1]

[1]TU Berlin, Germany, [2]European Synchrotron Radiation Facility, France, [3]ILL, France

MoD2-7 **15:45-16:00**

Small Angle Scattering Study on Phase Behavior of a Mixture of Amphiphilic Block Copolymer/Additives in Aqueous Solution

Tae-Hwan Kim[1,2], Eunhye Kim[1], Jong Dae Jang[1], and Young-Soo Han[1]

[1]Chonbuk Nat'l Univ., Korea, [2]KAERI, Korea

MoD2-8 **16:00-16:15**

Highly Ordered and Highly Aligned Hexagonal, Honeycomb, and Kagome Self-Assembled Superlattices of Binary 1D Nanoparticles

Sung-Hwan Lim[1], Taehoon Lee[1], Younghoon Oh[2], Theyencheri Narayanan[3], Bong June Sung[2], and Sung-Min Choi[1]

[1]KAIST, Korea, [2]Sogang Univ., Korea, [3]European Synchrotron Radiation Facility, France

Session Title	**[MoE2] Biological System II**
Date and Time	July 10 (Monday) / 14:00-16:30
Place	Room E (2F)
Session Chair	Giorgio Schiro (CNRS, France) Ichiro Tanaka (Ibaraki Univ., Japan)

MoE2-1 (Invited) — **14:00-14:30**

Assembly Architectures of Microtubules Triggered by Polycations

Juncheol Lee[1], Jimin Lee[1], Chaeyeon Song[2], Herbert Miller[3], Leslie Wilson[3], Cyrus Safinya[3], and Myung Chul Choi[1]

[1]KAIST, Korea, [2]Amore-Pacific Co. R&D Center, Korea, [3]UCSB, USA

MoE2-2 — **14:30-14:45**

The Effects of Deuterium on Human Serum Albumin

John White[1], Trevor Forsyth[2], Michael Haertlein[3], Valerie Laux[3], Hess David[3], and Fraser Nicolas[1]

[1]Australian Nat'l Univ., Australia, [2]Keele Univ., UK, [3]LL, France

MoE2-3 — **14:45-15:00**

Membrane Permeation versus Amyloidogenicity: A Multitechnique Study of Islet Amyloid Polypeptide Interaction with Model Membranes

Anne Martel[1], Lucas Antony[2], Yuri Gerelli[1], Lionel Porcar[1], Aaron Fluitt[2], Kyle Hoffmann[2], Irena Kiesel[1], Michel Vivaudou[3], Giovanna Fragneto[1], and Juan J. de Pablo[2]

[1]ILL, France, [2]Univ. of Chicago, USA, [3]Institut de Biologie Structurale, France

MoE2-4 — **15:00-15:15**

Orchestrated Domain Movement in Catalysis by Cytochrome P450 Reductase

Samuel Freeman[1,2], Anne Martel[2], Emma L. Raven[1], and Gordon C.K. Roberts[1]

[1]Univ. of Leicester, UK, [2]ILL, France

MoE2-5 — **15:15-15:30**

Dynamic Reorganisations of Photosynthetic Membranes as Revealed by Neutron Scattering

Gergely Nagy[1,2], Renáta Ünnep[1], and Győző Garab[1]

[1]Hungarian Academy of Sciences, Hungary, [2]PSI, Switzerland

MoE2-6 **15:30-15:45**

Inter-Lamellar Interactions and Multi-Lamellar Vesicle Formations under Shear

Hideki Seto[1], Michihiro Nagao[2,3], and Youhei Kawabata[4]
[1]HEARO, Japan, [2]Indiana Univ., USA, [3]NIST, USA, 4Tokyo Metropolitan Univ., Japan

MoE2-7 **15:45-16:00**

Effect of Nanodiamond Surfaces on Drug Delivery Systems

Debsindhu Bhowmik[1,2], Gurpreet Dhindsa[1], Utsab Shrestha[1], Eugene Mamontov[2], and Xiang-Qiang Chu[1]
[1]Wayne State Univ., USA, [2]ORNL, USA

MoE2-8 **16:00-16:15**

Fractional Dynamics in Silkworm Silk and Spider Silk

Igor Krasnov[1], Tilo Seydel[2], Imke Greving[3], Malte Blankenburg[3], and Martin Müller[1,3]
[1]Kiel Univ., Germany, [2]ILL, France, [3]HZG, Germany

MoE2-9 **16:15-16:30**

DNAlonogel: Structure and Self-Assembly

Pankaj Kumar Pandey
Jawaharlal Nehru Univ.

Session Title	**[MoF2] Industrial Applications I**
Date and Time	July 10 (Monday) / 14:00-17:00
Place	Room F (2F)
Session Chair	Ronald Jones (NIST, USA)

MoF2-1 (Invited) — **14:00-14:30**

SINE2020 - Strengthening the Role of Neutron Science in Industrial Innovation

Marc Thiry[1] and Caroline Boudou[2]

[1]HZG, Germany, [2]ILL, France

MoF2-2 (Invited) — **14:30-15:00**

Using Manufacturing Customers to Drive Innovation, Impact, and Funding of User Facilities

Ronald Jones

NIST, USA

MoF2-3 (Invited) — **15:00-15:30**

Neutron Scattering Leads Material Design in Industry

Kaoru Sato

JFE Techno-Research Corporation, Japan

MoF2-4 (Invited) — **15:30-16:00**

Application of Neutron Reflectometry for Development of Hybrid and Fuel Cell Vehicles

Masashi Harada[1], Hiroyuki Kawaura[1], Kenji Kudo[1], Jun Sugiyama[1], Norifumi Yamada[2]

[1]Toyota CRDL, Japan, [2]KEK, Japan

MoF2-5 (Invited) — **16:00-16:30**

Effects of Microstructural Behavior on Stress-Relaxation Properties of Inconel X-750 Helical Springs

Jeong Won Ha[1], Baek Seok Seong[2], Wanchuck Woo[2], Hi Won Jeong[3], Yoon Suk Choi[4], and Namhyun Kang[4]

[1]KOS LIMITED, Korea, [2]KAERI, Korea, [3]KIMS, Korea, [4]Pusan Nat'l Univ., Korea

MoF2-6 (Invited) — **16:30-17:00**

LINX -Linking Industry to Neutrons and X-Rays

Erik Brok, Nicholas Skar-Gislinge, and Lise Arleth

Univ. of Copenhagen, Denmark

Tuesday, July 11, 2017

09:00	**Plenary II. Tim Lodge** "Time-Resolved SANS Quantifies the Dynamics of Single Chain Exchange in Block Copolymer Micelles" (2F, Grand Ballroom)
09:45	**Plenary III. Jean-Marie Tarascon** "Reaction Mechanisms in Electrode/Battery Systems via Advanced Operando Techniques" (2F, Grand Ballroom)
10:30-11:00	**Coffee Break**
11:00-12:30	**Oral Sessions** TuA1 (Room A) Superconductors II TuB1 (Room B) Neutron Facilities II TuC1 (Room C) Magnetic Oxides TuD1 (Room D) Polymer Dynamics TuE1 (Room E) Biological Interface I TuF1 (Room F) Energy Materials I
12:30-14:30	**Lunch & Poster Session 2** (1F, Exhibition Hall)
14:30-16:00	**Oral Sessions** TuA2 (Room A) Multiferroics TuB2 (Room B) Elastic Scattering Instrumentations I TuC2 (Room C) Magnetic Domain Imaging TuD2 (Room D) Nanoparticles and Self-Assembly TuE2 (Room E) Biological Interface II TuF2 (Room F) Energy Materials II

* Complete abstracts are accessible on-line at

Session Title	**[TuA1] Superconductors II**
Date and Time	July 11 (Tuesday) / 11:00-12:30
Place	Room A (1F)
Session Chair	Linda Udby (U Coppenhagen, Denmark) Masaki Fujita (Tohoku Univ., Japan)

TuA1-1 **11:00-11:15**

Magnetic Resonant Excitations in Heavily Electron-Doped Iron-Selenide Superconductors

Jitae Park[1], Qisi Wang[2], Bingying Pan[2], Yao Shen[2], Yu Feng[2], Die Hu[2], Yiqing Hao[2], Hongliang Wo[2], Jeff Lynn[3], Alexander Ivanov[4], Songxue Chi[5], M. Matsuda[5], Huibo Cao[5], Andrew Christianson[5], Robert Birgeneau[6], Dmitri fremov[7], and Jun Zhao[2]
[1]TU Munich, Germany, [2]Fudan Univ., China, [3]NIST, USA, [4]ILL, France, [5]ORNL, USA, [6]Univ. of California, Berkeley, USA, [7]IFW Dresden, Germany

TuA1-2 **11:15-11:30**

Effect of Nematic Order on the Low-Energy Spin Fluctuations in Detwinned $BaFe_{2-x}Ni_xAs_2$ Systems

Wenliang Zhang[1], J. T. Park[2], Xingye Lu[1], Yuan Wei[1], Xiaoyan Ma[1], Lijie Hao[3], Pengcheng Dai[4], Ziyang Meng[1], Yi-feng Yang[1], Huiqian Luo[1], and Shiliang Li[1]
[1]CAS, China, [2]TU Munich, Germany, [3]CIAE, China, [4]Rice Univ., USA

TuA1-3 **11:30-11:45**

Spin Excitations of Hole-Overdoped Fe-based Superconductors

C. H. Lee[1], K. Horigane[2], K. Kihou[1], J. T. Park[3], F. Waßer[4], N. Qureshi[5], Y. Sidis[6], R. Kajimoto[7], K. Ikeuchi[8], S. Ji[8], J. Akimitsu[2], and M. Braden[4]
[1]Nat'l Inst. of Advanced Industrial Sci., Japan, [2]Okayama Univ., Japan, [3]TU Munich, Germany, [4]Univ. zu Köln, Germany, [5] ILL, France, [6] LLB, France, [7]J-PARC Center, Japan, [8]CROSS, Japan

TuA1-4 **11:45-12:00**

Impact of Uniaxial Pressure on Structural and Magnetic Phase Transitions in Electron-Doped Iron Pnictides

Xingye Lu[1], Kuo-Feng Tseng[2], Thomas Keller[2,3], J. T. Park[4], and Pengcheng Dai[1,5]
[1]Beijing Normal Univ., China, [2]Max-Planck-Institut fuer Festkoerperforschung, Germany, [3]MLZ, Germany, [4]TU Munich, Germany, [5]Rice Univ., USA

TuA1-5 **12:00-12:15**

Heisenberg Model Analysis on Inelastic Powder Neutron Scattering Data using Pure and K Doped $BaMn_2As_2$ Samples

Mehmet Ramazanoglu[1], Robert McQueeney[2], Aashish Sapkota[2], A Pandey[2], Jagat Lamsal[2], Alan Goldman[2], Andreas Kreyssig[2], David Johnston[2], D Abernathy[3], J Nledziela[3], and M Stone[3]
[1]Istanbul Technical Univ., Turkey, [2]DoE Ames Lab, USA, [3]Doe Oak Ridge Lab, USA

TuA1-6 **12:15-12:30**

Electron Doping Effects on the Spin Spectroscopy of $BaFe_{2-x}Ni_xAs_2$ Superconductors

Huiqian Luo[1], Dongliang Gong[1], Tao Xie[1], Xingye Lu[2], Kazuya Kamazawa[3], Kazuki Iida[3], Ryoichi Kajimoto[4], Alexandre Ivanov[5], Devashibhai Adroja[6], Jiri Kulda[5], Sergey Danilkin[7], Guochu Deng[7], Shiliang Li[1], and Pengcheng Dai[8]
[1]CAS, China, [2]Beijing Normal Univ., China, [3]CROSS, Japan, [4]JAEA, Japan, [5]ILL, France, [6]ISIS, UK, [7]ANSTO, Australia, [8]Rice Univ. USA

Session Title	**[TuB1] Neutron Facilities II**
Date and Time	July 11 (Tuesday) / 11:00-12:30
Place	Room B (1F)
Session Chair	Fangwei Wang (IoP/CAS, China) Masatoshi Arai (ESS ERIC, Sweden)

TuB1-1 (Invited) — **11:00-11:30**

Current Status of J-PARC MLF

Toshiji Kanaya

J-PARC Center, Japan

TuB1-2 — **11:30-11:45**

The ESS Instrument Suite

Ken Andersen

ESS ERIC, Sweden

TuB1-3 — **11:45-12:00**

The Jülich High Brilliance Neutron Source Project - Improving Access to Neutrons

T. Gutberlet, U. Rücker, P. Zakalek, T. Cronert, J. Voigt, J. Baggemann, P. Doege, and Th. Brückel

JCNS at MLZ, Germany

TuB1-4 — **12:00-12:15**

RIKEN Compact Neutron Systems and its New Application Results

Otake Yoshie

RIKEN, Japan

TuB1-5 — **12:15-12:30**

Current Status and Perspectives of HANARO

Chang-Hee Lee and Baek-Seok Seong

KAERI, Korea

TuB1-6 — **12:30-12:45**

Progress of Neutron Science Platform in China Advanced Research Reactor

Dongfeng Chen

CIAE, China

Session Title	**[TuC1] Magnetic Oxides**
Date and Time	July 11 (Tuesday) / 11:00-12:30
Place	Room C (1F)
Session Chair	Seongsu Lee (KAERI, Korea) Virginie Simonet (CNRS, France)

TuC1-1 (Invited) **11:00-11:30**

The Magnetism of Double Perovskites Containing 5d Transition Metal Ions

Patrick Woodward[1], Ryan Morrow[2], Jie Xiong[1], and Phuong Tran[1]
[1]Ohio State Univ., USA, [2]Leibniz Inst. for Solid State and Materials Research, Germany

TuC1-2 **11:45-12:00**

Magnetic Interactions in Gd-based Pyrochlore Antiferromagnets

Jason S Gardner[1], J Ross Stewart[2], Georg Ehlers[3], and J A M Paddison[4]
[1]NSRRC, Taiwan, [2]STFC-ISIS, UK, [3]ORNL, USA, [4]Univ. of Cambridge, UK

TuC1-3 **12:00-12:15**

Heavy Metal: Magneto-Structural Relationships in Ir and Os Oxides

Brendan Kennedy and Paula Kayser
The Univ. of Sydney, Australia

TuC1-4 **12:15-12:30**

Neutron as a Probe to Study Magnetization Reversal in a Spinel Compound, $CoCr_{1.9}Fe_{0.1}O_4$

Amit Kumar and S. M. Yusuf
BARC, India

Session Title	**[TuD1] Polymer Dynamics**
Date and Time	July 11 (Tuesday) / 11:00-12:30
Place	Room D (1F)
Session Chair	Mitsuhiro Shibayama (The Univ. of Tokyo, Japan) Soo-Hyung Choi (Hongik Univ., Korea)

TuD1-1 (Invited) — **11:00-11:30**

Complex Structured Polymers in Extensional Flow - Rheology and Small-Angle Neutron Scattering

Kell Mortensen[1], Jacob Kirkensgaard[1], Anine Borger[1], Ole Hassager[2], Kristoffer Almdal[2], Qian Huang[2], Andriy Dorokhin[2], and Christopher J. Garvey[3]

[1]Univ. of Copenhagen, Denmark, [2]Technical Univ. of Denmark, Denmark, [3]ANSTO, Australia

TuD1-2 — **11:30-11:45**

Time-Resolved Simultaneous SANS/FTIR Measurements on Cocrystallization Phenomena of Syndiotactic Polystyrene with Polyethyleneglycols

Fumitoshi Kaneko[1], Shuma Sato[1], Tatsuya Kawaguchi[1], Aurel Radulescu[2], Maria M. Schiavone[2], Tobias E. Schrader[2], Jürgen Allgaier[2], Masayoshi Nishiura[3], and Zhaomin Hou[3]

[1]Osaka Univ., Japan, [2]JCNS, Germany, [3]RIKEN, Japan

TuD1-3 — **11:45-12:00**

Topological Interactions in Polymers under Shear

Maciej Kawecki[1], Franz Adlmann[2], Philipp Gutfreund[3], Sudipta Gupta[4], Airidas Korolokovas[3], Peter Falus[3], David Uhrig[5], and Max Wolff[2]

[1]EMPA, Switzerland, [2]Uppsala Univ., Sweden, [3]ILL, France, [4]Louisiana State Univ., USA, [5]ORNL, USA

TuD1-4 — **12:00-12:15**

New Insights into an Old Topic: Rheology and Structure of Hyaluronic Acid (HA) - Surfactant Complexes

Philipp Buchold[1,2], Ralf Schweins[1], and Michael Gradzielski[2]

[1]ILL, France, [2]TU Berlin, Germany

TuD1-5 — **12:15-12:30**

The Logarithmic Relaxation Process and the Critical Temperature of Liquids in Nano-Confined States

Suresh Mavila Chathoth[1], Changjiu Chen[1], and Dehong Yu[2]

[1]City Univ. of Hong Kong, Hong Kong, [2]ANSTO, Australia

Session Title	**[TuE1] Biological Interface I**
Date and Time	July 11 (Tuesday) / 11:00-12:30
Place	Room E (2F)
Session Chair	Myung Chul Choi (KAIST, Korea) Martin Mueller (HZG, Germany)

TuE1-1 (Invited) **11:00-11:30**

Examining the Creation and Destruction of Model Bacterial Surfaces

Luke Clifton[1], Maximilian Skoda[1], Arwel Hughes[1], Stephen Holt[2], and Jeremy Lakey[3]
[1]ISIS, UK, [2]ACNS, Australia, [3]Newcastle Univ., UK

TuE1-2 **11:30-11:45**

Non-Lamellar Lipid Assembly at Interfaces-Revealing Layer Structure and Dynamics by Neutron Surface Scattering Techniques

Tommy Nylander[1], Olaf Soltwedel[2,3], Marina Ganeva[4], Christopher Hirst[1], James Holdaway[1], Marianna Yanez Arteta[1], Maria Wadsater[1], Justas Barauskas[5], Henrich Frielinghaus[4], and Olaf Holderer[4]
[1]Lund Univ., Sweden, [2]Max-Planck-Inst., Germany, [3]TU Munich, Germany, [4]JCNS, Germany, [5]Camurus AB, Sweden

TuE1-3 **11:45-12:00**

Neutron Reflectometry Investigations of Single Lipid Bilayer-Poloxamer Biomimetic Systems

Jaroslaw Majewski[1,2,3], Steven Hayden[4], Ann Junghans[2], and Millicent Firestone[2]
[1]Los Al Nat'l Science Foundation, USA, [2]Los Alamos Nat'l Laboratory, USA, [3]Univ. of California Davis, USA, [4]Aramco Research Center, USA

TuE1-4 **12:00-12:15**

Molecular Transport in Lipid Membranes: Lipid Exchange and Translocation Processes Investigated by Reflectivity and Small Angle Neutron Scattering

Lionel Porcar[1], Yuri Gerelli[1], Giovanna Fragneto[1], and Ursula Perez-Salas[2]
[1]ILL, France, [2]Univ. of Illinois, USA

TuE1-5 **12:15-12:30**

Cholesterol Facilitates Assembly of Protein on Membrane: Insights into Lipid Rafts

Minh Dinh Phan[1], Keel Yong Lee[1], Jumi Lee[1], Sushil Satija[2], and Kwanwoo Shin[1]
[1]Sogang Univ., Korea, [2]NIST, USA

Session Title	**[TuF1] Energy Materials I**
Date and Time	July 11 (Tuesday) / 11:00-12:30
Place	Room F (2F)
Session Chair	Sung-Yoon Chung (KAIST, Korea)

TuF1-1 (Invited) — **11:00-11:30**

Neutrons Are Indispensable for Research on Energy Materials!

Matthias Ballauff
HZB, Germany

TuF1-2 — **11:30-11:45**

Neutron Diffraction Study on Li_3PO_4 Solid Electrolyte for Lithium Ion Battery

Evvy Kartini[1], Maykel Manawan[2], and Malcolm F. Collins[3]
[1]Nat'l Nuclear Energy Agency, Indonesia, [2]Univ. of Indonesia, Indonesia, [3]McMaster Univ., Canada

TuF1-3 — **11:45-12:00**

Impact of Moisture on the Morphology of Hybrid Organometal Halide Perovskite Thin Films for Photovoltaic Applications

Johannes Schlipf[1], Lukas Oesinghaus[1], Lorenz Bießmann[1], Ezzeldin Metwalli[1], Lionel Porcar[2], and Peter Müller-Buschbaum
[1]TU Munich, Germany, [2]ILL, France

TuF1-4 — **12:00-12:15**

Evolution of Boson Peak with Li-Salt Concentration in Superionic $xLi_2SO_{4(1-x)}LiPO_3$ Glasses

Tom Heitmann[1], Gavin Hester[2], and Saibal Mitra[2]
[1]Univ. of Missouri Research Reactor, USA, [2]Missouri State Univ., USA

TuF1-5 — **12:15-12:30**

Hydrogen Dynamics in Novel Solid-State Li Conductors

Tatsiana Burankova[1], Léo Duchêne[2], Yigang Yan[2], Ruben-Simon Kühnel[2], Jan Embs[1], Bernhard Frick[3], and Arndt Remhof[2]
[1]PSI, Switzerland, [2]Swiss Federal Laboratories for Materials Sci. and Tech., Switzerland, [3]ILL, France

Session Title	**[TuA2] Multiferroics**
Date and Time	July 11 (Tuesday) / 14:30-16:00
Place	Room A (1F)
Session Chair	Je-Geun Park (Seoul Nat'l Univ., Korea) Patrick Woodward (Ohio State Univ., USA)

TuA2-1 **14:30-14:45**

Magnetic Ground State and Magnon-Phonon Interaction in Multiferroic h-$YMnO_3$

Sonja L. Holm[1,2], Andreas Kreisel[1,3], Turi K. Schäffer[1], Anders Bakke[1], Mads Bertelsen[1], Ursula B. Hansen[1], Maria Retuerto[1,4], Jacob Larsen[5], Dharmalingam Prabhakaran[6], Pascale P. Deen[1,7], Zahra Yamani[8], Jonas O. Birk[1,9], Uwe Stuhr[9], Christof Niedermayer[9], Amy Fennell[9], Brian M. Andersen[1], and Kim Lefmann[1]

[1]Univ. of Copenhagen, Denmark, [2]Univ. of Aarhus, Denmark, [3]Univ. of Leipzig, Germany, [4]Consejo Superior de Investigaciones Cientificas, Spain, [5]TU Denmark, Denmark, [6]Univ. of Oxford, UK, [7]ESS ERIC, Sweden, [8]Chalk River Nat'l Laboratories, Canada, [9]PSI, Switzerland

TuA2-2 **14:45-15:00**

Magnetic Structure and Dynamics of Multiferroic CuO

H. Jacobsen[1], A. J. Princep[1], E. Hamilton[1], S. Tóth[2], R.A. Ewings[3], M. Enderle[4], E. M. Hétroy Wheeler[5], D. Prabhakaran[1], and A. T. Boothroyd [1]

[1]Oxford Univ., UK, [2]PSI, Switzerland, [3]Rutherford Appleton Laboratory, UK, [4]ILL, France, [5]ILL, UK

TuA2-3 **15:00-15:15**

The Origin of the Polar Symmetry in Huebnerite-Type ($MnWO_4$) Multiferroics

SoHyun Park[1], Jürg Schefer[2], Muhtar Ahart[3], Björn Pedersen[4], Florence Porcher[5], David Behal[1], and Benedikt Röska[1]

[1]Ludwig-Maximilians-Universität München, Germany, [2]PSI, Switzerland, [3]Carnegie Institute, USA, [4]FRM II, Germany, [5]LLB, France

TuA2-4 **15:15-15:30**

Origin of Magnetoelectric Coupling Effect and Spin Dynamics of Multiferroic System $Co_4Nb_2O_9$

Guochu Deng[1], Yiming Cao[2], Wei Ren[2], Shixun Cao[2], Andrew Studer[1], Nicolas Gauthier[3], Michel Kenzelmann[3], Gene Davison[1], Kirrily Rule[1], Jason Gardner[4], Paolo Imperia[1], Clemens Ulrich[5], and Garry McIntyre[1]

[1]ANSTO, Australia, [2]Shanghai Univ., China, [3]PSI, Switzerland, [4]Nat'l Synchrotron Radiation Research Center, Taiwan, [5]Univ. of New South Wales, Australia

TuA2-5 **15:30-15:45**

Understanding Multiferroicity in the $(ND_4)_2FeCl_5(D_2O)$ Molecular Magnet

Javier Campo[1], José Alberto Rodríguez-Velamazán[1,2], Oscar Fabelo[2], Angel Millán[1], and Laurent Chapon[2]

[1]Materials Sci. Inst. of Aragon, Spain, [2]ILL, France

Session Title	**[TuB2] Elastic Scattering Instrumentations I**
Date and Time	July 11 (Tuesday) / 14:30-16:00
Place	Room B (1F)
Session Chair	Pavol Mikula (NPI/CAS, Czech) Henrich Frielinghaus (JCNS at MLZ, Germany)

TuB2-1 **14:30-14:45**

The First Year of Operation of the Novel PEARL Neutron Powder Diffractometer in Delft

Lambert van Eijck, Marnix Wagemaker, Ad van Well, and Catherine Pappas
Delft Univ. of Tech., Netherlands

TuB2-2 **14:45-15:00**

D3 at the ILL: Structural Studies of Hydrogenous Liquid and Amorphous Systems

Anne Stunault, Gabriel Cuello, Sebastien Vial, and David Jullien
ILL, France

TuB2-3 **15:00-15:15**

Realizing DREAM at European Spallation Source

Mikhail Feygenson[1], Werner Schweika[1,2], Nicolo Violini[1], Philipp Jacobs[3], and Andreas Houben[3]
[1]JCNS, Germany, [2]JCNS, Germany, [3]ESS ERIC, Sweden, [4]RWTH Aachen Univ., Germany

TuB2-4 **15:15-15:30**

The Upgrade from WAND to WAND2 at HFIR: Possibilities and Future

Matthias Frontzek, Katie Andrews, Bryan Chakoumakos, and Jaime Fernandez-Baca
ORNL, USA

TuB2-5 **15:30-15:45**

The Material Engineering Diffractometer BEER at ESS

Premysl Beran[1], Jan Saroun[1], Petr Lukas[1], Jochen Fenske[2], Mustapha Rouijaa[2], Gregor Nowak[2], Dirk Jan Siemers[2], Rudiger Kiehn[2], Martin Muller[2], and Markus Strobl[3]
[1]Nuclear Physics Institute CAS, Czech, [2]HZG, Germany, [3]ESS ERIC, Sweden

TuB2-6 **15:45-16:00**

Studying Soft-Matter and Biological Systems Over a Wide Length Scale from nm to Microns and with High Intensity and High Resolution at the Versatile SANS Diffractometer KWS-2

Judith Houston, Georg Brandl, Marie-Sousai Appavou, and Aurel Radulescu
JCNS, Germany

Session Title	**[TuC2] Magnetic Domain Imaging**
Date and Time	July 11 (Tuesday) / 14:30-16:00
Place	Room C (1F)
Session Chair	Takenao Shinohara (J-PARC, Japan) Seung Wook Lee (Pusan Nat'l Univ., Korea)

TuC2-1 (Invited) — **14:30-15:00**

The Response of Supplementary and Bulk Magnetic Domains during Static and Alternating Magnetic Field Excitations Visualized by Neutron Dark-Field Imaging

Christian Gruenzweig

PSI, Switzerland

TuC2-2 — **15:00-15:15**

A Review about Radiography and Tomography with Polarized Neutrons - a Perfect Tool to Study Magnetic Fields Inside of Matter

Wolfgang Treimer

Beuth Univ. of Applied Sciences, Germany

TuC2-3 — **15:15-15:30**

Quantitative Characterization of Microstructure of Additively Manufactured Inconel 718 Parts using Bragg-edge Imaging Radiography and Validation using Neutron Diffraction

Gian Song[1], Hassina Bilheux[1], Jean Bilheux[1], Jiao Lin[1], Qingge Xie[1], Ke An[1], Alexandru Stoica[1], Louis Santodonato[1], Ryan Dehoff[1], Michael Kirka[1], and Anton Tremsin[2]

[1]ORNL, USA, [2]Univ. of California, Berkeley, USA

TuC2-4 — **15:30-15:45**

In-situ Neutron Radiography Investigations of the Reaction of Zircaloy-4 in Steam, Nitrogen/Steam and Air/Steam Atmospheres

Mirco Grosse[1], Samuel Pulvermacher[1], Martin Steinbrueck[1], and Burkhard Schillinger[2]

[1]Karlsruhe Inst. of Tech., Germany, [2]TU Munich, Germany

TuC2-5 — **15:45-16:00**

Characterisation of 'Pattern-Welded' Swords from the Viking Age by Means of Neutron Techniques

Anna Fedrigo[1], Markus Strobl[1], Alan R. Williams[2], Peter Pentz[3], Kim Lefmann[4], Poul Erik Lindelof[4], Burkhard Schillinger[5], Antonella Scherillo[6], Florence Porcher[7], and Francesco Grazzi[8]

[1]ESS ERIC, Sweden, [2]The Wallace Collection of London, UK, [3]Nat'l Museum, Denmark, [4]Univ. of Copenhagen, Denmark, [5]FRM II, Germany, [6]ISIS, UK, [7] LLB, CEA-CNRS, France, [8]Consiglio Nazionale delle Ricerche, Italy

Session Title	**[TuD2] Nanoparticles and Self-Assembly**
Date and Time	July 11 (Tuesday) / 14:30-16:00
Place	Room D (1F)
Session Chair	Vinod Aswal (BARC, India) Changwoo Do (ORNL, USA)

TuD2-1 (Invited) — **14:30-15:00**

A Generic Size-Selective Purification Method for Nanoparticles based on the Critical Casimir Effect

Hongyu Guo[1,2], Gheorghe Stan[1], and Yun Liu[1,2]

[1]NIST, USA. [2]Univ. of Delaware, USA

TuD2-2 — **15:00-15:15**

Structure and Interfacial Properties of Patchy Nanoparticles

Zhi Luo and Francesco Stellacci

EPFL, Switzerland

TuD2-3 — **15:15-15:30**

Grazing Incidence Small Angle Neutron Scattering from Structures below an Interface

Shirin Nouhi, Maja S. Hellsing, Vassilios Kapaklis, and Adrian R. Rennie

Uppsala Univ., Sweden

TuD2-4 — **15:30-15:45**

SANS/USANS Tunable Multiscale Nanoparticle Ordering by Polymer Crystallization

J. Jestin[1,2], D. Zhao[2], V. Gimenez-Pinto[2], A. Jimenez[2], and S.K. Kumar[2]

[1]LLB, France, [2]Columbia Univ., USA

TuD2-5 — **15:45-16:00**

Complementary Small-Angle Neutron and X-Ray Scattering Studies of Mitoxantrone Loaded Iron Oxide Nanoparticle Complex for Magnetic Drug Targeting

Artem Feoktystov[1], Vasil Garamus[2], Jan Zaloga[3], Rainer Tietze[3], Alexander Ioffe[1], Thomas Brückel[1], and Christoph Alexiou[3]

[1]JCNS, Germany, [2]HZG, Germany, [3]Univ. Hospital Erlangen, Germany

Session Title	**[TuE2] Biological Interface II**
Date and Time	July 11 (Tuesday) / 14:30-16:00
Place	Room E (2F)
Session Chair	Luke Clifton (ISIS, UK) Hideki Seto (KEK, Japan)

TuE2-1 (Invited) **14:30-15:00**

Structure, Composition and Dynamics of Lipoproteins: How to Get Better Markers for Atherosclerosis

Selma Maric[1], Kathryn Browning[2], Tania Lind[1], Sarah Waldie[1,3], Martin Malmsten[2], Trevor Forsyth[3], Martine Moulin[3], Michael Haertlein[3], and Marite Cardenas[1]
[1]Malmö Univ., Sweden [2]Uppsala Univ., Sweden, [3]ILL, France

TuE2-2 **15:00-15:15**

Small Molecule Interactions with Lipid Bilayers by Neutron Diffraction

Christopher J. Garvey[1], Ben Kent[2], Thomas Hauß[2], Robert Georgii [3], Bruno Demé[4], Viviana Cristiglio[4], Tamim Darwish[1], Chun-Ming Wu[5], Ricardo L. Mancera[6], and Gary Bryant[7]
[1]ANSTO Australia, [2]HZB, Germany, [3]TU Munich, Germany, [4]ILL, France, [5]Nat'l Synchrotron Radiation Research Center, Taiwan, [6]Curtin Univ., Australia, [7]RMIT Univ., Australia

TuE2-3 **15:15-15:30**

Dynamical Transition in Cationic Lipid Dioctadecyldimethylammonium Bromide: QENS and MD Simulation Study

S. Mitra[1], P. Dubey[1], H. Srinivasan[1], V.K. Sharma[1], V. Garcia Sakai[2], and R. Mukhopadhyay[1]
[1]BARC, India, [2]Rutherford Appleton Laboratory, UK

TuE2-4 **15:30-15:45**

Neutron Diffraction Reveals Peculiar Effects of Calcium on Lipid Membranes

Norbert Kučerka[1,2], Ermuhammad Dushanov[3], Kholmirzo T. Kholmurodov[1,4], John Katsaras[5,6,7], and Daniela Uhríková[2]
[1]FLNP, Russia, [2]Univ. in Bratislava, Slovakia, [3]JINR, Russia, [4]Dubna State Univ. in Dubna, Russia, [5]Shull Wollan Center at Joint Inst. for Neutron Sciences in Oak Ridge, USA, [6]ORNL, USA, [7]Univ. of Tennessee, USA

TuE2-5 **15:45-16:00**

Determining the Location of Encapsulated Peptides, Proteins, and Other Biomolecules in Contrast-Matched Lipid Bicontinuous Cubic Phases using SANS

Leonie van't Hag[1],[2,3], Liliana de Campo[4], Sally Gras[2], Calum Drummond[5], and Charlotte Conn[5]
[1]ETH Zurich, Switzerland, [2]The Univ. of Melbourne, Australia, [3]CSIRO Manufacturing, Australia, [4]ANSTO, Australia, [5]RMIT Univ., Australia

Session Title	**[TuF2] Energy Materials II**
Date and Time	July 11 (Tuesday) / 14:30-16:00
Place	Room F (2F)
Session Chair	Tom Heitmann (Univ. of Missouri Research Reactor, USA)

TuF2-1 (Invited) — **14:30-15:00**

Advancing Energy Technologies by Understanding Material Function using Neutron Scattering and Computational Methods

Vanessa Peterson

ACNS, Australia

TuF2-2 — **15:00-15:15**

Battery Ageing and Performance Studied with Various Neutron Scattering Techniques

Ralph Gilles, Seidlmayer Stefan, Paul Neelima, von Lüders Christian, Hofmann Michael, Hattendorff Johannes, Buchberger Irmgard, Kudejova Petra, Knoche Thomas, Zinth Veronika, Schulz Michael, Schnell Joshua, Reinhart, Gunter, Gasteiger Hubert A., and Jossen Andreas

TU Munich, Germany

TuF2-3 — **15:15-15:30**

Operando Small-Angle Neutron Scattering of Lithium-Ion Batteries Using Silicon Nanoparticles Anodes

Coraline Millot[1], Jean-Francois Colin[1], Hakima Mendil-Jakani[1], Lionel Porcar[2], and Sandrine Lyonnard[1]

[1]CEA Grenoble, France, [2]ILL, France

TuF2-4 — **15:30-15:45**

In-Situ Observation of Redox Behavior in Ni-YSZ Solid Oxide Fuel Cell Electrodes

Markus Strobl[1,2], Malgorzata Makowska[3], Henrik L Frandsen[4], Salvatore De Angelis[4], Soren Schmidt[4], Monica-Elisabeta Lacatusu[4], Saurabh Kabra[5], Winfried Kockelmann[5], Manuel Morgano[2], Pavel Trtik[2], Tetsuya Kai[6], Takenao Shinohara[6], Anton S Tremsin[7], and Luise Theil-Kuhn[4]

[1]ESS ERIC, Sweden, [2]PSI, Switzerland, [3]FRM II, Germany, [4]DTU, Denmark, [5]RAL, UK, [6]J-PARC Center, Japan, [7]UC Berkeley, USA

TuF2-5 (Invited) — **15:45-16:15**

Comments on the Origin of Photovoltaic Properties of Organic-Inorganic Lead Iodide Perovskites

Seung-Hun Lee

Univ. of Virginia, USA

Wednesday, July 12, 2017

09:00	**Plenary IV. Peter Müller-Buschbaum** "GISANS - Basics, Challenges and Possibilities" (2F, Grand Ballroom)
09:45	**Plenary V. Victoria Garcia-Sakai** "Life on the Fast Lane - Importance of Motions at the Nanoscale" (2F, Grand Ballroom)
10:30-11:00	**Coffee Break**
11:00-12:30	**Oral Sessions** WeA1 (Room A) Lattice Dynamics WeB1 (Room B) Sample Environment and Software II WeC1 (Room C) Quantum Magnetism WeD1 (Room D) Single Chain Behaviour of Polymers WeE1 (Room E) Engineering Materials I WeF1 (Room F) Energy Materials III
12:30-14:30	**Lunch & Poster Session 3** (1F, Exhibition Hall)
14:30-16:00	**Oral Sessions** WeA2 (Room A) Magnetic Structure WeB2 (Room B) Sample Environments WeC2 (Room C) Neutron Imaging WeD2 (Room D) Liquids and Dynamics WeE2 (Room E) Elastic Scattering Instrumentations II WeF2 (Room F) Energy Materials IV

* Complete abstracts are accessible on-line at

Session Title	**[WeA1] Lattice Dynamics**
Date and Time	July 12 (Wednesday) / 11:00-12:30
Place	Room A (1F)
Session Chair	Toby Perring (ISIS, UK) Young Lee (Stanford Univ., USA)

WeA1-1 **11:00-11:15**

Large Anharmonicity in Energy Materials from Inelastic Neutron Scattering and First-Principles Calculations

Jiawang Hong

Beijing Inst. of Tech., China

WeA1-2 **11:15-11:30**

Phonon Localization as a Driver for Relaxor Ferroelectric Behavior

Michael Manley

ORNL, USA

WeA1-3 **11:30-11:45**

Thermal Expansion and Negative Linear Compressibility in $ZnAu_2(CN)_4$: An Inelastic Neutron Scattering Measurements and Lattice Dynamical Studies

Mayanak Kumar Gupta[1], Ranjan Mittal[1,2], Baltej Singh[1], Mohamed Zbiri[2], Andrew Goodwin[3], Helmut Schober[2], and Samarath Lal Chaplot[1,2]

[1]BARC, India, [2]Homi Bhabha Nat'l Inst., India, [3]ILL, France, [4]Univ. of Oxford, UK

WeA1-4 **11:45-12:00**

A Nuclear Quantum Effect with Pure Anharmonicity Causes the Anomalous Thermal Expansion of Silicon

Dennis (Sungtae) Kim and Brent Fultz

Caltech, USA

WeA1-5 **12:00-12:15**

Phonons and Anomalous Thermal Expansion Behaviour in Crystalline Solids

Ranjan Mittal, M. K. Gupta, and S. L. Chaplot

BARC, India

Session Title	**[WeB1] Sample Environment and Software**
Date and Time	July 12 (Wednesday) / 11:00-12:30
Place	Room B (2F)
Session Chair	Marek Bartkowiak (PSI, Switzerland) Arno Hiess (ESS, Sweden)

WeB1-1 **11:00-11:15**

Towards Realistic Tribological Models: Experimental Structural Studies of Confined Lubricating Surfaces Using Neutrons

Rob Barker[1,2], Javier Sotres[3], Stuart Prescott[4], Robert Richardson[5], Becky Welbourn[6], and Andrew Jackson[7]

[1]Univ. of Kent, UK, [2]Univ. of Dundee, UK, [3]Malmö Univ., Sweden, [4]UNSW, Australia, [5]Univ. of Bristol, UK, [6]ISIS, UK, [7]ESS ERIC, Sweden

WeB1-2 **11:15-11:30**

Temperature Sample Environment for the High Filed Magnet at the Helmholtz-Zentrum Berlin

Klaus Kiefer[1], Sebastian Gerischer[1], Robert Wahle[1], Bastian Klemke[1], Elizabeth Blackburn[2], Ted Forgan[2], and Peter Smeibidl[1]

[1]HZB, Germany, [2]Univ. of Birmingham, UK

WeB1-3 **11:30-11:45**

Compact HTS Magnets for Neutron Scattering Sample Environments

Taotao Huang, Donald Pooke, Mike Fee, and Vadim Chamritski

HTS-110, New Zealand

WeB1-4 **11:45-12:00**

BornAgain: a Simulation and Fitting Framework for Nuclear and Magnetic GISANS

Jan Burle, Jonathan Fisher, Marina Ganeva, Gennady Pospelov, Walter Van Herck, and Joachim Wuttke

JCNS, Germany

WeB1-5 **12:00-12:15**

Depth Resolved GISANS from Liquid Solid Interfaces Reconstructed via 2D Resolution Functions

Franz A. Adlmann[1], Gunnar K. Pálsson[1], Airidas Korolkovas[2], Brian Kitchen[1], Andreas Bliersbach[1], Boris Toperverg[3], and Max Wolff[1]

[1]Uppsala Univ., Sweden, [2]ILL, France, 3PNPI, Russia

WeB1-6 **12:15-12:30**

A Sapphire Single Crystal Cell for In Situ Neutron Powder Diffraction of Solid Gas Reactions

Holger Kohlmann

Univ. Leipzig, Germany

Session Title	**[WeC1] Quantum Magnetism**
Date and Time	July 12 (Wednesday) / 11:00-12:30
Place	Room C (1F)
Session Chair	Michel Kenzelmann (PSI, Switzerland) Catherine Pappas (Delft Univ., Netherlands)

WeC1-1 (Invited) — **11:00-11:30**

Majorana Ferimons in Kitaev Quantum Spin Lattice Alpha-$RuCl_3$

Seung-Hwan Do[1], Sang-Youn Park[2], Kwang-Yong Choi[1], Jae-Hoon Park[2,3], and Sungdae Ji[2,3]
[1]Chung-Ang Univ., Korea, [2]Max Planck POSTECH Center for Complex Phase Materials, Korea

WeC1-2 — **11:30-11:45**

Revisiting the Low Energy Spin Dynamics of the Quantum Spin Ice Candidate $Pr_2Sn_2O_7$

P. M. Sarte[1], A. A. Aczel[2], G. Ehlers[2], C. Stock[1], B. D. Gaulin[3,4], C. Mauws[5], M.B. Stone[2], S. Calder[2], S. E. Nagler[2], J. W. Hollett[5], J. S. Gardner[2,6], J. P. Attfield[1], and C. R. Wiebe[3,5,7,8]
[1]Univ. of Edinburgh, UK, [2]ORNL, USA, [3]McMaster Univ., Canada, [4]Canadian Inst. for Advanced Research, Canada, [5]Univ. of Winnipeg, Canada, [6]Nat'l Taiwan Univ., Taiwan, [7]Nat'l Synchrotron Radiation Research Center, Taiwan, [8]Univ. of Manitoba, Canada

WeC1-3 — **11:45-12:00**

Magnetic Charge Injection in Spin Ice: a New Way to Fragmentation

Virginie Simone[1], Emilie Lefrançois[1,2,3], Vadim Cathelin[1], Elsa Lhotel[1], Julien Robert[1], Rafik Ballou[1], Laurent C. Chapon[4], Pascal Lejay[1], Françoise Damay[5], Claire V. Colin[1], Jacques Ollivier[2], and Bjorn Fak[2]
[1]Institut Néel, France, [2]ILL, France, [3]Max Planck Inst. for Solid State Research, Germany, [4]Diamond, UK, [5]LLB, France

WeC1-4 — **12:00-12:15**

Magnetic Excitations in $Yb_2Ti_2O_7$ Studied in A 111 Magnetic Field

Jonas Kindervater[1], Allen Scheie[1], Seyed Koohpayeh[1], Garbiele Sala[2], Georg Ehlers[2], Oleg Tchernyshov[1], and Collin Broholm[1]
[1]Inst. for Quantum Matter and Department of Phyk, USA., [2]ORNL, USA

Session Title	**[WeD1] Single Chain Behaviour of Polymers**
Date and Time	July 12 (Wednesday) / 11:00-12:30
Place	Room D (1F)
Session Chair	Jaroslaw Majewski (UC Davis, USA) Dae-Won Sohn (Hanyang Univ., Korea)

WeD1-1 (Invited) — **11:00-11:30**

Structure and Dynamics of Single-Chain Nano-Particles in Solution

Arantxa Arbe[1], Josetxo Pomposo[1,2], Angel J. Moreno[1], and Juan Colmenero[1,3]
[1]Centro de Física de Materiales, Spain, [2]Ikerbasque, Basque Foundation for Science, Spain, [3]Donostia International Physics Center, Spain

WeD1-2 — **11:30-11:45**

Polymer Conformation Changes due to Soft Confinement

Björn Kuttich and Bernd Stühn
TU Darmstadt, Germany

WeD1-3 — **11:45-12:00**

Spatial Scale Dependence of Diffusion Process in Glass-Forming Liquids

Maiko Kofu[1,2], Antonio Faraone[3], Madhusudan Tyagi[3], Michihiro Nagao[3], and Osamu Yamamuro[2]
[1]J-PARC Center, Japan, [2]Univ. of Tokyo, Japan, [3]NIST, USA

WeD1-4 — **12:00-12:15**

Reduced Mobility of Polymer Thin Films near the Graphene Oxide Surface

Jaseung Koo[1], Ki-In Choi[1], Tae-Ho Kim[1], and Sushil Satija[2]
[1]KAERI, Korea, [2]NIST, USA

WeD1-5 — **12:15-12:30**

Investigation of Molecular Dynamics: Comparison of New Methods

Dominik Zeller[1,2,3], Victoria Garcia Sakai[3], and Judith Peters[1,2]
[1]Université Grenoble Alpes, LiPhy, France, [2]ILL, France, [3]ISIS, UK

Session Title	**[WeE1] Engineering Materials I**
Date and Time	July 12 (Wednesday) / 11:00-12:30
Place	Room E (2F)
Session Chair	Xun-Li Wang (City Univ. of Hong Kong, Hong Kong) Oliver Kirstein (ESS ERIC, Sweden)

WeE1-1 (Invited) **11:00-11:30**

In Situ Measurements of Microstructure Evolution during Heat-Treatments for Engineering Steels using Quantum Beams

Yo Tomota

NIMS, Japan

WeE1-2 **11:30-11:45**

The Influence of Porosity in Spray Formed Steels on Pseudo-Strains Induced in Neutron Diffraction Residual Strain/Stress Measurements

Tung Lik Lee

ISIS, UK

WeE1-3 **11:45-12:00**

Microstructural Evolution of Ultrahigh Strength Secondary Hardening Steels with Different Co and Ni Contents

Yoon-Jung Won, Jung-Sun You, Young-Jun Kwon, Soon-Woo Kwon, Hoon Kwon, and Ki-Sub Cho

Kookmin Univ., Korea

WeE1-4 **12:00-12:15**

In-situ Neutron Diffraction Study of Deformation Behaviors of CrCoFeNi High Entropy Alloy at Large Plastic Strain

Bing Wang[1], Muhammad NAEEM[1], Tamas Ungar[2], Weihong Liu[1], Chain Tsuan Liu[1], Si Lan[1,3], Stefanus Harjo[4], and Xun-Li Wang[1]

[1]City Univ. of Hong Kong, Hong Kong, [2]Etövös Univ. Budapest, Hungary, [3]Nanjing Univ. of Sci. and Tech., China, [4]JAEA, Japan

WeE1-5 **12:15-12:30**

Elucidating the Relationship Between Terahertz Vibrations and Mechanical Properties in Metal-Organic Framework Materials

Matthew Ryder[1,2,3], Bartolomeo Civalleri[4], Gianfelice Cinque[3], Sanghamitra Mukhopadhyay[2], Svemir Rudić[2], Felix Fernandez-Alonso[2], and Jin-Chong Tan[1]

[1]Univ. of Oxford, UK, [2]ISIS, UK, [3]Diamond Light Source, UK, [4]Univ. of Turin, Italy

Session Title	**[WeF1] Energy Materials III**
Date and Time	July 12 (Wednesday) / 11:00-12:30
Place	Room F (2F)
Session Chair	T. Kamiyama (KEK, Japan)

WeF1-1 (Invited) — **11:00-11:30**

Neutron Powder Diffraction of Energy Storage Materials

Ashfia Huq
ORNL, USA

WeF1-2 — **11:30-11:45**

Determining the Surface Property Variation of Heterogeneous Porous Materials Using the Generalized Porod's Law Scattering Theory

Wei-Shan Chiang[1,2] and Yun Liu[1,2]
[1]NIST, USA, [2]Univ. of Delaware, USA

WeF1-3 — **11:45-12:00**

Evaluation of Filling Rate of Methane in Methane-Propane Hydrate by Neutron Powder Diffraction

Akinori Hoshikawa, Takeshi Matsukawa, and Toru Ishigaki
Ibaraki Univ., Japan

WeF1-4 — **12:00-12:15**

Neutron Diffraction Study on Nanoparticles of Metal Hydrides

Hiroshi Akiba[1], Maiko Kofu[1,2], Kohei Kusada[3], Hirokazu Kobayashi[3], Hiroshi Kitagawa[3], Kazutaka Ikeda[2,4], Toshiya Otomo[2,4], and Osamu Yamamuro[1]
[1]The Univ. of Tokyo, Japan, [2]J-PARC, Japan, [3]Kyoto Univ., Japan, [4]KEK, Japan

Session Title	**[WeA2] Magnetic Structure**
Date and Time	July 12 (Wednesday) / 14:30-16:00
Place	Room A (1F)
Session Chair	Kim Lefman (Univ. of Copenhagen, Denmark) Shinich Shamoto (JAEA, Japan)

WeA2-1 **14:30-14:45**

B vs. T phase Diagram of $(ND_4)_2[FeCl_5(D_2O)]$ Studied by Neutron Diffraction and Magnetization

Wei Tian[1], Huibo Cao[1], Jiaqiang Yan[1], Amanda Clune[2], Kendall Hughey[2], John Singleton[3], Janice Musfeldt[2], Brian Sales[1], and Jaime Fernandez-Baca[1]
[1]ORNL, USA, [2]Univ. of Tennessee, USA, [3]Los Alamos Nat'l Laboratory, USA

WeA2-2 **14:45-15:00**

Magnetic Structure Analysis of $EuMn_2O_5$ at q_M=(1/2,0,1/3) Ferroelectric Phase based on Magnetic Space Group

Yukio Noda[1], Hiroyuki Kimura[1], Satoru Horio[1], Jin Lin[1], Sei Fujiyama[1], Mamoru Fukunaga[1], Haruhiro Hiraka[2], Hironori Nakao[3], ChangHee Lee[4], ShinAe Kim[4], and Myungkook Moon[4]
[1]Tohoku Univ., Japan, [2]Ibaraki Univ., Japan, [3]PF-KEK, Japan, [4]HANARO-KAERI, Korea

WeA2-3 **15:00-15:15**

Neutron Diffraction to Distinguish Between Symmetry Lowering and Renninger Effect: An Example of Multiferroic $Ba_2CoGe_2O_7$

Andrew Sazonov[1], Martin Meven[1], Robert Georgii[2], Georg Roth[3], and Vladimir Hutanu[1]
[1]MLZ, Germany, [2]TU Munich, Germany, [3]RWTH Aachen Univ., Germany

WeA2-4 **15:15-15:30**

STRUCTURE AND PROPERTIES OF SOME NEUTRON IRRADIATED MAGNETICS

Seongsu Lee[1], Vitaly Parkhomenko[2], Yury Skryabin[2], Savva Bogdanov[2], Alexander Nosov[2], Alexander Teplykh[2], Mikhail Semkin[3], and Alexander Pirogov[2,3]
[1]KAERI, Korea, [2]RAS, Russia, [3]Ural Federal Univ., Russia

WeA2-5 **15:30-15:45**

Powder Neutron Diffraction Studies of New Magnetic Manganites

Graham M. McNally[1], Ángel M. Arévalo-López[1], Pascal Manuel[2], and J. Paul Attfield[1]
[1]Univ. of Edinburgh, UK, [2]ISIS, UK

WeA2-6 **15:45-16:00**

Multi-Axial Spin Textures in the Complex Magnetic Phase Diagram of Rare-Earth Copper Compounds

Wolfgang Simeth[1], Andreas Bauer[1], Nives Bonacic[1], Christopher Duvinage[1], Robert Georgii[2], Matthias Gutmann[3], Vladimir Hutanu[4], Martin Meven[4], Sebastian Mühlbauer[2], Kirill Nemkovski[4], Bachir Ouladdiaf[5], Pascal Manuel[3], Björn Pedersen[2], Karel Prokes[6], Marein Rahn[7], Tobias Schrader[4], Anatoliy Senyshyn[2], Michael Wagner[1], and Christian Pfleiderer[1]

[1]TU Munich, Germany, [2]FRM II, Germany, [3]ISIS, UK, [4]JCNS at MLZ, Germany, [5]ILL, France, [6]HZB, Germany, [7]Oxford Univ., UK

Session Title	**[WeB2] Sample Environments**
Date and Time	July 12 (Wednesday) / 14:30-16:00
Place	Room B (1F)
Session Chair	Paolo Imperia (ANSTO, Australia) Ji-Yong So (KAERI, Korea)

WeB2-1 **14:30-14:45**

Data Processing Workflow for Inelastic Neutron Scattering at SNS

Andrei Savici, Mathieu Doucet, Ovidiu Garlea, and Barry Winn

ORNL, USA

WeB2-2 **14:45-15:00**

Recent Advances in in situ High Pressure Neutron Scattering in a Diamond Anvil Cell

Bianca Haberl[1], Jamie J. Molaison[1], Luke L. Daemen[1], Yongqiang Cheng[1], Timmy Ramirez-Cuesta[1], and Reinhard Boehler[1,2]

[1]ORNL, USA, [2]Carnegie Inst. of Washington, USA

WeB2-3 **15:00-15:15**

Development of High Intensity Wide-Angle Polarization Analysis with ^{3}He Spin Filters

Wangchun Chen[1,2], Thomas Gentile[2], Shannon Watson[2], Taufique Hassan[1,2], Qiang Ye[1,2], Aaron Kirchhoff[2], Yiming Qiu[2], Jose Rodriguez-Rivera[1,2], and Collin Broholm[2,3]

[1]Univ. of Maryland, USA, [2]NIST, USA, [3]Johns Hopkins Univ., USA

WeB2-4 **15:15-15:30**

High Magnetic Field Facility for Neutron Scattering at Helmholtz-Zentrum Berlin

Oleksandr Prokhnenko[1], Peter Smeibidl[1], Maciej Bartkowiak[1], Norbert Stuesser[1], Sebastian Gerischer[1], Robert Wahle[1], Stephan Kempfer[1], Oleg Rivin[1], Mark Bird[2], Karel Prokes[1], and Bella Lake[1]

[1]HZB, Germany, [2]Nat'l High Magnetic Field Laboratory, USA

WeB2-5 **15:30-15:45**

The Australian National Deuteration Facility for Structure Function Applications using Neutrons

Tamim Darwish, Nageshwar Yepuri, Anwen Krause Heuer, Anthony Duff, Karyn Wilde, and Peter Holden

ANSTO, Australia

Session Title	**[WeC2] Neutron Imaging**
Date and Time	July 12 (Wednesday) / 14:30-16:00
Place	Room C (1F)
Session Chair	Wolfgang Treimer (HZB, Germany)

WeC2-1 (Invited) — **14:30-15:00**

Application Study of Pulsed Neutron Imaging at RADEN in J-PARC MLF

Takenao Shinohara[1], Tetsuya Kai[1], Kenichi Oikawa[1], Yuhua Su[1], Kosuke Hiroi[1], Mariko Segawa[1], Takeshi Nakatani[1], Hirotoshi Hayashida[2], Yoshihiro Matsumoto[2], Joseph Don Parker[2], and Yoshiaki Kiyanagi[3]

[1]JAEA, Japan, [2]CROSS, Japan, [3]Nagoya Univ., Japan

WeC2-2 — **15:00-15:15**

Neutron Microscope Project at PSI - Recent Upgrades and Results from the First Scientific Users

Pavel Trtik and Eberhard Lehmann

PSI, Switzerland

WeC2-3 — **15:15-15:30**

Neutron Imaging Applications on DINGO at OPAL

Ulf Garbe, Filomena Salvemini, and Anna Paradowska

ACNS, Australia

WeC2-4 — **15:30-15:45**

Neutron Reflectivity Imaging of Buried Layers and Interfaces in Thin Films

Kenji Sakurai[1,2], Jinxing Jiang[1,2], Mari Mizusawa[1,3], Takayoshi Ito[3], Kazuhiro Akutsu[3], and Noboru Miyata[3]

[1]NIMS, Japan, [2]Univ. of Tsukuba, Japan, [3]CROSS, Japan

WeC2-5 — **15:45-16:00**

Sub-Pixel Correlation Length Imaging of Heterogeneous Colloidal Crystal Formation

Ralph Harti[1], Markus Strobl[2], and Christian Grunzweig[1]

[1]PSI, Switzerland, [2]ESS ERIC, Sweden

Session Title	**[WeD2] Liquids and Dynamics**
Date and Time	July 12 (Wednesday) / 14:30-16:00
Place	Room D (1F)
Session Chair	Moon Park (POSTECH, Korea) Arantxa Arbe (Centro de Física de Materiales, Spain)

WeD2-1 **14:30-14:45**

Deuteration and Partial Deuteration for the Investigation of the Dynamics of Ionic Liquids

Rolf Hempelmann

Transfercentre Sustainable Electrochemistry, Germany

WeD2-2 **14:45-15:00**

Effects of Hydrotropic Salt on the Dynamics of Cationic DTAB Micelles

V. K. Sharma[1], H. Srinivasan[1], S. Mitra[1], V. Garcia Sakai[2], and R. Mukhopadhyay[1]

[1]BARC, India, [2]Rutherford Appleton Laboratory, UK

WeD2-3 **15:00-15:15**

The Molecular-Level Mechanism Underlying Magnetic Effects in the Magnetic Room-Temperature Ionic Liquied [BMIM][$FeCl_4$]

Antonio Benedetto[1,2], Jan Embs[2], and Pietro Ballone[3]

[1]Univ. College Dublin, Ireland, [2]PSI, Switzerland, [3]Norwegian Univ. of Sci. and Tech., Norway

WeD2-4 **15:15-15:30**

Influence of H-Bonding on Dynamical Properties of Ionic Liquids

Juan Francisco Mora Cardozo[1], Tatsiana Burankova[1], Jacques Ollivier[2], Bernhard Frick[2], and Jan P. Embs[1]

[1]PSI, Switzerland, [2]ILL, France

WeD2-5 **15:30-15:45**

Isomorphs in Glass-Forming Liquids

Henriette Wase Hansen[1], Bernhard Frick[2], and Kristine Niss[1]

[1]Roskilde Univ., Denmark, [2]ILL, France

Session Title	**[WeE2] Elastic Scattering Instrumentations II**
Date and Time	July 12 (Wednesday) / 14:30-16:00
Place	Room E (1F)
Session Chair	Hideki Seto (KEK/JPARC, Japan) June Hyuk Lee (KAERI, Korea)

WeE2-1 **14:30-14:45**

MAGiC: the Polarized Single-Crystal Diffractometer at the ESS

Xavier FABREGES[1], Sergey KLIMKO[1], Arsen Goukasov[1], Werner Schweika[2,3], Peter Harbott[2], Uwe Filges[4], and Michel Kenzelmann[4]

[1]CEA-CNRS, France, [2]JCNS at MLZ, Germany, [3]ESS ERIC, Sweden, [4]PSI, Switzerland

WeE2-2 **14:45-15:00**

Tools for Grazing Incidence Neutron Scattering Experiments for Nano-Scale Tribology Studies

Henrich Frielinghaus, Manuchar Gvaramia, Gaetano Mangiapia, Sebastian Jaksch, Marina Ganeva, Alexandros Koutsioubas, Stefan Mattauch, Michael Ohl, Michael Monkenbusch, and Olaf Holderer

JCNS at MLZ, Germany

WeE2-3 **15:00-15:15**

The Time-of-Flight SANS Instrument BILBY at ANSTO: Design, Commissioning and First Results

Anna Sokolova, Andrew Whitten, and Liliana de Campo

ANSTO, Australia

WeE2-4 **15:15-15:30**

A Compact Focusing SANS Instrument using a Metallic Focusing Mirror for Compact Accelerator Driven Neutron Sources Demonstrated at the Hokkaido University Neutron Source

Shin Takeda[1], Takuya Hosobata[1], Masahiro Hino[2], Toshinori Ishida[3], Junta Yamada[3], Shin-ya Morita[4], Masato Ohnuma[3], Yutaka Yamagata[1], and Michihiro Furusaka [3]

[1]RIKEN, Japan, [2]Kyoto Univ., Japan, [3]Hokkaido Univ., Japan, [4]Tokyo Denki Univ., Japan

WeE2-5 **15:30-15:45**

HEIMDAL at ESS: A Thermal Neutron Powder Diffractometer Combined with SANS and Imaging - a Multiple Length Scale Instrument for Materials Science

Sonja Holm[1], Kåre Iversen[1], Jonas Birk[2], Rodion Kolevatov[3], Jürg Schefer[4], Bjørn Hauback[3], Kim Lefmann[2], and Mogens Christensen[1]

[1]Aarhus Univ., Denmark, [2]Univ. of Copenhagen, Denmark, [3]Inst. for Energy Tech., Norway, [4]PSI, Switzerland

WeE2-6 **15:45-16:00**

Present Status of and First Results from The Time of Flight USANS at the Spallation Neutron Source

Mikhail Agamalian[1], Kenneth Littrell[1], Luke Heroux[1], Matthieu Doucet[1], and Jack Carpenter[2]

[1]ORNL, USA., [2]Argonne Nat'l, Laboratory, USA

Session Title	**[WeF2] Energy Materials IV**
Date and Time	July 12 (Wednesday) / 14:30-16:00
Place	Room F (2F)
Session Chair	Ashfia Huq (ORNL, USA)

WeF2-1 **14:30-14:45**

Inelastic Neutron Scattering Studies of δ-Bi_2O_3-related Oxide-ion Conductors

Chris Ling[1], Julia Wind[1], and Richard Mole[2]
[1]The Univ. of Sydney, Australia, [2]ACNS, Australia

WeF2-2 **14:45-15:00**

Proton Conductive Membranes Based on Sulfonated Syndiotactic Polystyrene: Morphological Analysis through Small Angle Neutron Scattering

Maria Maddalena Schiavone and Aurel Radulescu
JCNS at MLZ, Germany

WeF2-3 **15:00-15:15**

Neutron Depth Profiling at a Focused Neutron Beam to Study Li-Ion Transport in Thin-Film Batteries

Egor Vezhlev[1], Alexander Ioffe[1], Stefan Mattauch[1], Thomas Brückel[1], Chunguang Chen[1,2], D.L. Danilov[1,2], R.-A. Eichel[1], and P. H. L. Notten[1,2]
[1]JCNS at MLZ, Germany, [2]Eindhoven Univ. of Tech., Netherlands

WeF2-4 **15:15-15:30**

Structural and Dynamic Properties of MgAgSb-Based Thermoelectric Materials Studied by Neutron Scattering

Xiyang Li[1], Baotian Wang[2], Tatiana Guidi[3], Maxim Avdeev[4,5], Lunhua He[1,2], Huaizhou Zhao[1], and Fangwei Wang[1,2]
[1]CAS., China, [2]CSNS, China, [3]ISIS, UK, [4]ANSTO, Australia, [5]The Univ. of Sydney, Australia

WeF2-5 **15:30-15:45**

Understanding Ion Transport Phenomena in Heterostructured Yttria-Stabilized Zirconia with Respect to Coordination Chemistry

Daehee Lee[1], George Sterbinsky[2], Aloysius Soon[1], Anton Stampfl[3], Joosun Kim[4], and Jooho Moon[1]
[1]Yonsei Univ., Korea, [2]Argonne Nat'l Laboratory, USA, [3]ANSTO, Australia, [4]KIST, Korea

WeF2-6 **15:45-16:00**

Influence of Water Vapor on the Dynamics of an Ionic Liquid Intercalated between MXene Layers

Naresh Osti[1], Katherine Van Aken[2], Mohamed Alhabeb[2], Madhusudan Tyagi[3,4], Yury Gogotsi[2], and Eugene Mamontov[1]
[1]ORNL, USA, [2]Drexel Univ., USA, [3]NIST, USA, [4]Univ. of Maryland, USA

Thursday, July 13, 2017

09:00	**Plenary VI. Pengcheng Dai** "Electron-Lattice-Magnetism interactions in iron-based superconductors" (2F, Grand Ballroom)
09:45-10:00	**Coffee Break**
10:00-12:00	**Oral Sessions** ThA1 (Room A) Spin Order and Dynamics ThB1 (Room B) Detectors and Optics ThC1 (Room C) Heavy Fermions and Metals ThD1 (Room D) Chemistry / Earth Science ThE1 (Room E) Engineering Materials II ThF1 (Room F) Industrial Applications II
12:00-13:30	**Lunch**
13:30-16:00	**Oral Sessions** ThA2 (Room A) Low Dimensional Magnetism ThB2 (Room B) Source and Instrumentations ThC2 (Room C) Frustration and Chirality ThD2 (Room D) Polymer Thin Films and Nanostructures ThE2 (Room E) Neutron Physics ThF2 (Room F) Energy Materials V

* Complete abstracts are accessible on-line at

Session Title	**[ThA1] Spin Order and Dynamics**
Date and Time	July 13 (Thursday) / 10:00-12:00
Place	Room A (1F)
Session Chair	Jason S. Gardner (NSRRC, Taiwan) Michael Manley (ORNL, USA)

ThA1-1 (Invited) — **10:00-10:30**

Physical Realization of A New Quantum Spin Liquid Based on A Novel Frustration Mechanism

Christian Balz[1], Bella Lake[1], Johannes Reuther[1], Hubertus Luetkens[2], Rico Schönemann[3], Thomas Herrmannsdörfer[3], Yogesh Singh[4], A.T.M. Nazmul Islam[1], Elisa M. Wheeler[5], Jose Rodriguez-Rivera[6], Tatiana Guidi[7], Giovanna Simeoni[8], Christopher Baines[2], and Hanyo Ryll[1]
[1]HZB, Germany, [2]PSI, Switzerland, [3]Helmholtz-Zentrum Dresden-Rossendorf, Germany, [4]Indian Inst. of Sci., Education and Research Mohali, India, [5]ILL, France, [6]NIST, USA, [7]STFC Rutherford Appleton Laboratory, UK, [8]Univ. of Stuttgart, Germany

ThA1-2 — **10:30-10:45**

Magnon Density of States in Yttrium Iron Garnet

Shinichi Shamoto[1], Masato Matsuura[2], Mitsuhiro Akatsu[3], Takashi U. Ito[1], Ryoichi Kajimoto[4], Michiyasu Mori[1], Hiroaki Onishi[1], Mitsutaka Nakamura[4], Seiko Kawamura[4], Kaoru Shibata[4], Yuichi Nemoto[3], and Sadamichi Maekawa[1]
[1]JAEA, Japan, [2]CROSS, Japan, [3]Niigata Univ., Japan, [4]J-PARC, Japan

ThA1-3 — **10:45-11:00**

Collinear Nematic Phase in the Breathing Pyrochlore Spinel $LiGa_{0.95}In_{0.05}Cr_4O_8$

Gøran Nilsen[1], Rafal Wawrzynczak[2], Yu Tanaka[3], Makoto Yoshida[3], Yoshihiko Okamoto[4], Pascal Manuel[1], Nicola Casati[5], Zenji Hiroi[3], and Masashi Takigawa[3]
[1]ISIS, UK, [2]ILL, France, [3]The Univ. of Tokyo, Japan, [4]Nagoya Univ., Japan, [5]PSI, Switzerland

ThA1-4 — **11:00-11:15**

Experimental Evidence for Field Induced Emergent Clock Anisotropies in the XY Pyrochlore $Er_2Ti_2O_7$

Jonathan Gaudet[1], Alannah Hallas[1], Jacque Thibeault[1], Nick Butch[2], Hanna Dabkowska[3], and Bruce Gaulin[1]
[1]McMaster Univ., Canada, [2]NIST, USA, [3]Brockhouse Inst., Canada

ThA1-5 **11:15-11:30**

Neutron Scattering Study in Breathing Pyrochlore Antiferromagnet $Ba_3Yb_2Zn_5O_{11}$

T Masuda[1], T Haku[1], M Soda[1], M Sera[2], K Kimura[2], J Taylor[3], S Itoh[4], T Yokoo[4], Y Matsumoto[5], D Yu[6], R. A. Mole[6], T Takeuchi[2], S Nakatsuji[1], Y Kohno[1], T Sakakibara[1], and L.-J Chang[7]
[1]Univ. of Tokyo, Japan, [2]Osaka Univ., Japan, [3]ISIS, UK, [4]KEK, Japan, [5]Max Planck Inst., Germany, [6] ANSTO, Australia, [7]NCKU, Taiwan

ThA1-6 **11:30-11:45**

Time-Reversal Symmetry Breaking Hidden Order in $Sr_2(Ir,Rh)O_4$

Jaehong Jeong[1], Yvan Sidis[1], Alex Louat[2], Véronique Brouet[2], and Philippe Bourges[1]
[1]LLB, France, [2]Univ. Paris-Sud, France

ThA1-7 **11:45-12:00**

Magnetic Structure and Magnon Spectra of Coupled Spin Tetramer System $SeCuO_3$

Vinko Šurij [1], Ivica Živković[1,2], Krunoslav Prša[2,3], Henrik M. Rønnow[2], and Helmuth Berger[2]
[1]Inst. of Physics, Croatia, [2]EPFL, Switzerland. [3]Universitat Freiburg, Germany

Session Title	**[ThB1] Detectors and Optics**
Date and Time	July 13 (Thursday) / 10:00-12:00
Place	Room B (1F)
Session Chair	Bruno Guerard (ILL, France) Myung Kook Moon (KAERI, Korea)

ThB1-1 (Invited) — **10:00-10:30**

Multi-Grid: the New Generation Large-Area Detector for Neutron Scattering Science

Anton Khaplanov[1], Michail Anastasopoulos[1], Jens Birch[2], Jean-Claude Buffet[3], Jean-Fransois Clergeau[3], Pascale Deen[1], Eszter Dian[4], Georg Ehlers[5], Patrick van Esch[3], Michelle Everett[5], Bruno Guerard[3], Richard Hall-Wilton[1], Kenneth Herwig[5], Lars Hultman[2], Carina Hoglund[1], Fatima Issa[1], Jens Jensen[2], Oliver Kirstein[1], Isaak Lopez Higuera[1], and Francesco Piscitelli[1]

[1]ESS ERIC, Sweden, [2]Linkoping Univ., Sweden, [3]ILL, France, [4]Centre for Energy Research, Hungary, [5]Spallation Neutron Source, USA

ThB1-2 — **10:30-10:45**

Performance Evaluation of Imaging Detector based on Boron-Coated Straws

Jeffrey Lacy[1], Murari Regmi[1], Athanasios Athanasiades[1], Christopher Martin[1], Gerson Vazquez[1], and Davide Raspino[2]

[1]Proportional Technologies, Inc., USA, [2]ISIS, UK

ThB1-3 — **10:45-11:00**

Neutron Detectors based on Boron Carbide Coatings

Gregor Nowak[1], Michael Störmer[1], Reinhard Kampmann[2], Christian Horstmann[1], Hans-Werner Becker[3], Martin Haese[1], Jean-Francois Moulin[1], Matthias Pomm[1], Thorsten Kühl[2], Engelhard Prätzel[2], Daniel Hoeche[1], Irina Stefanescu[4], Jörg, Burmester[1], Jörn Plewka[1], Christian Jacobsen[1], Richard Hall-Wilton[4], Jochen Fenske[1], and Martin Müller[1]

[1]HZG, Germany, [2]DENEX-GmbH, Germany, [3]Ruhr-Universität Bochum, Germany, [4]ESS ERIC, Sweden

ThB1-4 — **11:00-11:15**

Development of a Fast ^{3}He Detector for the Future Xtreme D Instrument: The Trench-MWPC

Jean-Claude Buffet , Jean-Francois Clergeau, Sylvain Cuccaro, Bruno Guerard, Julien Marchal, and Jérome Pentenero

ILL, France

ThB1-5 **11:15-11:30**

Novel Neutron Detectors based on the Time Projection Method

Markus Köhli[1,2], Tim Wagner[1], Fabian Schmidt[1], Ulrich Schmidt[2], Jochen Kaminski[1], and Klaus Desch[1]

[1]Univ. of Bonn, Germany, [2]Heidelberg Univ., Germany

ThB1-6 **11:30-11:45**

New Developments in Neutron Optics at ILL

Pierre COURTOIS, Thierry BIGAULT, David JULLIEN, and Alexandre PETUKHOV

ILL, France

ThB1-7 **11:45-12:00**

Additive Manufacturing for Shielding and Collimation

Anders Olsson, Maja Hellsing, and Adrian Rennie

Uppsala Univ., Sweden

Session Title	**[ThC1] Heavy Fermions and Metals**
Date and Time	July 13 (Thursday) / 10:00-12:00
Place	Room C (1F)
Session Chair	Sungdae Ji (MPI-Postech, Korea)

ThC1-1 (Invited) — **10:00-10:30**

The Valence-Fluctuating Ground State of Plutonium

Marc Janoschek[1], Pinaki Das[1], Bismayan Chakrabarti[2], Doug Abernathy[3], Mark Lumsden[3], Jon Lawrence[1], Joe Thompson[1], Gerry Lander[4], Jeremy Mitchell[1], Scott Richmond[1], Mike Ramos[1], Frans Trouw[1], Jian-Xin Zhu[1], Kristjan Haule[2], Gabi Kotliar[2], and Eric Bauer[1]

[1]Los Alamos Nat'l Laboratory, USA, [2]Rutgers Univ., USA, [3]ORNL, USA, [4]European Commission, JRC, Germany

ThC1-2 — **10:30-10:45**

Incommensurate Short-Range Multipolar Order and Spin Fluctuations in the Phase II of $Ce_3Pd_{20}Si_6$

P. Y. Portnichenko[1], S. Paschen[2], A. Prokofiev[2], A. S. Cameron[1], J.-M. Mignot[3], A. Ivanov[4], and D. S. Inosov[1]

[1]TU Dresden, Germany, [2]TU Vienna, Austria, [3]LLB, France, [4]ILL, France

ThC1-3 — **10:45-11:00**

Magnetic Frustration in a Prototypical Strongly Correlated Metal

David M. Fobes[1], S. Zhang[2], S.-Z. Lin[3], Pinaki Das[1], N. J. Ghimire[1], E. D. Bauer[1], J. D. Thompson[1], L. W. Harriger[4], G. Ehlers[5], A. Podlesnyak[5], R. I. Bewley[6], A. Sazonov[7], V. Hutanu[7], F. Ronning[1], C. D. Batista[1,2], and M. Janoschek[1]

[1]Los Alamos Nat'l Laboratory, USA, [2]The Univ. of Tennessee, USA, [3]NIST, USA, [4]ORNL, USA, [5]ISIS, UK, [6]TU Munich, Germany

ThC1-4 — **11:00-11:15**

Crystal Field Excitations in the Metallic Ising 2D Antiferromagnet Nd_2Ni_2In

Matthew Stone[1], Gabriele Sala[1], and Silvie Maskova[2]

[1]ORNL, USA., [2]Charles Univ., Czech

ThC1-5 **11:15-11:30**

Evidence for a Novel Quantum Phase Transition

Daniel Gabriel Mazzone[1], Stéphane Raymond[2], Jorge Gavilano[1], Ruchika Yadav[1], Marek Bartkowiak[1], Eric Ressouche[2], Christof Niedermayer[1], Jonas Birk [1,3], Bachir Ouladdiaf[4], Gael Bastien[2], Georg Knebel[2], Dai Aoki[2], Gérard Lapertot[2], and Michel Kenzelmann[1]
[1]PSI, Switzerland, [2]Univ. Grenoble Alpes, France, [3]TU Denmark, Denmark, [4]ILL, France

ThC1-6 **11:30-11:45**

Vibron States in Non-Centrosymmetric Tetragonal $CeCuAl_3$ Compound - a Single Crystal Study

Milan Klicpera[1], Martin Boehm[2], Pavel Javorský[1], Paul Steffens[2], and Jiří Kulda[2]
[1]Charles Univ., Czech, [2]ILL France

ThC1-7 **11:45-12:00**

High Energy Magnetic Excitations in the Itinerant Electron Ferromagnet Iron Measured throughout the Brillouin Zone

Alex Buts[1], H. A. Mook[2], and T. G. Perring[1]
[1]ISIS, UK, [2]ORNL, USA

Session Title	**[ThD1] Chemistry / Earth Science**
Date and Time	July 13 (Thursday) / 10:00-12:00
Place	Room D (1F)
Session Chair	Brendan Kennedy (The Univ. of Sydney, Australia) Yusheng Zhao (Southern Univ. of Sci. and Tech., USA)

ThD1-1 (Invited) — **10:00-10:30**

High-Pressure Neutron Diffraction Studies for Earth/Energy/Environmental Materials

Yusheng Zhao

SUSTech, China

ThD1-2 — **10:30-10:45**

Hydrogen Bonds in Enantiomers: The Alanine Paradigm

Jose Pereira[1], Ezequiel Belo[2,3], Paulo Freire[3], Dimitri Argyriou[4], Juergen Eckert[5,6], and Heloisa Bordallo[1,4]

[1]Univ. of Copenhagen, Denmark, [2]Univ. Federal do Pará, Brazil, [3]Univ. Federal do Ceará, Brazil, [4]ESS ERIC, Sweden, [5]Univ. of South Florida, USA, [6]Los Alamos Nat'l Laboratory, USA

ThD1-3 — **10:45-11:00**

Microstructural Evolution of Dental Glass-Ionomer Cements during Setting Reaction Followed using SANS and USANS

Chee W. Loy[1], Khamirul A. Matori[2], Norhazlin Zainuddin[3], Andrew E. Whitten[4], Christine Rehm[4], Liliana de Campo[4], and Siegbert Schmid[1]

[1]The Univ. of Sydney, Australia, [2]Univ. Putra Malaysia, Malaysia, [3]Univ. Putra Malaysia, Malaysia, [4]ANSTO, Australia

ThD1-4 — **11:00-11:15**

Effect of Spacer Group of Cationic Gemini Surfactants on their Interactions with Natured and Denatured Bovine Serum Albumin

Sayantan Halder[1], Sonu Kumar[1], Sunita Kumari[1], Vinod Kumar Aswal[2], and Subit Kumar Saha[1]

[1]Bits Pilani, India, [2]BARC, India

ThD1-5 — **11:15-11:30**

Archaeometallurgical Evaluation of Copper Coins from Fillippoi, Topirus, Macedonia Koina and Avdera, Employing Non-Destructive Neutron Diffraction

Ioannis M. Siouris[1], Stefanos Katsavounis[1], and Andreas Hoser[2]

[1]Democritus Univ. of Thrace, Greece, [2]HZB, Germany

ThD1-6 — **11:30-11:45**

Grazing Incident Scattering on Model Catalyst for Polymer Electrolyte Fuel Cell

Satoru Ueda[1], Satoshi Koizumi[1], Ohira Akihiro[2], Kuroda Seiichi[2], and Frielinghaus Henrich[3]

[1]Ibaraki Univ., Japan, [2]FC-Cubic, Japan, [3]JCNS at MLZ, Germany

Session Title	**[ThE1] Engineering Materials II**
Date and Time	July 13 (Thursday) / 10:00-12:00
Place	Room E (2F)
Session Chair	Yo Tomota (NIMS, Japan)

ThE1-1 (Invited) — **10:00-10:30**

Magneto-Elastic Coupling in Ferromagnetic Shape Memory Alloys

Yubin Ke[1], Abhijit Pramanick[2], Honghui Wu[2], and Xun-Li Wang[2]
[1]CSNS, China, [2]City Univ. of Hong Kong, Hong Kong

ThE1-2 — **10:30-10:45**

Elastic Constants of Oriented Ti_3AlC_2 and Ti_3SiC_2 Obtained via Coherent Inelastic Neutron Scattering

Oliver Kirstein[1,2], Veronica Gray[2,3], Anton P. J. Stampfl[4], and Erich H. Kisi[2]
[1]ESS ERIC, Sweden, [2]Univ. of Newcastle, Australia, [3]Swansea Univ., UK, [4]ACNS, Australia

ThE1-3 — **10:45-11:00**

In Situ Neutron Diffraction Study on the Relationship between Residual Stresses and the Crack Opening Resistance

WANCHUCK WOO[1], Huai Wang[1,2], Dong-Kyu Kim[1], and Gyu Baek An[3]
[1]KAERI, Korea, [2]Chungnam Nat'l, Univ., Korea, [3]Chosun Univ., Korea

ThE1-4 — **11:00-11:15**

Heterogeneous Nucleation in an Excellent Metallic Glass Former Zr-Cu-Al-Ag Triggered by Quenched-in Metastable Crystals - a Time-Resolved Neutron Scattering Study

Zhenduo WU[1], Si LAN[1,2], Katharine PAGE[3], Baolong SHEN[4], and Xun-Li WANG[1]
[1]City Univ. of Hong Kong, Hong Kong, [2]Nanjing Univ. of Sci. & Tech., China, [3]ORNL, USA, [4]Southeast Univ., China

ThE1-5 — **11:15-11:30**

Investigation of Ordering and Disordering of β/βo -Phase in γ-TiAl Alloys by Neutron Diffraction

Victoria Kononikhina[1], Andreas Stark[1], Florian Pyczak[1], Weimin Gan[2], and Andreas Schreyer[3]
[1]HZG, Germany, [2]FRM II, Germany, [3]ESS ERIC, Sweden

ThE1-6 — **11:30-11:45**

Investigation of the Deformation Behavior of Superelastic BMG Composites Under In-Situ Neutron Diffraction Scattering

Wook Ha Ryu[1], Hyun Seok Oh[1], Wan Chuck Woo[2], and Eun Soo Park[1]
[1]Seoul Nat'l, Univ., Korea, [2]KAERI, Korea

Session Title	**[ThF1] Industrial Applications II**
Date and Time	July 13 (Thursday) / 10:00-12:00
Place	Room F (2F)
Session Chair	Baek Seok Seong (KAERI, Korea) Masato Ohnuma (Hokkaido Univ., Japan)

ThF1-1 **10:00-10:15**

Active Use of Compact Neutron Source to Industrial Applications

Masato Ohnuma[1], Toshinori Ishida[1], Michihiro Furusaka[1], B. S. Seong[2], Satoshi Koizumi[3], Yohei Noda[3], and Toru Minemura[4]

[1]Hokkaido Univ., Japan, [2]KAERI, Korea, [3]Ibaraki Univ., Japan, [4]Ibaraki Pref., Japan

ThF1-2 **10:15-10:30**

A New Era on Industrial Applications by Neutron Beam Techniques at HANARO

BAEK SEOK SEONG, Eunjoo Shin, Young-Soo Han, Wan Chuck Woo, Seong-Soo Lee, Tae-Ju Kim, Sang Jin Cho, Jong Yul Kim, and Ji Myung Ryu

KAERI, Korea

ThF1-3 **10:30-10:45**

Radiation Damage Studies in Fusion Reactor Steels by Means of Small-Angle Neutron Scattering (SANS)

Roberto Coppola[1], Michael Kilimenkov[2], Rainer Lindau[2], Anton Moeslang[2], and Monica Valli[1]

[1]ENEA, Italy, [2]KIT, Germany

Session Title	**[ThA2] Low Dimensional Magnetism**
Date and Time	July 13 (Thursday) / 13:30-16:00
Place	Room A (1F)
Session Chair	Bella Lake (HZB, Germany)

ThA2-1 (Invited) — **13:30-14:00**

Quantum Spin Liquids: A New State of Magnetism

Young Lee
Stanford Univ., USA

ThA2-2 — **14:00-14:15**

24-Spin Cluster in the Natural Mineral Boleite: A Quantum Spin Droplet

Erik Dreier Christensen[1], Sonja L. Holm[1], Kenneth Lønbæk[1], Ursula B. Hansen[1], Martin Ruminy[2], Andrea Piovano[3], Stéphane Rols[3], Gøran Nielsen[3,4], Martin Boehm[3], Markos Skoulatos[2], Jürg Schefer[2], Nicola Casati[2], Henrik M. Rønnow[5],Tom Fennell[2], and Kim Lefmann[1]
[1]Univ. of Copenhagen, Denmark, [2]PSI, Switzerland, [3]ILL, France, [4]ISIS, UK, [5]EPFL, Switzerland

ThA2-3 — **14:15-14:30**

Field-Induced Unconventional Quantum Phase Transition in an Ising-like Antiferromagnetic Spin Chain

Quentin Faure[1,2,3], Shintaro Takayoshi[4], Virginie Simonet[3], Sylvain Petit[5], Louis-Pierre Regnault[2], Martin Boehm[6], Stéphane Raymond[2], Jonathan White[7], Martin Mansson[8], Christian Ruegg[7], Benjamin Canals[3], Shunsuke Furuya[4], Thierry Giamarchi[4], Claude Berthier[9], Pascal Lejay[3], and Béatrice Grenier[1,2]
[1]Univ, Grenoble Alpes, France, [2]INAC, CEA-Grenoble, France, [3]Institut Néel, France, [4]Univ. of Geneva, Switzerland, [5]LLB, CEA-Saclay, France, [6]ILL, France, [7]PSI, Switzerland, [8]KTH Royal Inst. of Tech., Sweden, [9]LNCMI, France

ThA2-4 — **14:30-14:45**

The Whole Picture of Magnetic Excitations in an S=1/2 Triangular-Lattice Heisenberg Antiferromagnet Revealed from Inelastic Neutron Scattering Experiment on $Ba_3CoSb_2O_9$

Hidekazu Tanaka[1], Saya Ito[1], Nobuyuki Kurita[1], Seiko Ohira-Kawamura[2], Kenji Nakajima[2], Shinichi Itoh[3], Keitaro Kuwahara[4], and Kazuhisa Kakurai[5]
[1]Tokyo Inst. of Tech., Japan, [2]J-PARC Center, Japan, [3]HEARO, Japan, [4]Ibaraki Univ., Japan, [5]CROSS, Japan

ThA2-5 **14:45-15:00**

Absence of Long Range Order in $SrDy_2O_4$ Frustrated Magnet due to Trapped Defects from a Dimensionality Crossover

Nicolas Gauthier[1], Amy Fennell[1], Bobby Prévost[2], Anne-Christine Uldry[1], Bernard Delley[1], Romain Sibille[1], Alexandre Désilets-Benoit[2], Hanna Dabkowska[3], Goran J. Nilsen[4], Louis-Pierre Regnault[4], Jonathan S. White[1], Christof Niedermayer[1], Vladimir Pomjakushin[1], Andrea D. Bianchi[2], and Michel Kenzelmann[1]

[1]PSI , Switzerland, [2]Univ. de Montréal, Canada, [3]Brockhouse Inst. for Materials Research, Canada, [4]ILL, France

ThA2-6 **15:00-15:15**

Spin-spin Correlations in the 1D State of the Trimer-Chain Compound $CaNi_3(P_2O_7)_2$: A Reverse Monte Carlo Analysis of Diffuse Magnetic Neutron Scattering

A. K. BERA, AMIT KUMAR, and S. M. YUSUF

BARC, India

ThA2-7 **15:15-15:30**

A Tale of Two Types of Magnetic Dynamics in $CoCl_2$·2D2O

Ursula Hansen[1], Jonas O. Birk[1], Lise Hoffmann[1], Christopher R. Andersen[1], Turi K. Schäffer[1], Sonja Holm[2], Christof Niedermayer[3], Jose A Rodriguez-Rivera[4], Jens Jensen[1], Niels B. Christensen[5], and Kim Lefmann[1]

[1]Univ. of Copenhagen, Denmark, [2]Univ. of Aarhus, Denmark, [3]PSI, Switzerland, [4]NIST, USA, [5]DTU, Denmark

ThA2-8 **15:30-15:45**

Magnetic Excitations of the Cu^{2+} Quantum Spin Chain in Sr_3CuPtO_6

Jonathan Leiner[1,2], Joosung Oh[1,2], A. I. Kolesnikov[3], M. B. Stone[3], Manh Duc Le[4], M. Mourigal[5], S.-W. Cheong[6], and Je-Geun Park[1,2]

[1]IBS, Korea, [2]Seoul Nat'l Univ., Korea, [3]ORNL, USA, [4]ISIS, UK, [5]Georgia Inst. of Tech., USA, [6]Rutgers Univ., USA

ThA2-9 **15:45-16:00**

Evidence of Electron-Phonon Interaction in Single Crystal of (Ru^{3+}/Ru^{4+}) Mixed-Valence $Na_{2.7}Ru_4O_9$ and $NaRu_2O_4$

Arvind Yogi[1,2], C. I. Sathish[1,2], Hasung Sim[1,2], and Je-Geun Park[1,2]

[1]IBS, Korea, [2]Seoul Nat'l Univ., Korea

Session Title	**[ThB2] Source and Instrumentations**
Date and Time	July 13 (Thursday) / 13:30-16:00
Place	Room B (1F)
Session Chair	Thomas Krist (HZB, Germany) Masahiro Hino (Kyoto Univ., Korea)

ThB2-1 **13:30-13:45**

The ESS Neutron Beam Generation Approach as New Opportunity for A Variety of Future Neutron Sources

Ferenc Mezei[1,2]
[1]*ESS ERIC, Sweden,* [2]*HAS Wigner Research Center, Hungary*

ThB2-2 **13:45-14:00**

Modelling Option USANS Upgrade: the Project OPUS for LoKI@ESS and the Upgrade of D11@ILL

Claudia Mondelli[1], Víctor M. Galván Josa[1], Emmanuel Farhi[1], Ralf Schweins[1], and Andrew Jackson[2]
[1]*ILL, France,* [2]*ESS, Sweden*

ThB2-3 **14:00-14:15**

Recent Developments in Neutron Imaging and Diffraction: IMAT Beamline at ISIS

Genoveva Burca[1], Winfried Kockelmann[1], Daniel Pooley[1], Jeffrey Sykora[1], Triestino Minniti[1], Nigel Rhodes[1], Will Halcrow[1], Jim Nightingale[1], and Jon James[2]
[1]*STFC Rutherford Appleton Laboratory, UK,* [2]*The Open Univ., UK*

ThB2-4 **14:15-14:30**

Development and Application of in situ Polarized ^{3}He Neutron Spin Filters at Oak Ridge National Laboratory

Chenyang Jiang, Xin Tong, Tianhao Wang, Daniel Brown, Lee Robertson, and Adam Wonder
ORNL, USA

ThB2-5 **14:30-14:45**

Neutron Guide System of the High-Flux PIK Reactor

Peter Konik[1,2], Konstantin Pavlov[1,2], Yurii Kireenko[1], Sergey Grigoriev[1,2], and Evgeny Moskvin[1,2]
[1]*PNPI, Russia,* [2]*SPbSU, Russia*

ThB2-6 **14:45-15:00**

Simulation Study on Resonance Spin Flippers for High-Resolution Neutron Resonance Spin Echo Methods

Tatsuro Oda[1], Masahiro Hino[1], Hitoshi Endo[2], and Yuji Kawabata[1]
[1]Kyoto Univ., Japan, [2]KEK, Japan

ThB2-7 **15:00-15:15**

An Instrument as Perfect Neutron Polarizer

Wolfgang Treimer[1,2] and Henning Höppner[1]
[1]Beuth Univ. of Applied Sciences, Germany, [2]HZB, Germany

ThB2-8 **15:15-15:30**

Advances in Neutron Optics at Helmholtz-Zentrum Berlin

Thomas Krist
HZB, Germany

Session Title	**[ThC2] Frustration and Chirality**
Date and Time	July 13 (Thursday) / 13:30-16:00
Place	Room C (1F)
Session Chair	Henrik M. Ronnow (EPFL, Switzerland) Marc Janoschek (Los Alamos National Laboratory, USA)

ThC2-1 (Invited) **13:30-14:00**

Novel Phases in Frustrated Magnets Studied with Polarized Neutron Scattering

Michel Kenzelmann
PSI, Switzerland

ThC2-2 **14:00-14:15**

Phase Transition of MnSi under Magnetic Field: A SANS and Neutron Spin Echo Study

Catherine Pappas[1], L.J. Bannenberg[1], E. Lelièvre-Berna[2], F. Qian[1], C. Dewhurst[2], R.M. Dalgliesh[3], D. Schlagel[4], T. Lograsso[4], and P. Falus[2]
[1]Delft Univ. of Tech., Netherlands, [2]ILL, France, [3]ISIS, UK, [4]Iowa State Univ., USA

ThC2-3 **14:15-14:30**

Helical Magnetism in the Vicinity of the Superconducting State in MnP

M. Matsuda[1], S. E. Dissanayake[1], F. Ye[1], J.-G. Cheng[2], S. Chi[1], J. Ma[3], H. D. Zhou[3], J.-Q. Yan[1,3], K. Matsubayashi[4], T. Okada[5], J. Gouchi[5], and Y. Uwatoko[5]
[1]ORNL, USA, [2]CAS, China, [3]Univ. of Tennessee, USA, [4]Univ. of Electro-Communications, Japan, [5]Univ. of Tokyo, Japan

ThC2-4 **14:30-14:45**

Spin Waves in Full-Polarized State of Dzyaloshinskii-Moriya Helimagnets: Small-Angle Neutron Scattering Study

Sergey Grigoriev[1,2], Evgeny Altynbaev[1,2], Kirill Pschenichnyi[1,2], Sven-Arne Siegfried[3], Andre Heinemann[3], Gregory Chaboussant[4], and Dirk Menzel[5]
[1]PNPI, Russia, [2]Saint-Petersburg State Univ., Russia, [3]HZG, Germany, [4]LLB, France, [5]TU Braunschweig, Germany

ThC2-5 **14:45-15:00**

Novel Mechanism for Introducing Chirality in Rare Earth Superlattices

Dieter Lott[1], Vlad Tarnavich[2], and Elena Tartakovskaya[3]
[1]HZG, Germany, [2]PNPI NRC KI, Russia, [3]Inst. of Magnetism NAS of Ukraine, Ukraine

ThC2-6 15:00-15:15

Phase Stability and Higher Order Peaks of the Skyrmion Lattice in Cu_2OSeO_3

Johannes D. Reim[1], Koya Makino[1], Daiki Higashi[1], Daisuke Okuyama[1], Taku J. Sato[1], Yusuke Nambu[1], Elliot P. Gilbert[2], Norman Booth[2], Shinichiro Seki[3,4], and Yoshinori Tokura[2,5]

[1]Univ. Tohoku, Japan, [2]ANSTO, Australia, [3]RIKEN, Japan, [3]PRESTO, Japan, [5]The Univ. of Tokyo, Japan

ThC2-7 15:15-15:30

Small Angle Neutron Scatterings Study on the Cubic Chiral Crystal $Pr_5Ru_3Al_2$

Koya Makino[1], Daisuke Okuyama[1], Maxim Avdee [2], Kazuki Ohishi[3], Kunihiko Yamauchi[4], Tamio Oguchi[4], and Taku J. Sato[1]

[1]Tohoku Univ., Japan, [2]ANSTO, Australia, [3]CROSS, Japan, [4]Osaka Univ., Japan

ThC2-8 15:30-15:45

Absolute Crystal and Magnetic Chiralities in the Langasite Compound $Ba_3NbFe_3Si_2O_{14}$ Determined by Polarized Neutron Scattering

Navid Qureshi[1], Laurent Chapon[2], and Sang-Wook Cheong[3]

[1]ILL, France, [2]Diamond Light Source, UK, [3]The State Univ. of New Jersey, USA

ThC2-9 15:45-16:00

Field-Dependence of the Helimagnon Dispersion in the Chiral Magnet MnSi

Tobias Weber[1,2], Johannes Waizner[3], Gregory Tucker[4], Robert Georgii[2], Max Kugler[2], Andreas Bauer[1], Markus Garst[5], and Peter Böni[1]

[1]TU Munich, Germany, [2]MLZ, Germany, [3]Universitaet zu Koeln, Germany, [4]PSI, Switzerland, [5]TU Dresden, Germany

Session Title	**[ThD2] Polymer Thin Films and Nanostructures**
Date and Time	July 13 (Thursday) / 13:30-16:00
Place	Room D (1F)
Session Chair	Jaseung Koo (KAERI, Korea) Jin Kon Kim (POSTECH, Korea)

ThD2-1 **13:30-13:45**

Highly Asymmetric Gyroid Structures by Blending of ABC Triblock Terpolymer and AB Diblock Copolymer

Jin Kon Kim, Seonghyeon Ahn, and Chungryong Choi

POSTECH, Korea

ThD2-2 **13:45-14:00**

Supramolecular Dendron-Jacketed Block Copolymer Micelles in Solutions and Thin Films

Xun-Yan Wu[1], Yen-Ming Hsu[1], Wei-Tsung Chuang[2], and Ya-Sen Sun[1]

[1]NCU, Taiwan [2]NSRRC, Taiwan

ThD2-3 **14:00-14:15**

Vertical Orientation of Block Copolymer Thin Films Induced by Segregation of Organic Nanoparticles

Hyun Suk Wang, Anzar Khan, June Huh, and Joona Bang

Korea Univ., Korea

ThD2-4 **14:15-14:30**

Dynamical Features in Self Assembled Molecular Aggregates

R. Mukhopadhyay, V.K. Sharma, and S. Mitra

BARC, India

ThD2-5 **14:30-14:45**

Realtime Structural Characterisation of Thin Film OLED Stacks During Thermally Induced Diffusion - the Importance of Glass Transitions

Andrew Nelson[1], Jake McEwan[2], Andrew Clulow[3], Paul Shaw[2], Tamim Darwish[1], Nageshwar Rao Yepuri[1], Paul Burn[2], and Ian Gentle[2]

[1]ANSTO, Australia, [2]Univ. of Queensland, Australia, [3]Monash Univ., Australia

ThD2-6 14:45-15:00

Time-Resolved Neutron Reflectivity Detects Mass Transfer along Film Thickness Direction

Satoshi Koizumi, Satoru Ueda, and Yohei Noda
Ibaraki Univ, Japan

ThD2-7 15:00-15:15

Swelling Behavior of Polyelectrolyte Brush/Multilayer Composites - Water Distribution in Humid Conditions

Oliver Löhmann[1], Samantha Micciulla[2], Emanuel Schneck[2], Olaf Sotlwedel[3], and Regine von Klitzing[1]
[1]TU Darmstadt, Germany, [2]Max Planck Inst. of Colloids and Interfaces Potsdam, Germany, [3]Max Planck Inst., Germany

ThD2-8 15:15-15:30

Monitoring the Thickness Evolution and Water Uptake of PEDOT:PSS Thin Films under High Humidity Conditions by In-Situ Neutron Reflectometry

Lorenz Bießmann[1], Lucas Kreuzer[1], Tobias Widman[1], Nuri Hohn[1], Jean-Francois Moulin[2], and Peter Müller-Buschbaum[1]
[1]TU Munich, Germany, [2]HZG, Germany

ThD2-9 15:30-15:45

Investigating Biomimetic Calcium Phosphate and Carbonate Mineral Formation within Multilayered Biopolymer Films using Small Angle Neutron Scattering

Rayomand Shahlori[1,2], Andrew Nelson[3], Jitendra Mata[3], Geoffrey Waterhouse[1,2], and Duncan McGillivray[1,2]
[1]The Univ. of Auckland, New Zealand, [2]MacDiarmid Inst. for Advanced Materials and Nanotechnology, New Zealand, [3]ANSTO, Australia

ThD2-10 15:45-16:00

Structure and Mechanical Properties of Polybutadiene Thin Films at Surface-Modified Carbon Interface

Koichiro Hori[1], Norifumi Yamada[1], Yoshihisa Fujii[2], Tomomi Masui[3], Hiroyuki Kishimoto[3], and Hideki Seto[1]
[1]HEARO, Japan, [2]Mie Univ., Japan, [3]Sumitomo Rubber Industries, Ltd., Japan

Session Title	**[ThE2] Neutron Physics**
Date and Time	July 13 (Thursday) / 13:30-16:00
Place	Room E (2F)
Session Chair	Valery Shvetsov (JINR, Russia)

ThE2-1 (Invited) — **13:30-14:00**

Neutron Physics at the Joint Institute for Nuclear Research

Valery Shvetsov

JINR, Russia

ThE2-2 — **14:00-14:15**

Experimental Demonstration of Direct Path State Characterization by Strongly Measuring Weak Values in Neutron Interferometry

Stephan Sponar

TU Wien, Austria

ThE2-3 — **14:15-14:30**

Transmission of Ultracold Neutrons Through Cold Deuterium and Hydrogen - The Scattering Cross Sections and Surface Scattering

Stefan Döge (Doege)[1,2,3], Christoph Morkel[1], Erwin Gutsmiedl[1], Tobias Jenke[2], Peter Geltenbort[2], Bernhard Lauss[4], Nicolas Hild[4], Winfried Petry[1], Stephan Paul[1]

[1]ILL France, [2]TU Munich, Germany, [3]Université Grenoble Alpes, France

ThE2-4 — **14:30-14:45**

The $^{33}S(n,\alpha)^{30}Si$ Cross-Section Measurement of the Thermal Point at ILL and Resonance Region at n_TOF-CERN. Potential Applications to Neutron Capture Therapy

Javier Praena[1], Ignacio Porras[1], and Marta Sabaté-Gilarte[2]

[1]Univ. of Granada, Spain, [2]CERN, Switzerland

ThE2-5 — **14:45-15:00**

Measurement of the Double-Differential Neutron Cross Section of U in UO2 from Room Temperature to Hot Full Power Conditions

Gilles Noguere[1], Alain FILHOL[2], Juan Pablo SCOTTA[1], Jacques OLIVIER[2], and Yoann CALZAVARA[2]

[1]CEA Cadarache, France, [2]ILL, France

ThE2-6 — **15:00-15:15**

Neutron Diffraction by A Surface Acoustic Wave

German Kulin[1], Alexander Frank[1], Yury Khaydukov[2], Dmitry Roshchupkin[3], and Simone Vadilonga[4]

[1]JINR, Russia, [2]Max-Plank Inst. for Solid State Research, Germany, [3]RAS, Russia, [4]HZB, Germany

Session Title	**[ThF2] Energy Materials V**
Date and Time	July 13 (Thursday) / 13:30-16:00
Place	Room F (2F)
Session Chair	Tatsiana Burankova (PSI, Switzerland)

ThF2-1 (Invited) — **13:30-14:00**

Uniformity of Lithium-Ion Batteries Probed by Neutron Scattering

Anatoliy Senyshyn[1], Martin Mühlbauer[2,3], and Michael Hofmann[1]
[1]TU Munich, Germany, [2]HIU, Germany, [3]KIT, IAM, Germany

ThF2-2 — **14:00-14:15**

Crystal Structure Refinement of Isotope Doped Li_2MnO_3 by using Neutron Powder Diffractometer, iMATERIA

Toru Ishigaki[1], Akinori Hoshikawa[1], Yukihiko Yoshida[1], Takeshi Matsukawa[1], and Hideto Imai[2]
[1]Ibaraki Univ., Japan, [2]NISSAN ARC LTD., Japan

ThF2-3 — **14:15-14:30**

Application of the High Resolution Fourier Diffractometer for Studing Battery Materials

Ivan Bobrikov, Nataly Samoylova, Sergey Sumnikov, Olga Ivanshina, and Anatoly Balagurov
JINR, Russia

ThF2-4 — **14:30-14:45**

Low-Temperature Effect on Lithium Diffusion in 18650 Li-ion Battery

Chun-Ming Wu[1], Chia-Chin Chang[2], Ping-I Pan[2], and Maxim Avdeev[3]
[1]Nat'l Synchrotron Radiation Research Center, Taiwan, [2]Nat'l Univ. of Tainan, Taiwan, [3]ANSTO, Australia

ThF2-5 — **14:45-15:00**

Catalytic Function of Intra-Zeolite Frustrated Lewis Pairs Investigated by In Operando Neutron/X-Ray Scattering

Heeju Lee[1], Kwang Soo Lim[2], Bonglim Suh[3], In Hwa Cho[4], Jihan Kim[3], Sanghyun Lee[5,6], Shukii Torii[5,6], Takashi Kamiyama[5,6], Tae Joo Shin[7], and Yong Nam Choi[2]
[1]Sogang Univ., Korea, [2]KAERI, Korea, [3]GIST, Korea, [4]KAIST, Korea, [5]J-PARC, Japan, [6]KEK, Japan, [7]UNIST, Korea

ThF2-6 **15:00-15:15**

Evidence of High Density of Confined Fluids in Nano-Pores

Jitendra Bahadur[1], Cristian Contescu[2], and Yuri Melnichenko[2]
[1]BARC, India, [2]ORNL, USA

ThF2-7 **15:15-15:30**

Self-Assembly of Diblock Polythiophene Polyelectrolytes for Organic Photovoltaic Devices

Judith Houston[1], Michèle Chevrier[2], Amandine Thomas[2], Ann Terry[3], Sébastien Clément[2], and Rachel Evans[4]
[1]JCNS, Germany, [2]Université Montpellier [2], France, [3]ISIS, UK, [4]Univ. of Cambridge, UK.

ThF2-8 **15:15-15:30**

Liquid-Like Thermal Conduction in Two-Dimensional Layered Crystalline Solids

Bing Li[1], H. Wang[2], Y. Kawakita[1], Q. Zhang[3], M. Feygenson[4], H. L. Yu[5], D. Wu[6], K. Ohara[7], T. Kikuchi[1], K. Shibata[1], T. Yamada[8], Y. Chen[5], J. Q. He[6], D. Vaknin[3], R. Q. Wu[2], K. Nakajima[1], and M. G. Kanatzidis[9]
[1]J-PARC, Japan, [2]Univ. of California, USA, [3]Iowa State Univ., USA, [4]JCNS at MLZ, Germany, [5]The Univ. of Hong Kong, Hong Kong, [6]South Univ. of Science and Tech. of China, China, [7]Japan Synchrotron Radiation Research Inst., Japan, [8]CROSS, Japan, [9]Northwestern Univ., USA

Monday, July 10, 2017

* Complete abstracts are accessible on-line at

[MoP] Poster Session 1
Monday, July 10, 2017 / 16:30-18:30
1F, Exhibition Hall

MoP 1

Understanding the Dynamics of Aqueous Solutions in Dental Cements

Marcella C. Berg[1,2], Ana R. Benetti[1], Mark T. F. Telling[3,4], Tilo Seydel[5], and Heloisa N. Bordallo[1,2]
[1]Univ. of Copenhagen, Denmark, [2]ESS ERIC, Sweden, [3]ISIS, UK, [4]Univ. of Oxford, UK, [5]ILL, France

MoP 2

Challenges of Kinetic Measurements with a Bonse-Hart Neutron Diffractometer

Christopher J. Garvey[1], Liliana de Campo[1], Christine Rehm[1], Chris D. Muzny[2], and Howard J. M. Hanley[3]
[1]ANSTO, Australia, [2]NIST, USA, [3] Australian Nat'l Univ., Australia

MoP 3

A Study of the Interaction between Polyelectrolytes and Biomolecules at the Solid/Solution Interface with Neutron Specular Reflectivity

Christopher Garvey[1], Vikram S. Raghuwanshi[2], Jielong Su[2], Warwick Raverty[2], Stephen A. Holt[1], Peter J. Holden[1], and Gil Garnier[2]
[1]ANSTO, Australia, [2]Monash Univ., Australia

MoP 4

Small Angle Neutron Scattering on Critical Polymer Clusters Formed with Tetra-Armed Prepolymers

Xiang Li[1], Kazu Hirosawa[1], Takamasa Sakai[1], Elliot Gilbert[2], and Mitsuhiro Shibayama[1]
[1]The Univ. of Tokyo, Japan, [2]ANSTO, Australia

MoP 5

Interfacial Polymer Contribution to Mechanical Reinforcement in Nanocomposites

Jacques Jestin[1], Nicolas Jouault[1], Chloé Chevigny[1], Dan Zhao[2], and Sanat Kumar[2]
[1]LLB, France, [2] Columbia Univ., USA

MoP 6

Infludence of H-Bonding on Dynamical Properties of Triethylammonium Triflate

Juan Francisco Mora Cardozo[1], Antonio Benedetto[2], Pietro Ballone[3], and Jan P. Embs[1]
[1]PSI, Switzerland, [2]Univ. College Dublin, Ireland, [3]Norwegian Univ. of Sci. and Tech., Norway

MoP 7

Adsorption Versus Non-Adsorption Behavior of Bovine Serum Albumin Protein on Silica Nanoparticles

Indresh Yadav[1,2], Sugam Kumar[1], Vinod Kumar Aswal[1,2], and Joachim Kohlbrecher[3]
[1]BARC, India, [2]Homi Bhabha Nat'l Inst., India, [3]PSI, Switzerland

MoP 8

Correlation Between Distribution of Gold Nanoparticles within Polymer Brushes and their Optical Properties

Dikran Kesal[1], Patrick Krause[1], Marcus Trapp[2], and Regine von Klitzing[1]
[1]TU Berlin, Germany, [2]HZB, Germany

MoP 9

Anomalous Dynamics of Interfacial Water Around Micelles

H. Srinivasan, V.K. Sharma, S. Mitra, and R. Mukhopadhyay
BARC, India

MoP 10

Probing Surfactant-Induced Depletion Interaction in Charged Nanoparticle System

Debes Ray and Vinod K. Aswal
BARC, India

MoP 11

Probing Structure and Kinetics of Nanoparticle Aggregation using Different Interactions by Scattering Techniques

Sohrab Abbas[1], Indresh Yadav[1], Sugam Kumar[1], Vinod K. Aswal[1], and Joachim Kohlbrecher[2]
[1]BARC, India, [2]PSI, Switzerland

MoP 12

Interaction among Proteins in Solution in Presence of Divalent Ions: Small-Angle Neutron Scattering Study

Sarathi Kundu[1], Vinod Aswal[2], and Joachim Kohlbrecher[3]
[1]Inst. of Advanced Study in Science in Science, India, [2]BARC, India, [3]PSI, Switzerland

MoP 13

Structure of Protein-Surfactant Complexes with Different Chain Length Surfactants

Debasish Saha[1,2], Debes Ray[1], and Vinod Kumar Aswal[1]
[1]BARC, India, [2]DST, India

MoP 14

Liquid-Liquid Phase Transition in Protein Solution:Effect of Multivalent Counter Ions

Sugam Kumar[1], Indresh Yadav[1], Vinod K. Aswal[1], and Joachim Kohlbrecher[2]
[1]BARC, India, [2]PSI, Switzerland

MoP 15

Understanding Graphene Incorporated Polyurethane Foams using SANS

Radha Perumal Ramasamy[1], Swathi Somanathan[1], S.N. Suraiya Begum[2], and Vinod Kumar Aswal[3]
[1]Anna Univ., India, [2]Justice Basheer Ahmed Sayeed College for Woman., India, [3]BARC, India

MoP 16

Hierarchical Self-Assembly and Gelation of TX-100

RAHUL RANJAN
Jawaharlal Nehru Univ., India

MoP 17

Microscopic Solvation Structure and Phase Behavior of Thermo-Responsive Polymers in Ionic Liquids

Kazu Hirosawa[1], Kenta Fujii[2], Takeshi Ueki[3], Yuzo Kitazawa[4], Masayoshi Watanabe[4], Elliot Paul Gilbert[5], and Mitsuhiro Shibayama[1]
[1]The Univ. of Tokyo, Japan, [2]Yamaguchi Univ., Japan, [3]NIMS, Japan, [4]Yokohama Nat'l Univ., Japan, [5]ANSTO, Australia

MoP 18

Network Structure of Polyelectrolyte Gels Fabricated from Tetra-Arm Polymers

Ken Morishima[1], Xiang Li[1], Kazuyuki Oshima[2], Yoshiro Mitsukami[2], and Mitsuhiro Shibayama[1]
[1]The Univ. of Tokyo, Japan, [2]Nippon Shokubai Co., Ltd., Japan

MoP 19

A New Approach to Analyze Data Obtained from the Grazing Incidence Neutron Scattering

Tetyana Kyrey[1,2], Marina Ganeva[2], Kornelia Gawlitza[3], Regine von Klitzing[1], Olaf Soltwedel[4], Stefan Wellert[1], and Olaf Holderer[2]
[1]TU Berlin, Germany, [2]JCNS, Germany, [3]BAM, Germany, [4]TUM, Germany

MoP 20

Small-Angle Neutron Scattering Study on the Structure of the "Nonswellable" Hydrogel

Shintaro Nakagawa, Xiang Li, Hiroyuki Kamata, Takamasa Sakai, and Mitsuhiro Shibayama
The Univ. of Tokyo, Japan

MoP 21

Effect of Membrane Active Drugs on the Structure of Lipid Bilayers

Manuchar Gvaramia, Gaetano Mangiapia, and Henrich Frielinghaus
JCNS, Germany

MoP 22

Self-Assembly of Magnetic Liquids at the Solid Boundaries

Apurve Saini and Max Wolff
Uppsala Univ., Sweden

MoP 23

In-Situ Measurement of Phospholipid Nanodisk Adhesion on a Solid Substrate using Neutron Reflectometry

Norifumi L. Yamada[1] and Michele Sferrazza[2]
[1]HEARO, Japan, [2]Univ. Libre de Bruxelles, Belgium

MoP 24

Temperature-Dependent Water-in-Oil Microemulsion System with an Ionic Liquid

Tae Hui Kang[1], Yoonnam Jeon[2], Shuo Qian[1], Changwoo Do[1], William T. Heller[1], and Mahn Won Kim[3,4]
[1]ORNL, USA, [2]IBS, Korea, [3]KAIST, Korea, [4]GIST, Korea

MoP 25

Gelation and Internal Structure of Hybrid Gel by using γ-ray Irradiated Imogolite

Jungju Ryu[1,2] and Daewon Sohn[1]
[1]Hanyang Univ., Korea, [2]KAERI, Korea

MoP 26

Temperature and Time Dual-Sensitive Structure of Triazole Branched Poly(Ethyl Methacrylate)

Jungin Kim[1], Jungju Ryu[1,2], and Daewon Sohn[1]
[1]Hanyang Univ., Korea, [2]KAERI, Korea

MoP 27

The Effect of Dispersing Solvent on the Microstructure of Polymer Nanocomposites Melt

Sol Mi Oh and So Youn Kim
UNIST, Korea

MoP 28

Structural Responses of Polyelectrolyte Brushes in Aqueous Solutions with Various Ionic Concentrations

Jumi Lee, Dinh Minh Phan, and Kwanwoo Shin
Sogang Univ., Korea

MoP 29

Controlling Crystallinity and Domain Composition of Conducting Polymers under Nanoconfinement and their Analysis by Small Angle Scattering

Jongkuk Ko[1], Jiyun Song[1], Hyunsik Yoon[1], Changhee Lee[1], Ruediger Berger[2], and Kookheon Char[1]
[1]Seoul Nat'l Univ., Korea, [2]Max Planck Institute for Polymer Research, Germany

MoP 30

Neutron Reflectivity Studies on the Amine-Triggered Changes in Reactive Polymer Films with Different MWs

Hyunjoo Son[1], Yeongseon Jang[1], Jaseung Koo[2], Jeong-Soo Lee[2], and Kookheon Char[1]
[1]Seoul Nat'l Univ., Korea, [2]KAERI, Korea

MoP 31

Structural Analysis on Surfactant Layer at the Interface of Liquid Crystal and Substrate using Neutron Reflectometry

Fumiya Nemoto[1], Norifumi L. Yamada[1], Masahiro Hino[2], and Hideki Seto[1]
[1]HEARO, Japan, [2]Kyoto Univ., Japan

MoP 32

The Inverse Temperature Transition of an Elastin-like Peptide Studied by Small Angle Neutron Scattering

Alexander Daniel Matt and Bernd Stühn
TU Darmstadt, Germany

MoP 33

SANS and SAXS Investigation of Selective Distributions of Functionalized Single-Walled Carbon Nanotubes ina Polymeric System

Jae-Min Ha, Hyung-Sik Jang, Sung-Hwan Lim, and Sung-Min Choi
KAIST, Korea

MoP 34

Functionalization of Single Wall Carbon Nanotube with Controllable Surface Charge Density

Sung-Hwan Lim[1], Tae-Hwan Kim[2], and Sung-Min Choi[1]
[1]KAIST, Korea, [2]KAERI, Korea

MoP 35

Self-Assembly of Pluronic Block Copolymer Depend on Hydro-Philic/Phobic Mass Fractions

Jong Dae JANG[1,2], Tae-Hwan KIM[1], Joona BANG[2], and Young Soo HAN[1]
[1]KAERI, Korea, [2]Korea Univ., Korea

MoP 36

SANS Study on the Phase Behavior of Mixed Polymer Ligands Anchored on a Nanoparticle Surface

Seyong Kim[1], Tae-Hwan Kim[2], June Huh[3], Joona Bang[3], and Soohyung Choi[4]
[1]Drexel Univ., USA, [2]Chonbuk Univ., Korea, [3]Korea Univ., Korea, [4]Hongik Univ., Korea

MoP 37

Phase Behavior of Block Copolymers Containing Ionic Additives

Ha Young Jung and Moon Jeong Park
POSTECH, Korea

MoP 38

Neutron Reflectivity Measurement of Deutrated PS on PS-Grafted Layers

Hoyeon Lee[1], Seongjun Jo[2], Toyoaki Hirata[3], Norifumi L. Yamada[4], Keiji Tanaka[5], and Du Yeol Ryu[2]
[1]KAERI, Korea, [2]Yonsei Univ., Korea, [3]Fukui Univ., Japan, [4]J-PARC, Japan, [5]Kyushu Univ., Japan

MoP 39

SANS and DLS Study on the Effect of NaOH and Chloroauric Acid upon BSA

Radha Perumal Ramasamy[1], S.N. Suraiya Begum[1,2], and Vinod Kumar Aswal[3]
[1]Anna Univ., India, [2]Justice Basheer Ahmed Sayeed College for Woman, India, [3]BARC, India

MoP 40

Characterization of Doxorubicin Load Vesicles (Soybean Oil and Mygliol 812) Delivery Systems for Cancer using Very Small Angle Neutron Scattering (VSANS)

Fabiano Yokaichiya[1], Christian Schmidt[2], Joachim Storsberg[2], Mont Kumpugdee Vollrath[3], Daniele Ribeiro de Araujo[4], Ben Kent[1], Daniel Clemens[1], Friedrich Wingert[2], and Margareth Franco[5]

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MoP 41

Caracterization of Poloxamer 407 and 188-based Delivery Systems Containing Sumatriptane for Pain Treatment (Migraine) using Very Small Angle Neutron Scattering (VSANS)

Margareth Franco[1], Fabiano Yokaichiya[2], Daniel Clemens[2], and Daniele Ribeiro de Araujo[3]

[1]IPEN, Brazil, [2]HZB, Germany, [3]Universidade Federal do ABC, Brazil

MoP 42

Structural Evolution of Poly(lactide) Molecular Bottlebrushes: Kinetics Study by Size Exclusion Chromatography, Small-Angle Neutron Scattering and Simulations

Suk-kyun Ahn [1], Seungwan Cho [1], Jan-Michael Y. Carrillo [2], Youngkyu Han [2], Tae-Hwan Kim [3], Kunlun Hong [2], Michael Kilbey [4], Bobby Sumpter [2], Gregory Smith [2], and Changwoo Do [2]

[1]Pusan Nat'l Univ., Korea, [2]ORNL, USA, ,[3]KAERI, Korea, [4] Univ. of Tennessee, USA

MoP 43

Investigations on Shear-Induced Alignment and Phase Behavior of SWNT Superstructure in Polymeric System

Sang-Jo Lee, Sung-Hwan Lee, Jae-Min Ha, and Sung-Min Choi

KAIST, Korea

MoP 44

Nanoscale Rheology on Phospholipid Membranes

Sebastian Jaksch[1], Olaf Holderer[1], Manuchar Gvaramia[1], Michael Ohl[2], Michael Monkenbusch[3], and Henrich Frielinghaus[1]

[1]JCNS at MLZ, Germany, [2]JCNS at SNS, USA, [3]JCNS, Germany

MoP 45

Diffusion of Hemoglobin Inconcentrated Solutions and in Blood Cells: a Physiological Implication

Stephane Longeville
LLB, France

MoP 46

Ligand-Induced Dynamical Change of G-Protein-Coupled Receptor Revealed by Neutron Scattering

Utsab Shrestha[1], Debsindhu Bhowmik[2], Eugene Mamontov[2], and Xiang-Qiang Chu[1]
[1]Wayne State Univ., USA, [2]ORNL, USA

MoP 47

Effects of Pressure on the Dynamics of a Hyperthermophilic Protein Revealed by Quasielastic Neutron Scattering

Utsab Shrestha[1], Debsindhu Bhowmik[2], John Copley[3], Madhusudan Tyagi[3,4], Juscelino Leao[3], and Xiang-Qiang Chu[1]
[1]Wayne State Univ., USA, [2]ORNL, USA, [3]NIST, USA, [4]Univ. of Maryland, USA

MoP 48

A Neutron Scattering and Molecular Dynamics Study of the Effect of Room-Temperature Ionic Liquieds on the Fibrillation of a Model Amyloidogenic Protein

Antonio Benedetto[1,2] and Pietro Ballone[3]
[1]Univ. College Dublin, Ireland, [2]PSI, Switzerland, [3]Norwegian Univ. of Sci. and Tech., Norway

MoP 49

The Location and Orientation of Antimicrobial Peptides in Model Biological Membranes Determined by Neutron Reflectometry

Anton Le Brun[1], Marc-Antonine Sani[2], and Frances Separovic[2]
[1]ANSTO, Australia, [2]Univ. of Melbourne, Australia

MoP 50

Using Macromolecular Neutron Crystallography to Study Hydrogen Atoms in the Catalytic Mechanism of the FADH Cofactor in Cholesterol Oxidase

Emily Golden[1], Li-Juan Yu[1], Flora Meilleur[2], Matthew Blakeley[3], Anthony Duff[4], Amir Karton[1], and Alice Vrielink[1]
[1]Univ. of Western Australia, Australia, [2]ORNL, USA, [3]ILL, France, [4]ANSTO, Australia

MoP 51

Microscopic Dynamics of Phospholipid Membrane: Effects of Non-steroidal Anti-Inflammatory Drugs

V. K. Sharma[1] and E. Mamontov[2]
[1]*BARC, India,* [2]*PSI, Switzerland,* [2]*ORNL, USA*

MoP 52

A New Structural Model for Analysis of Low Density Lipoproteins using Small-Angle Scattering - Insights into the Fatty Core Packing and Phase Transition

Selma Maric[1], Tania Lind[1], Eva Bengtsson[2], Gunilla Nordin Fredrikson[2], Jan Skov Pedersen[3], and Marite Cardenas[1]
[1]*Malmoe Univ., Sweden,* [2]*Lund Univ., Sweden,* [3]*Aarhus Univ., Denmark*

MoP 53

Bayesian Statistics as Framework for Inclusion of Prior Knowledge and Complementary Data in the Analysis of Small-Angle Scattering Data

Andreas N Larsen[1], Asger Sand[1], Lise Arleth[1], Martin C Pedersen[2], and Steen Hansen[1]
[1]*Univ. of Copenhagen, Denmark,* [2]*Australian Nat'l Univ., Australia*

MoP 54

Neutron Scattering Studies of Interfacial Soft-and Bio-Related Structures: From Polyelectrolyte Coatings to Adhesion of Living Cells

Jaroslaw Majewski[1,2,3], Ann Junghans[1], and Saurabh Singh[4]
[1]*LANL, USA,* [2]*NSF, USA,* [3]*UC Davis, USA,* [4]*INTEL, USA*

MoP 55

Investigation of the Hydration Dynamics of a Squid-Derived Protein by Quasielastic in Neutron Scattering

Huihun Jung[1], Abdon Pena-Francesch[1], Madhusan Tyagi[2], and Melik Demirel[1]
[1]*Pennsylvania State Univ., USA,* [2]*NIST, USA*

MoP 56

Dynamics of Adenosine Monophosphate in Lipid and Salty Environment

Loreto Misuraca[1,2], Francesca Natali[2,3], Laura da Silva[4], Judith Peters[2,5], Giuseppe Zaccai[2,6,7,8], David Deamer[9], and Marie Christine Maurel[4]
[1]*Univ. of Palermo, Italy,* [2]*ILL, France,* [3]*CNR-IOM, France,* [4]*UMR 7205 CNRS-MNHN-UPMC-EPHE, France,* [5]*Universié Grenoble Alpes, France,* [6]*Institut de Biologie Structurale, France,* [7]*CEA Grenoble, France,* [8]*CNRS, France,* [9]*Univ. of California, Santa Cruz, USA*

MoP 57

Laser-Induced Picosecond Dynamics of Purple Membrane Patches Studied by QENS

Tatsiana Burankova[1,2], Thomas Hauß[3], Jacques Ollivier[4], Ruep E. Lechner[5], Norbert A. Dencher[6], and Jörg Pieper[2]

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MoP 58

Mechanistic Understanding of PHD2 Enzyme upon Ligand Interactions using SAXS and SANS

Praveen George Vadakkedath[1,2], Timothy M Ryan[3], Ivanhoe K H Leung[1], and Duncan J McGillivray[1,2]

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MoP 59

Effect of Molecular Crowding on Protein Structure Clarified by Neutron and X-ray Scattering

Mitsuhiro Hirai[1], Satoshi Ajito[1], Masaaki Sugiyama[2], Hiroki Iwase[3], Noboru Ohta[4], Nobutaka Shimizu[5], and Noriyuki Igarashi[5]

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MoP 60

Neutron Scattering on Humane Compact Bone

Yong Choi[1], S.G. Bogdanov[2], E.Z. Valiev[2], P.A. Borisova[3], and A.N. Pirogoz[2]

[1]Dankook Univ., Korea, [2]RAS, Russia, [3]Kurchatov Inst., Russia

MoP 61

A Challenge of Neutron Single Crystallographic Analysis of Manganese Catalase with 133 Å Axes using iBIX

Taro Yamada, Naomine Yano, and Katsuhiro Kusaka

Ibaraki Univ., Japan

MoP 62

Ligand Topology of the Self-Assembled Nanohybrids Directs Multivalent Recognition and Selectivity Enhancement

Jun Shik Choi and Yong-beom Lim
Yonsei Univ., Korea

MoP 63

A Robust and Reliable Method for High Yield Deuterated Recombinant Protein Production using Escherichia Coli BL21

Anthony Duff, Karyn Wilde, Agata Rekas, Vanessa Lake, and Peter Holden
ANSTO, Australia

MoP 64

Neutron Potein Crystallographic Study of the Glucose Isomerization

Saki Yamoto[1], Naoya Komatsuzaki[1], Katsuhiro Kusaka[1], Naomine Yano[1], Natsuki Okuda[2], Akio Sasaki[2], and Ichiro Tanaka[1]
[1]Ibaraki Univ., Japan, [2]Visible Information Center, Inc., Japan

MoP 65

Effects of Lipid Type Composing Membrane on Energy Transfer Efficiency of Membrane Protein

Hyeyoung Kim, Minh Dinh Phan, Keel Yong Lee, and Kwanwoo Shin
Sogang Univ., Korea

MoP 66

Low-Frequency Dynamics of Bovine Serum Albumin and Alpha-Lactalbumin Studied by Inelastic Neutron Scattering

Anna V. Frontzek[1], Jan Peter Embs[2], and Sergey G. Lushnikov[1]
[1]Ioffe Inst., Russia, [2]PSI, Switzerland

MoP 67

How Dose Trehalose Affect Protein Structure and its Stability?

Satoshi Ajito[1], Mitsuhiro Hirai[1], Hiroki Iwase[2], Noboru Ohta[3], Nobutaka Shimizu[4], and Noriyuki Igarashi[4]
[1]Gunma Univ., Japan, [2]CROSS, Japan, [3]Japan Synchrotron Radiation Research Inst., Japan, [4]KEK, Japan

MoP 68

Small Angle Neutron/X-Ray Scattering Study of Microtubules and Cationic Polymers

Juncheol Lee [1], Jimin Lee [1], Chaeyeon Song [2], Herbert Miller [3], Leslie Wilson [3], Cyrus Safinya [3], and Myung Chul Choi [1]

[1]KAIST, Korea, [2]Amore-Pacific Co. R&D Center, Korea, [3]UCSB, USA

MoP 69

Biomimetic Cell Membrane Models based on Lipids Extracted from Phosphatidylcholine Producing E Coli

Tania Lind, Sarah Waldie, Trevor Forsyth, Michael Haertlein, Martine Moulin, Selma Maric, and Marité Cárdenas

Malmoe Univ., Denmark

MoP 70

Synthesis of Perdeuterated 1-Palmitoyl-2-Oleoyl-Sn-Glycero-3-Phosphocholine ([D82]POPC) for Neutron Studies on Bilayer Lipid Membranes

Nageshwar Rao Yepuri[1], Tamim Darwish[1], Anna Leung[2], Anwen Krause-Heuer[1], Hannah Wacklin[2], Robin Delhom[2], and Peter Holden[1]

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MoP 71

Investigation of Inorganic-Organic Hybrid $(C_6H_5CH_2CH_2NH_3)_2CuCl_4$(Cu-PEA) by Neutron Single Crystal Diffraction

Garam Park[1,2], In-Hwan Oh[1], J. M. Sungil Park[1], Martin Meven[3], Gernot Heger[3], Seong-Hun Park[4], Chang-Seop Hong[2], and Kwang-Sei Lee[6]

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MoP 72

Neutron Single Crystal Diffraction Study of Tl_2SO_4

In-Hwan Oh[1] and Kwang-Sei Lee[2]

[1]KAERI, Korea, [2]Inje Univ., Korea

MoP 73

Chemical Deuteration of Ionic Liquids and their Application in Neutron Reflectivity

Kazuhiro Akutsu[1,2], Tamim A. Darwish[3], Marina Cagnes[3], Kazuhisa Tamura[4], and Toshiji Kanaya[2,5]

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MoP 74

Single Crystal Neutron Diffraction Study of a Crystalline-State Photoisomerization Ina 3-Cyanopropyl Cobaloxime Complex

Takashi Ohhara[1], Ryoji Kiyanagi[1], Kenichi Oikawa[1], Takuro Kawasaki[1], Koji Kaneko[1], Itaru Tamura[1], Akiko Nakao[2], Takayasu Hanashima[2], and Koji Munakata[2]
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MoP 75

A Tomography Approach to Investigate the Impactite Formation Processes

Anna Fedrigo[1,2], Kasper Marstal[2,3], Anders Bjorholm Dahl[2], Mark Lyksborg[2], Carsten Gundlach[4], Christian Bender Koch[5], and Markus Strobl[1]
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MoP 76

Anisotropic Pore Structure Characterization under Sorbing Gas Injection Condition for Shale and Coal: Small Angle Neutron Scattering Experiment and Modeling

Rui Zhang and Shimin Liu
The Pennsylvania State Univ., USA

MoP 77

Li Distribution in Tungsten Bronze $Li_xSr_{1-0.5x}Ta_2O_6$ Studied by Neutron Diffraction Analysis

Hyeon-Dong Han and Young-Il Kim
Yeungnam Univ., Korea

MoP 78

Grazing-Incidence X-Ray Diffraction Studies on Polymer Semiconductors: Relationship between Polymer Microstructures and Electrical Performance

Hae Rang Lee and Joon Hak Oh
POSTECH, Korea

MoP 79

Small Angle Neutron Scattering Study of Silica Filled Polydimethylsiloxane Membrane for Alcohol/Water Pervaporation Separation

Ankitkumar M. Kansara[1], Pradeep K. Prajapati[1], Vinod K. Aswal[2], and Puyam S. Singh[1]
[1]CSIR-CSMCRI, India, [2]BARC, India

MoP 80

Probing Phenol-Ionic Liquid Interactions: Using Neutron Diffraction to Improve Industrial Processes

Adam H. Turner and John D. Holbrey
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MoP 81

Structure of Silica Ionogels with Short Chain Pyridinium Ionic Liquid by SANS and SAXS

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MoP 82

Breathing Microporous: What is the Mechanics?

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MoP 83

Synthesis of Hierarchical Metal-Organic Frameworks in DMSO/CO_2-Gas Expanded Solvent Systems

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Beyond Ni-base Superalloys: Co-Re base Alloys with Strengthening Nanosized TaC Precipitates

Ralph Gilles[1], Debashis Mukherji[2], Pavel Strunz[3], Lukas Karge[1], Premysl Beran[4], Michael Hofmann[1], Armin Kriele[5], and Joachim Rösler[2]
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MoP 85

Validation of CMWP Method in Analyses of Neutron Diffraction Patterns for Investigation of Microstructures during Stress Relaxation of 780 MPa Grade Bainitic Steels

Kodai Murasawa[1], Masato Takamura[2], Masayoshi Kumagai[3], Yoshimasa Ikeda[2], Hiroshi Suzuki[4], Yoshie Otake[2], Takayuki Hama[5], and Shinsuke Suzuki[1]
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Neutron Reflectometry Studies of Metal-Ceramic Ti-TiN Interfaces for Novel Nano-Composites Materials

Jaroslaw Majewski[1,2,3], Erik Watkins[1], J. Kevin Baldwin[1], Nathan Mara[1], Irene Beyerlein[4], Richard Hoagland[1], Nan Li[1], Youxing Chen[1], Xiang-Yang Li[1], and Satyesh Yadav[5]

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Neutron Diffraction Study on Low Cycle Fatigue Behavior of Additive Manufactured Stainless Steel

Hobyung Chae[1], Minki Hong[1], E-Wen Huang[2], Wanchuck Woo[3], Ke An[4], and Soo Yeol Lee[1]

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MoP 88

Deformation Asymmetry of Magnesium Alloy under Cyclic Loading Investigated by In Situ Neutron Diffraction and EVPSC Modeling

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MoP 89

SANS Studies of Morphology and Phase Behavior of Thermoplastic Polyurethane Subjected to Conditioning in High Humidity, Elevated Temperature and Ionizing Irradiation

Qiang Tian[1], Erzsebet Takacs[2], Ivan Krakovsky[3], Minhao Yan[4], Guanyun Yan[1], Guangai Sun[1], Bo Chen[1], Laszlo Rosta[5], and Laszlo Almasy[4,5]

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MoP 90

Residual Strain Measurement Near the Cut Surface for Electrical Steel

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MoP 91

Microstructural Investigations of Bulk Metallic Glasses using Small-Angle Neutron Scattering

Vasyl Ryukhtin[1], Sergiy Bakai[2], Baek Seok Seong[3], Tae-Gyu Shin[3], Vitaliy Pipich[4], Artem Feoktystov[4], and Oleksandr Bakai[2]
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MoP 92

Neutron Diffraction and Vibrational Spectroscopy of Proton-Inserted CeO_{2-x}

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Micromechanical Elasto-Plastic Deformation of Additive-Manufactured AlSi10Mg Alloy

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Quasielastic Neutron Scattering and Molecular Dynamics Simulation of Methanol Diffusion Confined in Cross-Linked Phenolic Resins

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MoP 95

Treatment of Spatial Resolution Effects in Neutron Residual Strain Scanning

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Small Angle Neutron Scattering Analysis for Nano-Precipitates of Ni-Base Alloys

Eunjoo Shin and Wan Chuck Woo
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MoP 97

Synthesis and Characterization of Porous Gold Sponges using Self-Assembly of Gold Nanoparticles Induced by Thiolated Poly(Ethylene Glycol)

Min-Jae Lee, Sung-Hwan Lim, Jae-Min Ha, and Sung-Min Choi
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MoP 98

Study of Stability of Microstructure and Residual Strain After Thermal Loading of Plasma Sprayed YSZ by through Surface Neutron Scanning

Hyoung Chul Back[1], Florian Vollert[1], Jens Gibmeier[1], Joana Rebelo-Kornmeier[2], Markus Mutter[3], and Robert Vaßen[3]
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MoP 99

Studies NiCrAl Alloy Hardness Depending on the Phase Composition and Size, the Solid Phase Formed Nanoparticles

Dmitry Trunov[1,2], Ravil Sadykov[1], Vasily Litvin[1], Sergey Axenov[1,2], Anatoliy Gulutin[1], Alexander Khar/'kovskiy[1], Victor Glazkov[2], Polina Borisova[2], M-S Appavou[3], Alexander Ioffe[3], and Rusten Khasanov[4]
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Characterization of Nano Sized Microstructures in Ni base ODS Alloys using SANS and SAXS

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Various Phase Transitions of PS-b-PnBMA/dPS-b-PnHMA Blends and Hydrostatic Pressure Effects

Seongjun Jo[1], Yonghoon Lee[1], Hyungju Ahn[2], and Du Yeol Ryu[1]
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Effect of Gauge Volume on Strain Measurement in Rock Materials using Time-of-Flight Neutron Diffraction

Jun Abe[1], Kotaro Sekine[2], Stefanus Harjo[3], Takuro Kawasaki[3], and Kazuya Aizawa[3]
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MoP 103

Fabrication of Digital X-ray Imaging Detector using Pixelated Gd_2O_2S: Tb Scintillator on Flexible Substrate

Son Singh, Daekyun Jeong, Rahim Abdur, Donghwan Ahn, Hoi Sup Soh, and Jaegab Lee
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MoP 104

Forward Model Algorithms for Multigrain Indexing in Laue Mode

Marc Raventos[1,2], Eberhard Lehmann[1], Christian Gruenzweig[1], and Soeren Schmidt[3]
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MoP 105

Neutron Facility for a Complex Radiation Diagnostics "DRAGON"

Victor Somenkov[1], Victor Glazkov[1], Vecheslav Em[1], Alexander Gureev[1], Mihail Murashev[1], Ravil Sadykov[2], Dmitry Trunov[1,2], Sergey Axenov[1,2], Lev Kravchuk[2], and Andrey Vazhentsev[3]
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MoP 106

Non-Standard Configuration of SANS Instruments: Multiple-Beam Techniques for VSANS and Scanning Neutron Imaging Methods

Charles Dewhurst and Isabelle Grillo
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MoP 107

A Preliminary Study on Hidden Relics using Neutron Tomography at a Compact Neutron Source

TaeJoo Kim[1], Jin Man Kim[1], Jongyul Kim[1], Atsushi Taketani[2], Yoshie Otake[2], Yasuo Wakabayashi[2], Makoto Goto[2], Takao Hashiguchi[2], and ChangHee Lee[1]
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MoP 108

Recent Progress on Practical Materials Study by Bragg Edge Imaging at J-PARC

Kenichi Oikawa[1], Yuhua Su[1], Ryoji Kiyanagi[1], Takuro Kawasaki[1], Takenao Shinohara[1], Tetsuya Kai[1], Kosuke Hiroi[1], Stefanus Harjo[1], Joseph Don Parker[2], Yoshihiro Matsumoto[2], Hirotoshi Hayashida[2], Shuoyuan Zhang[2], Yo Tomota[3], and Hirotaka Sat[4]
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MoP 109

Energy Selective Neutron Imaging System at HANARO

Jongyul Kim[1], Myung Kook Moon[1], TaeJoo Kim[1], Wanchuck Woo[1], Eun Joo Shin[1], Youngju Kim[2], Ohsung Oh[2], and Seung Wook Lee[2]

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MoP 110

Characteristics of the 2012 Model Lithium-6 Time-Analyzer Neutron Detector (LiTA12) System as a High Efficiency Detector for Resonance Absorption Imaging

Tetsuya Kai[1], Setsuo Satoh[2], Kosuke Hiroi[1], Yuhua Su[1], Mariko Segawa[1], Joseph Don Parker[3], Yoshihiro Matsumoto[3], Hirotoshi Hayashida[3], Takenao Shinohara[1], Kenichi Oikawa[1], and Yoshiaki Kiyanagi[4]

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MoP 111

Observation of Magnetic Domain Structure in a Grain Oriented Magnetic Steel using Polarized Pulsed Neutron Imaging

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MoP 112

A Neutron Grating Interferometer with an Analyzer Grating based on Structured Scintillator Fabricated by Gadox Particle Filling Method

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Development of a Multi-Element Quantification Method by Pulsed Epithermal Neutron Transmission Spectroscopy

Hirotaku Ishikawa, Hirotaka Sato, and Takashi Kamiyama

Hokkaido Univ., Japan

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Neutron Imaging with Fission and Thermal Neutrons at NECTAR at MLZ

Martin Johann Mühlbauer[1,2,3], Thomas Bücherl[4], Michael Knapp[1,2], Malgorzata Makowska[3,5], Michael Schulz[3], and Helmut Ehrenberg [1,2]

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MoP 115

Optimal Design of Talbot-Lau Interferometer for RADEN Beam Line in J-PARC MLF

Yoshichika Seki[1], Takenao Shinohara[1], Wakana Ueno[1], Joseph Parker[1], Wataru Yashiro[2], and Atsushi Momose[2]
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Trial of Neutron Diffraction Imaging using a High-Resolution WLSF-Scintillator Detector

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MoP 117

Archeological Research using Neutron Radiography at Thailand Research Reactor

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Thailand Inst. of Nuclear Tech., Thailand

MoP 118

New Evaluated Thermal Neutron Scattering Cross Sections for Liquid Hydrogen and Deuterium

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The Investigation of Thermal Neutron Scattering of Thorium Dioxide Crystal

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MoP 120

The Physical Design of Multi-Physics Instrument in CSNS

Wen Yin, Longwei Mei, Fei Shen, Tairan Liang, and Xuejun Jia
CAS, China

MoP 121

AbINS: a Modern Software for INS Interpretation

Krzysztof Dymkowski, Stewart Parker, Sanghamitra Mukhopadhyay, and Felix Fernandez-Alonso
ISIS, UK

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Non-Collinear Magnetic Structures in Doped M-type Barium Hexaferrite

Surbhi Gupta, Vasudeva Siruguri, and Vasant G. Sathe
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MoP 123

Investigation of the Thermal Scattering Law for Light Water Obtained from Inelastic Neutron Scattering Experiments and Molecular Dynamics Simulations

Vaibhav Jaiswal[1], Luiz Leal[1], Wim Haeck[1], Valerie Vallet[2], and Florent Real[2]
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MoP 124

New Approach for High-Precision Neutron Spectrometry

V. V. Voronin[1,2,3], Ya. A. Berdnikov[2], A. Ya. Berdnikov[2], Yu. V. Borisov[1], Yu. P Braginetz[1,2], V. V. Fedorov[1,2,3], I.A. Kuznetsov[1], M. V. Lasitsa[1,2], and S. Yu. Semenikhin[1]
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MoP 125

Crystal Acceleration Effect for Cold Neutrons in Vicinity of Bragg Resonance

V. V. Fedorov[1,2,3], Yu. P. Braginetz[1,2], Ya. A. Berdnikov[2], M. V. Lasitsa[1,2], S. Yu. Semenikhin[2], and V. V. Voronin[1,2,3]
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MoP 126

Study of Selective Gas Adsorption and Gas Adsorption Position in Microporous Metal-Organic Frameworks

Yoodae Song[1], Sanghyun Lee[2], Takashi Kamiyama[2], Shuki Torii[2], and Minyoung Yoon[1]
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MoP 127

The Domain Structure Transformation at the Orientation Phase Transition in Tm_2Fe_{17} Ferromagnetic

M. Shushunov[1], V. Glazkov[1], V. Voronin[2], E. Valiev[2], A. Kuchin[2], L. Maksimov[1], S. Platonov[2], and V. Somenkov[1]
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MoP 128

Complex Radiation Diagnosis of Materials and Products

M. Shushunov, V. Glazkov, V. Somenkov, E. Kovalenko, and K. Podyrec
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MoP 129

Measurement of the Flux Density, the Fast Neutron Fluence and the Gamma Radiation Doses on the IBR-2 Facility for Radiation Investigations via Si and Ni "Satellites" at Considerable Removal from the Reactor

Maksim Bulavin, A. E. Verkhoglyadov, S. A. Kulikov, S. V. Afanasiev , N. I. Zamyatin, and A. I. Shafronovskaya
JINR, Russia

MoP 130

Theoretical Investigation on the Hierarchical Self-Assembly of Hexagonal, Honeycomb, and Kagome Superlattices of Binary 1D Colloids

Younghoon Oh[1], Sung-Hwan Lim[2], Sung-Min Choi[2], and Bong June Sung[1]
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Tuesday, July 11, 2017

* Complete abstracts are accessible on-line at

[TuP] Poster Session 2
Tuesday, July 11, 2017 / 12:30-14:30
1F, Exhibition Hall

TuP 1

Neutron Scattering Study on the Quantum Fluctuations in $Ba_3CoSb_2O_9$

Jie M[1], Y. Kamiya[2], L. Ge[3], Tao Hong[4], Y. Qiu[5], D. L. Quintero-Castro[6], H. B. Cao[4], G. Ehlers[4], W. Tian[4], M. Matsuda[4], C. D. Batista[4,7], M. Mourigal[3], and H. D. Zhou[7]
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TuP 2

Investigation of Magnetic Fluctuations in the Ferromagnet UGe_2 by Means of Modulated Intensity by Zero Effort (MIEZE)

Franz Haslbeck[1], Steffen Säubert[1], Christian Franz[1], Marc Janoschek[1,2], and Christian Pfleiderer[1]
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TuP 3

Study of the Critical Fluctuations at the Curie Point in Iron using the Longitudinal MIEZE Setup at RESEDA

Jonas Kindervater[1,2], Wolfgang Häußler[1], Christian Franz[1], Christian Fuchs[1], Steffen Säubert[1], Franz Haslbeck[1], Peter Böni[1], and Christian Pfleiderer[1]
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TuP 4

Magnetic-Field Dependence of the Spin Excitations of Partially Frustrated CePdAl

Stefan Lucas[1], Zita Huesges[1,2], Veronika Fritsch[3], Hilbert von Löhneysen[4], and Oliver Stockert[1]
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TuP 5

The Effects of Manufacturing Processes on Historical Ceramic Morphology Studied by Small Angle Neutron Scattering

Claudia Mondelli[1], Giulia Ricci[2], Eleonora Balliana[2], Víctor M. GalvánJosa[1], Ralf Schweins[1], and Elti Cattaruzza[2]
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TuP 6

Neutron Powder Diffraction Study of $Tm_2Mn_2O_7$ and $Y_2Mn_2O_7$ - Pyrochlores Obtained by Yet Another Chemical Route of Synthesis

Ekaterina Pomjakushina, Katharina Rolfs, Vladimir Pomjakushin, Janusz Karpinski, and Kazimierz Conder
PSI, Switzerland

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Crystal Electric Field Splitting in the Cubic Pyrochlore $Nd_2Hf_2O_7$

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TuP 8

Exploring the Effect of Bi Doping in Cubic Spinel $Bi_xCo_{2-x}MnO_4$ by Employing Neutron Diffraction

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TuP 9

X-ray and Neutron Diffraction Study on CS_2 Glasses Created by Low-Temperature Vapor Deposition

Yuki Mizuno[1], Shinji Kohara[2], and Osamu Yamamuro[1]
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TuP 10

Stripy Order in Buckled Honeycomb Lattice Antiferromagnet Ba_2NiTeO_6

Shinichiro Asai[1], Minoru Soda[1], Kazuhiro Kasatani[2], Toshio Ono[2], Maxim Avdeev[3], V. Ovidiu Garlea[4], Barry Winn[4], and Takatsugu Masuda[1]
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TuP 11

On Magnetic and Crystal Structures of NiO, MnO and MnS

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TuP 12

Single Ferroelectric Transition of First-Order in Multiferroic Hexagonal Manganite $RMnO_3$ (R = In, Y, Ho-Lu)

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TuP 13

Magnetic-Field-Induced Self-Assembly of Iron Oxide Nanoparticles

Zhendong Fu, Yinguo Xiao, Artem Feoktystov, Vitaliy Pipich, Marie-Sousai Appavou, Yixi Su, Erxi Feng, Wentao Jin, and Thomas Brückel
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TuP 14

Studies on Phonon Modes in a Molecular Dimer-Mott insulator β'-$(BEDT\text{-}TTF)_2ICl_2$ by Inelastic Neutron Scattering

Seiko Ohira-Kawamura[1], Masato Matsuura[2], Satoshi Iguchi[3], Takahiko Sasaki[3], Hiromi Taniguchi[4], Aiko Kubota[4], Kazuhiko Satoh[4], Yasuhiro Inamura[1], Tatsuya Kikuchi[1], and Kenji Nakajima[1]
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TuP 15

Phonon Contributions to High-Temperature Superconductivity

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TuP 16

Fluctuations of Magnetic Stripes in Twinned Cuprate Superconductors

Henrik Jacobsen[1,2], Sonja Lindahl Holm[2,3], Monica-Elisabeta Lacatusu[2,4], Mads Bertelsen[2], Martin Boehm[5], Rasmus Toft-Petersen[4,6], Jean-Claude Grivel[4], Samuel Emery[7,8], Linda Udby[2], Barrett Wells[7], and Kim Lefmann[2]
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TuP 17

Spin Dynamics of the Hidden Order State in $Gd_3Ga_5O_{12}$ and $Gd_3Al_5O_{12}$

Henrik Jacobsen[1,2,3], Rasmus Tang[2], Emil Martiny[2], Ovidiu Florea[4,5], Elsa Lhotel[4,5], Kim Lefmann[2], Tilo Seydel[6], Robert Bewley[7], Andrew Wildes[6], Gøran Nilsen[6,7], and Pascale Deen[2,3]
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TuP 18

Dynamical Correlation Functions of Coherent Scattering from Elemental Liquid Metals with Complex Static Structure

Yukinobu Kawakita[1], Tatsuya Kikuchi[1], Yasuhiro Inamura[1], Shuta Tahara[2], Kenji Maruyama[3], Takayasu Hanashima[4], Mitsutaka Nakamura[1], Ryoji Kiyanagi[1], Yasuhiro Yamauchi[1], Kaori Chiba[5], Seiko Ohira-Kawamura[1], Yoshifumi Sakaguchi[4], Hironori Shimakura[6], Ryuta T
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TuP 19

Neutron Diffraction Studies on the Influence of Excess Oxygens on Crystal and Magnetic Structure in Nd_2NiO_{4+d}: An Oxygen Ion Conductor

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In-field Neutron Diffraction Investigation of Metamagnetism in Nd_7Rh_3

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TuP 21

Residual Stress Instrument with Double Crystal Monochromator at Research Reactor IR-8

I.D. Karpov[1], V.T. Em[1], V.A. Somenkov[1], V.P. Glazkov[1], A.M. Balagurov[2], V.V. Sumin[2], P. Mikula[3], and J. Saroun[3]
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Full and Selective Deuteration Effects in Bis(glycinium) Oxalate : A Comparative Study using Single Crystal Neutron Diffraction

Chitra R and Rajul R. Choudhury
BARC, India

TuP 23

Uniaxial Stress Control of Skyrmion Lattice Phases in MnSi and Cu_2OSeO_3

Taro Nakajima[1], Yoichi Nii[2], Akiko Kikkawa[1], Yuichi Yamasaki[1,2], Victor Ukleev[1], Kazuki Ohishi[3], Jun-ichi Suzuki[3], Kazuhisa Kakurai[1,3], Shin-ichiro Seki[1], Yasujiro Taguchi[1], Yoshihiro Iwasa[1,2], Yoshinori Tokura[1,2], and Taka-hisa Arima[1,4]

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TuP 24

Structural Dependency of Ion Transport in $La_{1-y}Ba_yF_{3-y}$ ($0 \leq y \leq 0.10$) from Single-Crystal Neutron Diffraction Data

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TuP 25

Neutron Powder Diffraction Study of La_2CoIrO_6 Double Perovskite

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TuP 26

To the Question of Conformational Equilibrium and Polymorph's States of O-Hydroxy Acetophenone

Agnieszka Kwocz[1], Dorota Chudoba[2,3], Łukasz Hetmańczyk[4], Przemysław Szklarz[1], and Aleksander Filarowski[1,3]

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TuP 27

Influence of Packing Density and Viscosity on the Growth of Dynamic Heterogeneity While Cooling Metallic Melts

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TuP 28

Magnetic Structure for $NaCr_2O_4$ Analyzed by Neutron Diffraction and Muon Spin-Rotation/Relaxation

Hiroshi Nozaki[1], Hiroya Sakurai[2], Oren Ofer[3], Edualdo Ansaldo[3], Jess Brewer[3,4], Kim Chow[5], Vladimir Pomjakushin[6], Lukas Keller[6], Krunoslav Prsa[6], Kazutoshi Miwa[1], Martin Mansson[7], and Jun Sigiyama[1]

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TuP 29

Neutron Diffraction Study of Phase Transformations of Fullerene C_{70} after Mechanical Activation

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TuP 30

Relation between Structural Properties and Magnetic Excitations in the $Ce_2Pd_2(Al,Ga)_2$ System

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TuP 31

E-Type Non-Collinear Magnetic Ordering in Multiferroic O-$LuMnO_3$

Saumya Mukherjee[1,2], Andreas Dönni[3], Taro Nakajima[4,5], Setsuo Mitsuda[4], Makoto Tachibana[3], Hideaki Kitazawa[3], Vladimir Pomjakushin[1], Lukas Keller[1], Chrisrtof Niedermayer[1], Andrea Scaramucci[1], and Michel Kenzelmann[1]

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TuP 32

Possible Excitonic Phase of $(Pr_{1-y}Ry)_{1-x}Ca_xCoO_3$ (R = Lanthanides and Y)

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TuP 33

Properties and Internal Structure of Complex Coacervate Core Micelles

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TuP 34

Neutron Scattering Study of Magnetic Order in Oxygen Deficient Perovskite $La_{6.4}Sr_{1.6}Cu_8O_{20}$

Masaki Fujita
Tohoku Univ., Japan

TuP 35

Complex Superstructures in the Co-Doped High-Tc Superconductor $La_{2-x}Sr_xCuO_{4+y}$, Observed with Neutrons and X-rays

Pia J. Ray[1], Ursula B. Hansen[1], Monica-Elisabeta Lacatusu[2], Matthias J. Gutmann[3], Matthias D. Frontzek[4], Jonathan P. Wright[5], and Linda Udby[1]
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TuP 36

Excitation Spectra of the Chiral Cupola System $Ba(TiO)Cu_4(PO_4)_4$

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TuP 37

Unexpected Suppression of Magnetic Stripes by Field in Underdoped LSCO

Ana - Elena Nan[1], Henrik Jacobsen[1,2], Monica - Elisabeta Lacatusu[1,3], Tim Birger Tejsner[1,4], Sonja Lindahl Holm[1,5], Laura Folkers[6], Yasmine Sassa[7], Martin Böhm[4], Paul Steffens[4], Rasmus Toft - Petersen[8], Jean - Claude Grivel[3], Barrett Wells[9], and Kim Lefmann[1]
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TuP 38

Role of the Critical Helix Fluctuations in Stabilization of the Skyrmion Lattice in MnSi

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TuP 39

Temperature-Dependent Magnetic Dynamics in Frustrated Tetragonal Spinel $ZnMn_2O_4$

Hun Chang[1], In-Yong Hwang[1], Jae-Ho Chung[1], Ross Stewart[2], Wataru Higemoto[3], Yasuhiro Miyake[3], Su-Jae Kim[4], and Seongsu Lee[4]
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TuP 40

Complex Evolution of Magnetic Structures in Multiferroic Al-Doped Zn_2Y Hexaferrites above T_C

Hak Bong Lee[1], Jae-Ho Chung[1], Karel Prokes[2], Manfred Reehuis[2], Shin-Ae Kim[3], and In-Hwan Oh[3]
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TuP 41

Determination of the Crystal Field Levels in TmV_2Al_{20}

Reyner White[1], Wayne Hutchison[1], Gail Iles[2], Richard Mole[2], Sean Cadogan[1], Takahiro Namiki[3], and Katsuhiko Nishimura[3]
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TuP 42

Incommensurate Spin Correlations of a Cr Alloy with Dilute Fe

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TuP 43

Complex Magnetic Incommensurability in Multiferroic Co_3TeO_6

Chi-Hung LEE[1], Chin-Wei Wang[2], Yang Zhao[3,4], Wen-Hsien Li[1], Jeffrey W. Lynn[3], A. Brooks Harris[5], Kirrily Rule[6], Hung-Duen Yang[7], and Helmuth Berger[8]
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TuP 44

Spontaneous Magnetostriction of CoF_3 and FeF_3

Sanghyun Lee[1], Shuki Torii[1], Yoshihisa Ishikawa[1], Masao Yonemura[1,2], and Takashi Kamiyama[1,2]
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TuP 45

Temperature Dependence of Thermoelectric Clathrate $Ba_8Al_{16}Ge_{30}$

Widya Rika Puspita[1], Hiroyuki Takeya[2], Takashi Mochiku[2], Yoshihisa Ishikawa[2], Sanghyun Lee[3], Shukii Torii[3], Masao Yonemura[3], and Takashi Kamiyama[1,3]
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TuP 46

Neutron Diffraction Study of Frustrated Antiferromagnetic Tetragonal Spinel $ZnMn_2O_4$

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TuP 47

The Investigation of Magnetism in $PrBaCo_2O_{5.74}$ by High-Resolution Neutron Powder Diffraction under 14 T Magnetic Field

Zhijian Tan[1], Ping Miao[2], Xiaohuan Lin[3], Sanghyun Lee[2], Yoshihisa Ishikawa[2], Shuki Torii[2], Yingxia Wang[3], Masao Yonemura[2], and Takashi Kamiyama[1,2]
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TuP 48

Structural Distortions Induced by Orbital Doping in Tetragonal Spinel Mn_3O_4

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TuP 49

Magnetic Excitation and Anisotropy in Multiferroic $Ba_2CoGe_2O_7$

Minoru Soda[1], Shohei Hayashida[1], Masashige Matsumoto[2], Martin Månsson[3], Bertrand Roessli[4], Jonathan S. White[4], Seiko Ohira-Kawamura[5], Kenji Nakajima[5], Ryousuke Shiina[6], and Takatsugu Masuda[1]
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TuP 50

Crystal Structure of $(Lu_{1-x}Ca_x)Ba_2Cu_3O_{7-z}$ (x = 0, 0.2) Superconducting Compounds by Neutron Powder Diffraction

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TuP 51

Inelastic Neutron Scattering Study on 4f-Electron Multipole System $PrTr_2X_{20}$ (Tr : Transition Metal, X : Al and Zn)

Kazuaki Iwasa[1], Takahiro Onimaru[2], Toshiro Takabatake[2], Ryuji Higashinaka[3], Yuji Aoki[3], Seiko Ohira-Kawamura[4], and Kenji Nakajima[4]
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TuP 52

Crystal Structure of a Non-Centrosymmetric System, $CuY_2Ge_2O_8$

Hwanbeom Cho[1], Hasung Sim[1], Sanghyun Lee[2], Maxim Avdeev[3], Yukio Noda[4], and Je-Geun Park[1]
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TuP 53

Analysis of the Q Dependent S(Q,E) Spectra by Inelastic Neutron Scattering Measurements on Iron Chalcogenide Superconductor $Fe(Te_{0.5}Se_{0.5})$

Motoyuki Ishikado[1], Katsuaki Kodama[2], Ryoich Kajimoto[2], Mitsutaka Nakamura[2], Kazuhiko Ikeuchi[1], Yasuhiro Inamura[2], Sungdae Ji[1], Masatoshi Arai[2], and Shin-ich Shamoto[2]
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TuP 54

Magnetic Excitations in Metallic Antiferromagnets $Fe_{0.7}Mn_{0.3}$ and $Fe_{0.5}Mn_{0.5}$

Shinichi Itoh, Takafumi Hawai, Soshi Ibuka, Tetsuya Yokoo, and Yasuo Endoh
KEK, Japan

TuP 55

Search for a Ground State in Pyrochlore Titanates

Viviane Pecanha-Antonio, Yixi Su, and Erxi Feng
JCNS at MLZ

TuP 56

Spin Waves in Metallic Ferromagnet $SrRuO_3$

Shinichi Itoh[1], Yasuo Endoh[1], Tetsuya Yokoo[1], Soshi Ibuka[1], Takafumi Hawai[1], Je-Geun Park[2], Yoshio Kaneko[3], Kei S. Takahashi[3], Yoshinori Tokura[3], and Naoto Nagaosa[3]
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TuP 57

Neutron Inelastic Scattering Study on the Iron-based Ladder Compound $BaFe_2Se_3$

Takafumi Hawai[1], Yusuke Nambu[2], Kenya Ohgushi[2], Barry Winn[3], V. Ovidiu Garlea[3], Melissa Graves-Brook[3], Igor A. Zaliznyak[4], Shinichi Itoh[1], Testuya Yokoo[1], and Taku J. Sato[2]
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TuP 58

Figure of Merit ZT Enhancement in Na Doped SnSe

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TuP 59

Anomalous Dielectric Response of Protons in Short Hydrogen Bonds under Pressure: The Case of $(Mn_{0.5}Fe_{0.5})^{2+}AlPO_4(OH)_2H_2O$

Benedikt Röska[1], SoHyun Park[1], Björn Pedersen[2], Yusuke Yoshimori[3], Kenta Kimura[3], and Tsuyoshi Kimura[3]
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TuP 60

Pressure-Dependent Structural Characterization of SnO using Neutron Diffraction.

Asaf Pesach[1], Rafael Hevroni[1], Eran Sterer[1], Elad Caspi[1], Antonio de Santos[2], Jamie Molaison[2], and Chris Tulk[2]
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TuP 61

Structure and Magnetic Properties of $Ni_xCo_{1-x}(N(CN)_2)_2$ Molecular Magnets

D. Lee[1], S. Song[1], D.J. Williams[2], S. C. Vogel[2], Th. Proffen[2,3], J. D. Thompson[2], L. L. Daemen[2,3], and Sungkyun Park[1]
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TuP 62

Studies of Antiferromagnetic Order and Ferroelectricity on Mn-Doping in Single Crystalline $BiFeO_3$

Ki-Myung Song, Hyungsub Kim, and Seongsu Lee
KAERI, Korea

TuP 63

Complex Radiation Diagnosis of Materials and Products

M. Shushunov, V. Somenkov, V. Glazkov, and E. Kovalenko
Kurchatov Institute, Russia

TuP 64

Phonon Dynamics of NaI Investigated by G(r,E) Analysis

Mitsutaka Nakamura[1], Tatsuya Kikuchi[1], Kazuya Kamazawa[2], and Yukinobu Kawakita[1]
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TuP 65

Geometric Effect Corrections in using a Comb Sample as a Stress-Free Reference for Stress Measurements by Neutron Diffraction

I.D. Karpov and V.T. Em
Kurchatov Institute, Russia

TuP 66

Magnetic an Isotropy in Isovalent Spin S=7/2 Family $EuTIn_4$ (T=Ni, Pd, Pt)

Koji Kaneko[1], Shugo Ikeda[2], Matthias D. Frontzek[3], Takayasu Hanasima[4], Akiko Nakao[4], Ryoji Kiyanagi[1], Takashi Ohhara[1], Yoshiya Homma[5], Hisao Kobayashi[2], and Hiroshi Yamagami[1,6]
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TuP 67

Diminished Spin Fluctuation in Low-T_c Nodal Iron-Based Superconductor $LaFePO_{0.9}$

Motoyuki Ishikado[1], Katsuaki Kodama[2], Ryoich Kajimoto[2], Mitsutaka Nakamura[2], Yasuhiro Inamura[2], Fumio Mizuno[3], Shuichi Wakimoto[2], Akira Iyo[4], Hiroshi Eisaki[4], Tao Hong[5], Hannu Mutka[6], Masatoshi Arai[2], and Shin-ich Shamoto[2]
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TuP 68

Giant Magnetoelectric Effects Achieved by Tuning Spin Cone Symmetry in Y-type Hexaferrites

Kun Zhai[1,2], Yan Wu[3], Shipeng Shen[1], Wei Tian[3], Huibo Cao[3], Yisheng Chai[1], Bryan C. Chakoumakos[3], Dashan Shang[1],Liqin Yan[1], Fangwei Wang[1], and Young Sun[2,1]
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TuP 69

Single Crystal Neutron Diffraction of the Magnetoelectric Co_2Z-Type Hexaferrite

Hun Chang[1], Hak Bong Lee[1], Jae-Ho Chung[1], Sae Hwan Chun[2], Kwang Woo Shin[2], Byung-Gu Jeon[2], Kee Hoon Kim[2], Karel Prokeš[3], and Slavomir Mat'aš[3]
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TuP 70

Polarized Neutron Reflevtivity of Thin Films in Ultrahigh Vacuum using Portable Transfer Chamber

Amir Syed Mohd, Sabine Pütter, Stefan Mattauch, Alexander Weber, Alexandros Koutsioubas, Harald Schneider, and Thomas Brückel
JCNS, Germany

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Spin Structure of Nanoparticles as Seen by Small-Angle Neutron Scattering

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TuP 72

Evolution of Depth Dependent Structure and Magnetism of FePt/Cu Multilayer on Annealing

Surendra Singh[1], C. L. Prajapat[1], M. Gupta[2], and S. Basu [1]
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Nano-Metric Self-Diffusion of Fe: Effect of Grain Size

Amitesh Paul
TU Munich, Germany

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Realizing Topological Stability of Magnetic Helices in Exchange- Coupled Multilayers for All-Spin- based System

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Recovery and Nonrecovery of the Untrained State in an Exchange-Coupled System

Amitesh Paul
TU Munich, Germany

TuP 76

R Ion Effect for Spin Dynamics in Frustrated Spin System $RBaFe_4O_7$(R= Y, Ho, Yb, Lu) - Inelastic Neutron Scattering Studies

Kazuya Kamazawa[1], Seiko Ohira-Kawamura[2], Kenji Nakajima[2], and Taketo Moyhoshi[1]
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TuP 77

The Magnetic Structure of $SmCo_5$ - Competing Spin and Orbital Magnetic Momentum

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TuP 78

Magnetism in Polycrystalline FeRh Thin Films

Jingfan Ye[1], Marco Hauke[1], Vikram Singh[2], Akhil Tayal[2], Mukul Gupta[2], Rajeev Rawat[2], Jochen Stahn[3], Neelima Paul[4], Peter Böni[1], and Amitesh Paul[1]
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TuP 79

Unraveling the Coupling between Skyrmion and Crystallographic Lattices

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TuP 80

Multichannel Supermirror Analyzers of Neutron Polarization of Fan Type

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Phonons in Multiferroics $YMnO_3$ and $GaFeO_3$: Inelastic Neutron Scattering and First Principles Studies

Mayanak Kumar Gupta[1], Ranjan Mittal[1], Nitika Sharma[1], Ripandeep Singh[1], Mohamed Zbiri[2], Stefan Rols[2], Helmut Schober[2], and Samrath Lal Chaplot[1]
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TuP 82

Neutron Depolarization Measurements of Magnetite in Chiton Teeth

Marc Seifert, Michael Schulz, Pau Jorba, Georg Benka, Christian Pfleiderer, and Stuart Gilder
TU Munich, Germany

TuP 83

Formation of Co-N Phases in Magnetron Sputtering Process and their Magnetization Studied using Polarized Neutron Reflectivity

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Long-Period Smectic-like Magnetic Structures in $Mn_{1-x}(Co,Rh)_xGe$ Alloys

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TuP 85

Tracing the Verwey Transition from Bulk to Nanoscale

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TuP 86

Influence of Ho-Mn/Cr Interaction on the Magnetic Structure in Cr Doped $HoMnO_3$

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Neutron Diffraction Study on Exotic Magnetic Properties of Mn Substituted Spinel Cobalt Chromite

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Grazing Incidence Neutron Diffraction from Near-Surface Nanostructures

Alexander Belushkin and Sergej Manoshin
FLNP, Russia

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Pseudo-Goldstone Nagnons in the Frustrated S = 3/2 Heisenberg Helimagnet $ZnCr_2Se_4$ with a Pyrochlore Magnetic Sublattice

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TuP 90

Linear Spin Chains in Paramagnetic and in ordered Bulk Magnets

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TuP 91

Magnetic Transition of Inorganic-Organic Hybrid $(C_6H_5CH_2CH_2NH_3)_2MnCl_4$(Mn-PEA) Revealed by Neutron Single Crystal Diffraction

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Polarized Neutron Reflectivity Measurement for Pt/YIG Thin Films as a Spintronics Device

Hiroshi Nozaki[1], Masashi Harada[1], Hiroyuki Kawaura[1], Yasushi Kouno[2], and Noboru Miyata[3]
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Magnetic Structure of $Cu_{0.5}In_{0.5-x}Fe_xCr_2S_4$ Studies by Neutron Scattering at LT, H and P

Ravil Sadykov[1], Norbert Stusser[2], Vladimir Pomyakushin[3], Polina Borisova[4], Victor Glazkov[4], Galina Shabunina[5], and Telman Aminov[5]
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Dual Nature in Magnetic Excitations in Oxygen Doped Lanthanum Nickel Oxide

Kenji Nakajima and Ryoichi Kajimoto
J-PARC, Japan

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Magnetic Properties of the Geometrically Frustrated $SrLn_2O_4$ Compounds

Simon Riberolles[1,2], Geetha Balakrishnan[1], Navid Qureshi[2], Monica Ciomaga Hatnean[1], and Oleg A. Petrenko[1]
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Relatively-Thick (300nm -) Thin-Film Structure Estimated by the Back-Incidence Neutron Reflectometry

Noboru MIYATA and Tsukasa MIYAZAKI
CROSS, Japan

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Localized Magnetic Excitations in the S = 1/2 Fully Frustrated Dimerized Magnet $Ba_2CoSi_2O_6Cl_2$

Nobuyuki Kurita[1], Seiko Ohira-Kawamura[2], Kenji Nakajima[2], Daisuke Yamamoto[3], Takuya Kanesaka[3], Nobuo Furukawa[3], and Hidekazu Tanaka[1]
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High Temperature Post-Annealing Induced Boron Diffusion and Nonuniform Magnetic Depth Profile in CoFeB/MgO Multilayers

K.-Y. Kim[1], I.-J. Shin[2], B.-C. Min[2], H.-C. Choi[3], S.-Y. Jo[3], C.-Y. You[3,4], S. Singh[5], M. R. Fitzsimmons[5], H. Ambaye[6], V. Lauter[6], J. Keum[6], K.-J. Kim[7], J.-W. Kim[8], and S. Park[9]
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Current Status of a Polarized Neutron Reflectometer "SHARAKU" in J-PARC

Hiroyuki Aoki[1], Kazuhiko Soyama[1], Dai Yamazaki[1], Noboru Miyata[2], Kazuhiro Akutsu[2], Takayasu Hanashima[2], Satoshi Kasai[2], and Jun-ichi Suzuki[2]
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How Universal is the Helimagnetic transition? A SANS and NSE Study of $Fe_{1-x}Co_xSi$

L.J. Bannenberg[1], R. Dalgliesh[2], P. Falus[3], E. Lelièvre-Berna[3], C.D. Dewhurst[3], F. Qian[1], Y. Onose[4], Y. Endoh[5], Y. Tokura[4,5], K. Kakurai[5,6], and C. Pappas[1]
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Crystal-Field Spectroscopy of Tetragonal Lanthanide Single-Molecule Magnets

Ursula Hansen[1], Mikkels Sørensen[1], Hannu Mutka[2], Giovanna Simeoni[3], Tom Fennel[4], Mark Telling[5], Mingee Chung[6], Henrik Rønnow[6], Mauro Perfetti[1], Høgni Weihe[1], Kim Lefmann[1], and Jesper Bendix[1]
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A Glance Inside Exotic ε-Fe_2O_3 Thin Films Grown on GaN with Polarized Neutron Reflectometry

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Magnetic Spin Correlations in the One-Dimensional Frustrated Spin-Chain System Ca_3Co_2O

M. Mansson[1], J. Sugiyama[2], B. Roessli[3], B. Hitti[4], Y. Ikedo[5], I. Zivkovic[6], H. Nozaki[2], M. Harada[2], Y. Sassa[7], D. Andreica[8], T. Goko[3], A. Amato[3], O. Ofer[4], E.J. Ansaldo[4], J.H. Brewer[4], K.H. Chow[9], H.T. Yi[10], S.-W. Cheong[10], and K. Prsa[11]

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Spring Exchange Nanocomposites $CoFe_2O_4$-FeCo, Studied by in Situ Neutron Diffraction

Jakob Voldum Ahlburg, Cecilia Granados, Henrik Lyder Andersen, Pelle Gorm Garbus, and Mogens Christensen

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Inelastic Measurements on Co_3TeO_6 and Ni_3TeO_6

Jonas O. Birk[1], Christopher Roehl[1], Anders K. Ravn[1], Jakob Lass[1], Maria retuerto[2], Ursula B. Hansen[1], Helle Leerberg[1], John Taylor[3], Tatiania Guidi[4], Andrea Piovano[5], and Kim Lefmann[1]

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Studies on Structure and Dynamics of Graphene-Based Polymer Nanocomposite Thin Films using Neutron Reflectivity

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Neutron Diffraction Study of New Low-Dimensional Spin Frustrated Chiral Tellurate $MnSnTeO_6$

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Magnetic Properties and Magnetocaloric Effect in Layered $NdMn_{1.7}V_{0.3}Si_2$

Muhamad Faiz Din[1,2], J. L. Wang[2,3], Y. N. A. Norizan[2], M. T. Tajudin[2], M. Avdeev[3], S. J. Kennedy[3], and S. X. Doua[1]

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Application of Neutron Reflectivity to Study the Gas-Phase OH Radical Oxidation of an Organic Film at the Air-Water Interface

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Understanding the Relations between a Free Space Reactor and Silicon Nanoparticle Morphology with Small Angle Neutron Scattering and Diffraction

Samson Y. Lai, Kenneth D. Knudsen, Geir Helgesen, Thomas J. Preston, Hallgeir Klette, Jan Petter Maehlen, and Trygve T. Mongstad

Inst. For Energy Tech., Norway

TuP 111

Carbongels for Future Hydrogen Storage Systems

Orsolya Czakkel[1], Balazs Nagy[2], Emanuel Bahn[1,3], Peter Fouquet[1], Silvia Villar-Rodil[4], Juan J. M. D. Tascon[4], and Krisztnia Laszlo[2]

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Mapping of Spin and Lattice Excitations in the Magnetocaloric Compound $MnFe_4Si_3$

Kirill Nemkovski[1], Nikolaos Biniskos[2,3], Karin Schmalzl[2], Stéphane Raymond[3], Jörg Voigt[1], Jörg Perßon[1], Ryoichi Kajimoto[4], Kazuki Iida[5], and Thomas Brückel[1]

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Operando Small-Angle Neutron Scattering of Lithium-Ion Batteries using Silicon Nanoparticles Anodes

Coraline Millot[1], Jean-Francois Colin[1], Hakima Mendil-Jakani[1], Lionel Porcar[2], and Sandrine Lyonnard[1]
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Enhanced Hydrogen Storage in Soft Porous Crystals: In-Situ Neutron Scattering Study of CAU-1 Metal Organic Framework

Margarita Russina[1], Moritz-Casper Schlegel[1,2], Daniel Toebbens[1], Roman Svetogorov[4], Norbert Stock[5], Helge Reinsch[5], Dirk Wallacher[1], and Ross Stewart[6]
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Evidence for Spin-Phonon Coupling and High Pressure Phase Stabilities of $RMnO_3$ using An Inelastic Neutron Scattering and First Principle Studies

S. K. Mishra[1], M. K. Gupta[1], R. Mittal[1], A. I. Kolesnikov[2], and S. L. Chaplot[1]
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Dynamics of Li- ion in Battery Materials $LiAlO_2$ and $LiAlSiO_4$: Neutron Scattering and Computational Studies

Baltej Singh[1,2], M. K. Gupta[1], R. Mittal[1,2], M. Zbiri[3], S. Rols[3], S. J. Patwe[4], S. N. Achary[1], H. Schober[3], A. K. Tyagi[4], and S. L. Chaplot[1,2]
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High Temperature Inelastic Neutron Scattering and Molecular Dynamics of Battery Materials Li_2O, $LiFePO_4$ and $LiMnPO_4$

Prabhatasree Goel[1], Mayanak K. Gupta[1], Ranjan Mittal[1], Samrath Lal Chaplot[1], Stephane Rols[2], S. J. Patwe[1], S. N. Achary[1], and A. K. Tyagi[1]
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Understanding a New Technology for Water Purification with Moringa Seeds

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Dynamics in Deep Eutectics: Quasielastic Neutron Scattering Studies

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Neutron Diffraction Studies of Nanostructured $SrFe_{12}O_{19}$ Magnets

Matilde Saura-Múzquiz[1], Marian Stingaciu[1], Anna Z. Eikeland[1], Henrik L. Andersen[1], Cecilia Granados-Miralles[1], Vladimir Lucin[2], Maxim Avdeev[2], and Mogens Christensen[1]

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Correlation between Structure and Performance-Related Properties of Radiation-Grafted Proton-Conducting Membranes

Gergely Nagy[1,2], Véronique Sproll[2], Urs Gasser[2], Thomas J. Schmidt[2,3], Lorenz Gubler[2], and Sandor Balog[4]

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Dynamics of Hydrogen Atoms in Palladium Nanoparticles

Osamu Yamamuro[1], Maiko Kofu[2], Naoki Hashimoto[1], Hiroshi Akiba[1], Hirokazu Kobayashi[3], Hiroshi Kitagawa[3], Madhusudan Tyagi[4,5], Wiebke Lohstroh[6], Kazuki Iida[7], and Mitsutaka Nakamura[2]

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Proximity Effects in Single-Crystal Superlattices Revealed by Neutron Reflectivity and Enabled by A New Sample Environment: The Case of Fe/VHx and Cr/VHx

Gunnar Palsson[1], S Droulias[1], L Mooij[1], P Gutfreund[2], M Wolff[1], and B Hjorvarsson[1]

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Using Small Angle Neutron and X-ray Scattering Methods to Reveal the Required Structure of Anion Exchange Fuel Cell Membranes with High Performance

Yue Zhao, Kimio Yoshimura, Shin Hasegawa, Akihiro Hiroki, and Yasunari Maekawan
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Visualization of Oxide Ion Conduction Pathways from Neutron Diffraction Study on High Conducting Garnet $PrY_2Fe_5O_{12}$

Dnyaneshwar Bhosale[1,2], S Patil[2], and S Yusuf[1]
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Formation of Frustrated Lewis Pairs in Pt_x-Loaded Zeolite NaY and Its Catalytic Application

Heeju Lee[1], Yong Nam Choi[2], and Hyunjung Kim[1]
BARC, India

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Bi_4TaO_8Cl Nano-Photocatalyst: Influence of Local, Average and Band Structure

Swetha S M Bhat[1,2], Diptikanta Swain[3], Mikhail Feygenson[4,5], Joerg Neuefeind[4], Abhishek Misra[6], Janardhan Hodala[2], Chandrabhas Narayana[7], Ganapati Shanbhag[2], and Nalini Sundaram[2]
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Influence of the Irradiation in Cements for the Brazilian Radiactive Waste Depositories: Characterization via X-ray Diffraction, X-Ray Tomography and Quasielastic Neutron Scattering

Fabiano Yokaichiya[1], Eduardo Gurzoni[2], Júlio T. Marumo[2], Roberto Vicente[2], Francisco Garcia-Moreno[1], Paul H. Kamm[3], Manuela Klaus[1], Margarita Russina[1], Gerrit Gunther[1], Catalina Elena Jimenez[1], and Margareth KKD Franco[2]
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Reflection Projection Measurements for Neutron Reflectivity Imaging of the Interface between Sulfuric Acid and Gold Thin Film

Mari Mizusawa[1,2], Kenji Sakurai[1], Xiang XingSing[1], Dai Yamazaki[3], and Masayasu Takeda[4]
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Cation Disordering by Rapid Crystal Growth in $LiFePO_4$ and $LiMnPO_4$ Nanocrystals

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Surface-Orientation-Dependent Distribution of Subsurface Cation-Exchange Defects in $LiFePO_4$ Nanocrystals

Yoon Her[1], Sung-Yoon Chung[1], Tae-Hwan Kim[2], and Seongsu Lee[2]
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Size and Structure of Hydrothermally Synthesized Magnetic Spinel Ferrite Nanocrystallites

Henrik L. Andersen, Cecilia Granados-Miralles, Matilde Saura-Muzquiz, Marian Stingaciu, Frederik M. Sondergaard-Pedersen, Jakob V. Ahlburg, and Mogens Christensen
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Analysis of Local Structure of Deuterated $Ti_{53}Zr_{27}Ni_{20}$ Alloys

Sang-hwa Lee[1], Ashfia Huq[2], and Jaeyong Kim[1,3]
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Spin & Local Structure Studies of Electrode Material

Seongsu Lee
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Carbon-based Nanomaterials for Supercapacitor: Neutron Reflectometry Studies

JEONG HEESUNG[1], KOO JASEUNG[1], KIM JONGSOON[2], CHOI JAEHAK[3], and KIM HYERI[4]
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Wednesday, July 12, 2017

* Complete abstracts are accessible on-line at

[WeP] Poster Session 3
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WeP 1

Study of the Advanced Multi-Phases Steels by Neutron Scattering

BAEK SEOK SEONG[1,2], Sae'd Hashem Al Momani[2,3], Mahmoud Yaseen Suaifan[2,3], Eunjoo Shin[1], Wan Chuck Woo[1], and Shi-Hoon Choi[4]
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Study on the Hydrogen Induced Cracking (HCI) of API-X80 Steels by Small Angle Neutron Scattering and Ultrasonic Testing

Y. Baik[1], M. R. Kim[2], Yong Choi[1], E. J. Shin[3], B. S. Seung[3], and Y.S. Han[3]
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Microstructure and Neutron Transmission Absorption Behavior of 0.02-0.32% Gd-Duplex Stainless Steels

B. K. Kang[1], Y. Baik[1], Yong Choi[1], B. M. Moon[2], S. G. Bogdanov[3], and A. N. Pirogov[3]
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WeP 4

D50: The Industrial Instrument at the ILL

Jaime Segura[1], Duncan Atkins[1], Benjamin Giroud[1], Alessandro Tengattini[2], Edward Andò[2], Cino Viggiani[2], Robert Cubitt[1] and Jerome Beaucour[1]
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WeP 5

Combined Neutron and X-Ray Reflectivity Characterization of Key Interfaces for the Microelectronics Industry

Jaime Segura[1], Philipp Gutfreund[1], Anne Ponard[2], Gregory Imbert[2], Fabien Roze[2], Olivier Gourhant[2], François Bertin[3], Marwan Tedjini[3], Frank Fournel[3], Robert Cubitt[1], and Jerome Beaucour[1]
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Neutron Diffraction Analysis of Ultrasonic Wet-Magnetic Separated $Ni_xZn_{1-x}Fe_2O_4$ Nano-powders Formed by Self-Propagating High Temperature Synthesis

M. S. Gu[1], Yong Choi[1], and B.S. Seung[2]
[1]Dankook Univ., Korea, [2]HANARO, Korea

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A Program for Supporting Small and Medium Sized Enterprises with Neutron Beam Instruments

Sang Jin Cho
KAERI, Korea

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The Upgraded D16 Cold-Neutron Diffractometer at the ILL

Bruno Demé and Viviana Cristiglio
ILL, France

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Performance Test on Neutron Polarization Analysis Capability of PELICAN -Time of Flight Cold Neutron Spectrometer

Tim D'ADAM, Wai-Tung Lee[1], Richard A Mole[1], and Dehong Yu
ANSTO, Australia

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Neutron Depth Profiling: Pushing a Method towards Fast, High Resolution Measurements

Egor Vezhlev[1], Alexander Ioffe[1], Stefan Mattauch[1], Jiri Vacik[2], Ivo Tomandl[2], and Thomas Brückel[1]
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Coextensive Ultra-Small Angle Neutron Scattering (KIST-USANS) Instrument at HANARO Cold Neutron Guide, CG4B

Man-Ho Kim
KIST, Korea

WeP 12

A Compact Photo-Neutron Source Driven by 15 MeV Electron Linac

Xiaohe Wang, Jianlong Han, Xiangzhou Cai, Jingen Chen, Jifeng Hu, Hongwei Wang, Longxiang Liu, and Meng Zhang
CAS, China

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SKADI - Highly Versatile SANS at ESS

Sebastian Jaksch[1], Henrich Frielinghaus[1], Jacques Jestin[2], Sylvain Désert[2], and Romuald Hanslik[3]
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Advances in Neutron Reflectometry Techniques: Coherent Summing and Refractive Encoding

Robert Cubitt, Thomas Saerbeck, Philipp Gutfreund, Campbell Richard, Barker Robert, and Jaime Segura
ILL, France

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The Recent Progress and Application of Neutron Powder Diffractometer at CMRR

Yuanhua Xia, Lei Xie, Xiping Chen, Leiming Fang, Guangai Sun, and Bo Chen
Inst. of Nuclear Physics and Chemistry, China

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CAMEA - A Novel Multiplexing Analyzer for Neutron Spectroscopy

Felix Groitl[1,2], Dieter Graf[2], Jonas O. Birk[2], Marton Marko[2,3], Marek Bartkowiak[2], Uwe Filges[2], Raphael Muller[2], Christof Niedermayer[2], Christian Ruegg[2,4], and Henrik M. Ronnow[1,5]
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Luminosity Class of Neutron Reflectometers

Nikolay Pleshanov
Kurchatov Inst., Russia

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Polarization Analysis on the LET Time-of-Flight Spectrometer

Gøran Nilsen, Jan Kosata, Robert Bewley, Mark Devonport, and Ross Stewart
ISIS, UK

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MARIA - The High-Intensity Polarized Neutron Reflectometer of JCNS

Stefan Mattauch[1], Alexandros Koutsioubas[1], Sabine Puetter[1], Amir Syed Mohd[1], Earl Babcock[1], Zahir Salhi[1], Alexander Ioffe[1], and Thomas Brückel[2]
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Neutronics Analysis of Target, Moderators and Reflector Design Options for the ISIS TS-1 Project

Goran Skoro, Steven Lilley, and Rob Bewley
ISIS, UK

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Low Dimensional Thermal and Cold Finger Moderator for the High Brilliance Neutron Source Jülich

Tobias Cronert[1], Jan Philipp Dabruck[2], Sarah Böhm[2], Paul Zakalek[1], Johannes Baggemann[1], Paul Emmanuel Doege[1], Marcel Klaus[3], Yannick Beßler[1], Ulrich Rücker[1], Carsten Lange[3], Eric Mauerhofer[1], Thomas Gutberlet[1], Michael Butzek[1], Rahim Nabbi[2], and Thomas Brückel[1]
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The Elastic Scattering Spectroscopy (ESS): a New Neutron Spectroscopy for Dynamics of Complex (Bio-) System from Elastic Scattering

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Search for New Gravity-Like Forces using Neutron Scattering Instruments and Possible Reductions of Systematic Uncertainties

Yoshio Kamiya[1], Koji Yamada[1], Keita Itagaki[1], Misato Tani[1], Guinyun Kim[2], Robert Cubitt[3], Oliver Zimmer[3], and Sachio Komamiya[1]
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About the Versatility of the State-of-the-Art Usans Instrument Kookaburra

Christine Rehm and Liliana de Campo
ANSTO, Australia

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SPATZ: The Second Time-of-Flight Neutron Reflectometer at the OPAL Research Reactor

Anton Le Brun, Stewart Pullen, Paris Constantine, James Spedding, David Roach, Andrew McGregor, John Affleck, and Jason Christoforidis
ANSTO, Australia

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Quokka - 40 Metre Reactor based Monochromatic Small Angle Neutron Scattering Instrument

Christopher J. Garvey[1], Elliot P. Gilbert[1], Jitendra Mata[1], Kathleen Wood[1], and Chun-Ming Wu[2]
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The Neutron Guide System of the ODIN Imaging Beamline at ESS

Manuel Morgano[1], Michael Lerche[2], Eberhard Lehmann[1], and Markus Strobl[3]
[1]PSI, Switzerland, [2]TU Munich, Germany, [3]ESS, Sweden

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Dedicated Function Deriving Neutron Spectra of Beryllium Target Bombarded by Protons with Energy less than 12 MeV for Compact Sources

Yasuo Wakabayashi[1], Atsushi Taketani[1], Yoshimasa Ikeda[1], Takao Hashiguchi[1], Tomohiro Kobayashi[1], Sheng Wang[2], Mingfei Yan[2], Masahide Harada[3], Yujiro Ikeda[1,3], and Yoshie Otake[1]
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Recent Developments on the D7 Diffuse Scattering Spectrometer at the ILL

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TOSCA Neutron Guide and its Effect on the Instrument

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Hitoshi Endo[1], Tatsuro Oda[2], and Masahiro Hino[2]
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Ivan Shishkin[1], Evgeniy Moskvin[1], Helmut Eckerlebe[2], and Sergey Grigoriev[1]
[1]PNPI, Russia, [2]HZG, Germany

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Small-Angle Neutron Scattering Machine with Polarized Option for PIK Reactor

Ivan Shishkin[1], Evgeniy Moskvin[1], Helmut Eckerlebe[2], and Sergey Grigoriev[1]
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Pavol Mikula[1], Miroslav Vrána[1], Jan Saroun[1], Baek-Seok Seong[2], Wanchuck Woo[2], and Chang-Hee Lee[2]
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Alexandra Franz[1], Andreas Hoser[1], and Susan Schorr[1,2]
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Felix Groitl[1,2], Hidetoshi Kitaura[3], Naomi Nishiki[3], and Henrik M. Ronnow[1,4]
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Ursula Hansen[1], Mads Bertelsen[1], Jochen Stahn[2], and Kim Lefmann[1]
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Alexander Schoekel[1,2], Martin Johann Mühlbauer[1,2,3], Anatoliy Senyshyn[2], Björn Pedersen[2], Michael Knapp[1,3], and Helmut Ehrenberg[1,3]
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ZOOM Small-Angle Neutron Scattering Instrument at ISIS Pulsed Neutron and Muon Source

James Doutch[1], Richard K. Heenan[1], Ann E. Terry[1,2], and Diego Alba Venero[1]
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Seiji Tasaki, Hiroki Matsumoto, and Yutaka Abe
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A Novel Data Reduction Procedure for Small-Angle Neutron Scattering Data Measured with ^{3}He Tube Detectors

Lukas Karge[1], Ralph Gilles[1], and Sebastian Busch[2]
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Ravil Sadykov
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Lili Yan, J. R. Zhang, H. L. Tian, M. Tang, and R. Du
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Jim Browning[1], Jason Dugger[1], Mingtao Chen[2], Timothy Long[2], Rajeev Kumar[1], and Bradley Lokitz[1]
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Yoshihisa Ishikawa[1], Junrong Zhang[2], Ryoji Kiyanagi[3], Masao Yonemura[1,4], Takeshi Matsukawa[5], Akihiro Hoshikawa[5], Toru Ishigaki[5], Shuki Torii[1], Ryoko Tomiyasu[6], and Takashi Kamiyama[1,4]
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Jan Burle[1], Jonathan Fisher[1], Marina Ganeva[1], Emmanuel Kentzinger[1,2], Gennady Pospelov[1], Walter Van Herck[1], and Joachim Wuttke[1]
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Celine Durniak, Torben Nielsen, and Thomas Rod
ESS ERIC, Denmark

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SY MINH TUAN HOANG, GWANG MIN SUN, JISEOK KIM, HAN RIM LEE, and HANI BAEK
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Akiko Nakao[1], Takashi Ohhara[2], Moyoshi Takayasu[1], Takayasu Hanashima[1], Ryoji Kiyanagi[2], and Koji Munakata[1]
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The Esmeralda Suite for Laue Diffraction Data Treatment

Luis Fuentes-Montero[1], Petr Cermak[2], Juan Rodriguez-Carvajal[3], Bachir Ouladdiaf[3], and Alain FILHOL[3]
[1]Diamond Facility, Chilton Ditcot, UK, [2]FRM II, Germany, [3]ILL, France

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The FullProf Suite for Laue Diffraction Data Treatment

Juan Rodriguez-Carvajal[1], Alain FILHOL[1], and Aleksei Bytchkov[2]
[1]ILL, France, [2]ESRF, France

WeP 124

Swedish Neutron Education for Science & Society: SwedNess

Martin Månsson[1] and Kristina Edström[2]
[1]KTH Royal Inst. of Tech., Sweden, [2]Uppsala Univ., Sweden

WeP 125

Magnetic Properties of LaSrCoO Alloys

Joonyoung Won, Thi Lan Anh Nguyen, Jaeyong Kim
Hanyang Univ., Korea

WeP 126

Phase Behavior of Poly(2-vinyl pyridine)-block-poly(4-vinyl pyridine) copolymer with Gold Nanoparticles

LEE JAEYONG, Sung Hyun Han, Jongheon Kwak, Chungryong Choi, and Jin Kon Kim
POSTECH, Korea

WeP 127

Highly Asymmetric Gyroid Structures in Block Copolymer Blends

Seonghyeon Ahn, Jongheon Kwak, Chungryong Choi, and Jin Kon Kim
POSTECH, Korea

WeP 128

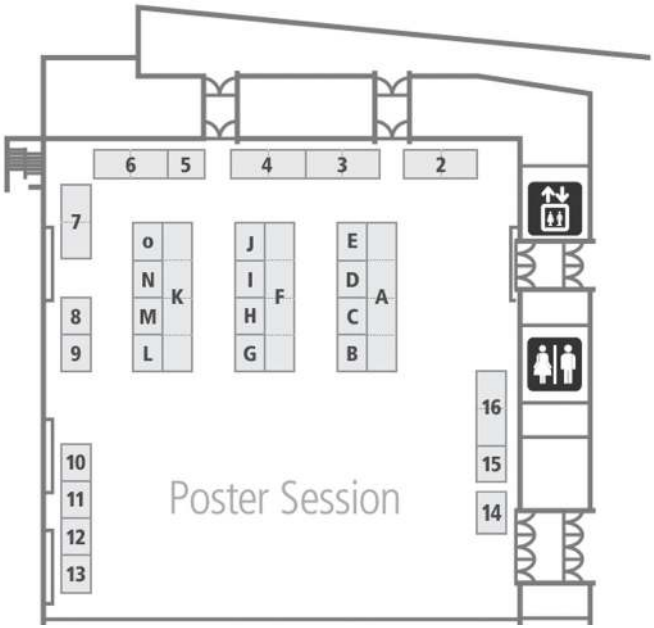
Development of He-3 Based Neutron Optics Technology for a Reflectometer at HANARO

Sungman Lee, Kwang-Hoon Ko, June Hyuk Lee, Ki Yeon Kim, Myung Kook Moon, Sang Jin Cho, and Chang-Hee Lee
KAERI, Korea

Exhibition

* Complete abstracts are accessible on-line at

Exhibition Information



No.	Company	Booth No.	No.	Company	Booth No.
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2	INSTITUT LAUE LANGEVIN (ILL)	3	17	SwissNeutronics AG	B
3	European Spallation Source	4	18	OXFORD INSTRUMENTS	C
4	JAPAN RESEARCH REACTOR 3	5	19	Quantum Design Korea	D
5	ISIS (STFC)	6	20	Panasonic	E
6	IBR-2@FLNP_JINR	7	21	J-PARC MLF	F
7	ISSP-NSL U-TOKYO	8	22	Airbus Defence and Space GmbH	G
8	NRC "Kurchatov Institute" - PNPI	9	23	JJ X-RAY	H
9	Springer Nature	10	24	Malvern PANalytical	I
10	Zurich Instruments	11	25	S-DH	J
11	ASK CORPORATION	12	26	Neutrons for Science in Germany	K
12	Leybold Korea Ltd.	13	27	MIRROTRON LTD.	L
13	TAIYO KOKO Co., LTD.	14	28	HTS-110 (KOREA ITS)	M
14	YOUNGINST&GE-RS	15	29	Huber Diffraktionstechnik GmbH & Co. KG	N
15	Edwards Korea Ltd.	16	30	R-DEC/KASHIYAMA	O

Exhibition Directory

[Booth # 3]

INSTITUT LAUE LANGEVIN

The Institut Laue Langevin (ILL) is an international research centre at the leading edge of neutron science and technology. It operates the most intense continuous neutron source in the world, feeding neutrons to a suite of 40 high-performance instruments that are constantly upgraded. As a service institute, the ILL makes its facilities and expertise available to visiting scientists. Every year, about 2000 researchers from more than 30 countries visit the ILL. Research focuses primarily on fundamental science in a variety of fields, including condensed matter physics, chemistry, biology, materials science, engineering, nuclear physics and particle physics.

Exhibition Materials

- Two transportable fold-up stands, documentation to be distributed and some gifts (pens, badges, usb).

Contact

- VirginieGuerard
- 71 avenue des Martyrs 38000 Grenoble ,FRANCE
- Tel: +33 (0)6 87 07 85 81, Fax: + 33 (0)4 76 48 39 06 / Email: guerardv@ill.fr
- Website: www.ill.eu

[Booth # 4]

European Spallation Source

The European Spallation Source is a partnership of European Nations committed to the goal of collectively building and operating the world's leading facility for research using neutrons by the end of the decade.

Contact

- Roger Eriksson
- Box 176, 221 00 Lund, Sweden
- Tel: +468883000 / Email: roger.eriksson@esss.se
- Website: europeanspallationsource.se

[Booth #5]

Japan Research Reactor - 3 (JRR-3 Users Office)
JRR-3 is a 20MW reactor utilized for various neutron beam experiments and neutron irradiation. For beam experiments, 16 instruments owned by JAEA and 15 instruments constructed by outside JAEA are installed. These are used for structural determination of crystals, dynamical studies of materials, radiography, residual stress measurements, prompt gamma-ray analysis, etc.

Exhibition Materials
- Posters

Contact
- Dr. Hideaki Matsue
- 2-4 Shirakata, Tokai-mura, Naka-gun, Ibaraki-ken 319-1195, Japan
- Tel: +81-29-282-6098 Fax: +81-29-282-6763 Email: jrr3-uoffice@jaea.go.jp
- Website: http://jrr3uo.jaea.go.jp/jrr3uoe/index.htm

[Booth #7]

Frank Laboratory of Neutron Physics Joint Institute for Nuclear Research
Frank Laboratory of Neutron Physiscs is one of the laboratories of the Joint Institute for Nuclear Research (Dubna, Russia) that investigates the neutron as an elementary particle using various instruments, and employs the neutron as an instrument to investigate the structure and dynamics of condensed matter, including crystals and nanosystems, functional materials, complex liquids and polymers, rocks, etc. so that our findings could find application in molecular biology and pharmacology, engineering diagnostics and in other fields of science and technology.

Contact
- V. N. Shvetsov
- Joliot-Curie str. 6, Dubna, Moscow reg., Russia, 141980
- Tel: +7 49621 65657 Fax: +7 49621 65085 / Email: shv(at)nf.jinr.ru
- Website: http://flnp.jinr.ru/

[Booth #9]

NRC "Kurchatov Institute"- PNPI

Konstantinov Petersburg Nuclear Physics Institute of National Research Center "Kurchatov Institute" (NRC "Kurchatov Institute" - PNPI) is a multidisciplinary research center located in Gatchina, Russia (near St. Petersburg). It conducts fundamental and applied research in neutron scattering for condensed matter physics, molecular biophysics, nuclear physics as well as particle and high-energy physics. The start of the nuclear research reactor PIK with the thermal power 100 MW is scheduled for 2018.

Exhibition Materials

- Booklet “NRC “Kurchatov Institute” - PNPI” (8 pages, 100 items)
- Souvenir "Matryoshka" - 15 items.
- Souvenir Matryoshka-key ring (200 items)
- Postcards (300 items.)
- Banner (1 item.)

Contact

- Sergey Grigoriev
- 1, mkr. Orlova roshcha, Gatchina, Leningradskaya oblast, 188300, Russia
- Tel: +7(813-71) 46025, +7(813-71) 46047 Fax: +7(813-71) 46047, +7(813-71) 36025 Email: dir@pnpi.nrcki.ru
- Website: http://www.pnpi.spb.ru/index.html.en

[Booth #10]

SpringerNature

SpringerNature is a world leading research, educational and professional publisher dedicated to providing the best possible service to the whole research community. We help authors to share their discoveries; enable researchers to find, access and understand the work of others and support librarians and institutions with innovations in technology and data.

Exhibition Materials

- Books

Contact

- Annie Kang
- Room #204, 56 Waoosan-ro, Mapo-gu, 121-707, Seoul
- Tel: 02-3143-3545 Fax: 02-3142-5768 / Email: Annie.kang@springernature.com
- Website: www.springernature.com

[Booth #11]

NUBiCOM(ZI)

Zurich Instruments is a test and measurement company based in Zurich, Switzerland, developing and selling measurement instruments and delivering customer support in key markets around the world, either directly or with carefully selected partners. We are a growing, independent and founder-led company. Nubicom is the sales distributor for Zurich Instruments in S. Korea.

Exhibition Materials

- Lock-in Amplifiers, AWGs, PLLs, Boxcar Averagers, Digitizers and more up to 600 MHz

Contact

- Sang-moon Nam
- Rm#203, Daedeuk Tech-Biz Center, 593, Daedeok-daero, Yuseong-gu, Daejeon, Korea
- Tel: 82-70-7872-0712 Fax: 82-42-863-2023 / Email: smnam@nubicom.co.kr
- Website: www.nubicom.co.kr www.zhinst.com

[Booth #12]

ASK CORPORATION

We are specialized in the field of Cryogenic, Magnetics and Vacuum in universities, governmental R&D institutes, industrial laboratories and others.

Exhibition Materials

- Cryogenic Equipment, Nano Positioner at Low temperature

Contact

- Hong-Kil, Kim
- RM.#1101, Anyang Trade Center, #161, Simindae-ro, Dongan-ku, Anyang-City, Kyunggi-do 14048, Republic of Korea
- Tel: 82-31-451-5600 Fax: 82-451-5605 / Email: ask@aqskcorp.co.kr
- Website: www.askcorp.co.kr

[Booth #13]

LEYBOLD KOREA

As a pioneer of vacuum technology, Leybold offers a wide range of vacuum components, standardized and fully customized vacuum solutions, complemented by vacuum technology accessories and instrumentation. Leybold´s ability to meet highest requirements of most complex applications gives our customers the competitive edge to succeed. High duty processes in metallurgy, clean-room conditions at worldwide renowned institutes for research and development, or coating applications of minute dimensions - Leybold offers highest performance.

Exhibition Materials

- Multi-stage Roots Vacuum Pump (Model name : ECODRY plus)

Contact

- HwuiJin Han
- (3F Jellzone 2 Tower) 162, Jonguail-ro Bundang-gu, Seongnam-si, Gyeonggi-do, Korea 13558.
- Tel: 031-785-1335 , 010-4028-6602 Fax: 031-785-1357 , 031-785-1359
  Email: HwuiJin.Han@leybold.com
- Website: www.leybold.com

[Booth #14]

TAIYO KOKO

TAIYO KOKO offers various vanadium products. The vanadium sample holder is used for neutron scattering experiments. In the vanadium sample holder with a thickness of 0.1mm, the Bragg peak derived from vanadium is very small. In addition, we developed a sample holder of same thickness made by 'Null-alloy'. We supply a lot of the sample holder to users of J-PARC in Japan every year.

Exhibition Materials

- Null Alloy sample holders in neutron scattering experiments

Contact

- Shinichi Watanabe
- 3-3-1 Marunouchi, Chiyoda-ku, Tokyo ,100-0005 Japan
- Tel: +81-3-3216-6041 Fax: +81-3-3216-6045 / Email: tokyo@taiyokoko.co.jp
- Website: http://www.taiyokoko.co.jp/en/index.html

[Booth #15]

YoungInST&GE-RS

Young In ST is a subsidiary of Young In Group which is the leader in serving analytical solutions in Korea. Young In ST is supplying various of solution for radiation, life science, biochemical, pharmaceutical and various of lab solution technologies. Especially, we supply radiation solutions such as gamma and alpha spectroscopy, neutron detector and alpha/beta counters and electronics.

Exhibition Materials
- He-3 Neutron Detector

Contact
- Byung Gook, Yu
- 60 Anyangcheondong-ro, Dongan-gu, Anyang-si, Gyeonggi-do
- Tel: +82-31-8033-0600 Fax: + 82-31-460-9480 / Email: bgyu@younginst.com
- Website: www.younginst.com

[Booth #16]

EDWARDS KOREA

As a world-class vacuum and abatement solution provider, Edwards Korea continues to grow with unwavering support and guidance from our customers We have been contributing to the vitalization of the local economy through shifting state-of-the-art production systems from our UK headquarters to our Cheonan production factory. We have created local employment for nearly 600 positions. Over 70% of our partners are selected from domestic businesses. With our highly advanced facilities and vast experiences from our talents, we provide not only the best quality but also energy-efficient and environmental vacuum and abatement across semiconductor, display, LED and solar energy manufacturing equipment. Our remanufacturing centre is capable of refurbishing more than 12,000 pumps annually to the highest quality for production efficiency and cost reduction.

Exhibition Materials
- Vacuum pump, Controller, Gauge

Contact
- Monica Hyun
- 4FL Hanwon B/D, 19, Hwangsaeul-ro 258beon-gil, Bundang-gu, Seongnam-si, Gyeonggi-do, 13595, Republic of Korea
- Tel: +82- 31-710-2242Fax: + 82- 31-710-2224 / Email: Monica.hyun@edwardsvacuum.com
- Website: Edwardsvacuum.com

[Booth #A]

Korea Atomic Energy Research Institute

HANARO at Korea Atomic Energy Research Institute (KAERI) offers 12 neutron beam instruments for scientific andindustrial researches to enable new discoveries in basic science and industryapplication. Beamlines include neutron scattering, neutron imaging, andneutron activation analysis instruments to measure material structure anddynamics in atomic or nanometer scale. This facility is open to users from academia and industry.

Contact

- Daedeok-daero 989-111, Yuseong-gu, Daejeon, Korea
- Tel: +82-42-866-6115 Fax: +82-42-868-4629 / Email: useroffice@kaeri.re.kr
- Website: Hanaro4u.kaeri.re.kr

[Booth #B]

SwissNeutronics AG

SwissNeutronics was founded in 1999 as a spin-off company of the Paul ScherrerInstitut (PSI) in Villigen, Switzerland. It is organized and registered as a joint stock company according to Swiss law. The know-how developed at PSI in the design and production of supermirror coatings was made fully available to the company for commercialization. In the meantime, SwissNeutronics has developed the technique for neutron supermirror coatings continuously further, thereby establishing the highest available quality and performance. Today our products cover a wide ra nge of neutron optics as well as the planning, design, construction, and installation of complete instruments.

Exhibition Materials

- Octagonal beam tube and general product information

Contact

- Michael Schneider
- Bruehlstrasse 28, CH-5313 Klingnau, Switzerland
- Tel: +4156 245 02 02 Fax: +41 56 245 0204 Email: tech@swissneutronics.ch
- Website: www.swissneutronics.ch

[Booth #C]

OXFORD INSTRUMENTS (KOREA OFFICE)

Oxford Instruments NanoScience designs, supplies and supports market-leading research tools that enable quantum technologies, new materials and device development in the physical sciences. Our tools support research down to the atomic scale through creation of high performance, cryogen-free low temperature and magnetic environments, based upon our core technologies in low and ultra-low temperatures, high magnetic fields and system integration, with ever-increasing levels of experimental and measurement readiness.

Exhibition Materials

- Banner
- Poster

Contact

- CHOI, JUNG HOON
- Songpa-gu, Chungmin-ro 10, Seoul, Korea
- Tel: +82-(0)2-2047-6466 Fax: +82-(0)2-2047-6464 / Email: Junghoon.choi@oxinst.com
- Website: https://www.oxfordinstruments.com/businesses/nanotechnology/nanoscience

[Booth #D]

QUANTUM DESIGN KOREA

Quantum Design Korea (QDK), branch office of QD Japan, is center for providing local marketing, sales and technical support of QD instruments to scientific research groups in the fields of physics, chemistry, biotechnology, materials science and nanotechnology in Korea Republic.

Exhibition Materials

- Quantum Design
- ICE oxford instruments

Contact

- Jiwon Park
- #303 dongshin Bldg., 204, Dogok-Ro, Kangnam-gu, Seoul 06272, Korea
- Tel: 82-2-2057-2710 Fax: 82-2-2057-2712 / Email: jwpark@qdkorea.com
- Website: http://www.qdkorea.com, http://www.qdusa.com/

[Booth #E]

Panasonic Corp.
Panasonic is one of the global manufacturers of consumer electric products, but we are wishing as well to contribute to Neutron Scattering Research and Engineering World by our scientific product; “Highly Oriented Graphite” material with its features like “Uniformity”, “Homogeneity” and “Reproducibility”

Exhibition Materials
- Highly Oriented Graphite

Contact
- Toshihiro Gotoh
- 2-7 Matsuba-cho, Kadoma City, Osaka 571-8502, Japan
- Tel: +81-6-6905-4882 Fax: +81-6-6905-5362 / Email: gotoh.toshihiro@jp.panasonic.com
- Website: http://www.panasonic.com/jp/company/ppe/jigyo/prod_02_07.html

[Booth #G]

Airbus Defence and Space GmbH
Neutron Velocity Selectors, Neutron Disk Choppers, Neutron Fermi Choppers

Exhibition Materials
- Rollups
- Advertisement

Contact
- Berno Spiegelhalder
- Claude-Dornier-Strasse, 88090 Immenstaad, Germany
- Tel: +49 7545 8 4841 Fax: +49 7545 8 2693 / Email: berno.spiegelhalder@airbuss.com
- Website:

[Booth #H]

JJ X-RAY

JJ X-RAY is a Danish company that develops, designs and produces highly specialized components and assemblies for scientific X-Ray, Synchrotron Radiation and Neutron Instrumentation. We are widely known for our high precision and durable JJ X-Ray Slits and Collimators. Our standard component portfolio is constantly expanding.

Contact

- Dr. Christian Mammen
- Dr Neergaards Vej 5D, 2970 Hoersholm, Denmark
- Tel: +45 4776 3000 Fax: +49 7545 8 2693 Email: cm@jjxray.dk
- Website: www.jjxray.com

[Booth #I]

MALVERN PANALYTICAL

Malvern and PANalytical are world leading suppliers of analytical instrumentation. In 1919, Philips launched first X-ray tube and developed and grew X-ray diffraction and X-ray fluorescence systems and continue to expand our business under new name PANalytical from 2002. And Malvern's materials and biophysical characterization technology and expertise enables scientists and engineers to investigate, understand and control the properties of dispersed systems. And Both Companies were merged from 1 January 2017, The combined entity is a strong player in the materials characterization market and will be able to leverage the strengths of the individual companies in their end markets ranging from building materials to pharmaceuticals and from metals and mining to nanomaterials.

Exhibition Materials

- Particle size analyzer
- X-ray diffraction
- X-ray fluorescence systems

Contact

- HyunJung, Gu
- 7H N tower Garden, 16-6 sunae-Dong, Bundang-Gu Seongnam-City, Gyeonggi-Do, Korea
- Tel: +82-31-486-0840 Fax: +82-31-786-0950 / Email: hyunjung.gu@malvern.com
- Website: www.malvern.com/kr www.panlaytical.kr

[Booth #J]

S-DH GmbH
We manufacture supermirror neutron guides, shieldings and large area Boron10 coatings for Detectors.

Exhibition Materials
- Neutron Optics

Contact
- Harald Haese
- Hans-Bunte-Str. 8-10, 69123 Heidelberg, Germany
- Tel: 00496221739441 Fax: 06221739443 Email: haese@s-dh.de
- Website: www.neutronguide.com

[Booth #K]

Heinz Maier-Leibnitz Zentrum (MLZ)
The Heinz Maier-Leibnitz Zentrum is a leading centre for cutting-edge research with neutrons and positrons. Operating as a user facility, the MLZ offers a unique suite of high-performance neutron scattering instruments. This cooperation involves the Technische Universität München, the Forschungszentrum Jülich and the Helmholtz-Zentrum Geesthacht. The MLZ is funded by the German Federal Ministry of Education and Research, together with the Bavarian State Ministry of Education, Science and the Arts and the partners of the cooperation.

Exhibition Materials
- Neutron Optics

Contact
- User Office
- Lichtenbergstr. 1, 85748 Garching, Germany
- Tel: ++49 (0)89 289 10794 Fax: ++49 (0)89 289 10799 / Email: useroffice@mlz-garching.de
- Website: mlz-garching.de

[Booth #M]

HTS-110 (KOREA ITS)
Based in Wellington, New Zealand, HTS-110 designs and manufactures cryogen-free High Temperature Superconducting (HTS) magnet systems. HTS-110 supplies custom instruments to the world's leading synchrotron and neutron beamlines. These instruments take full advantage of the properties of HTS wire to deliver compact cryogen-free magnets with field strengths in excess of 8 Tesla which provide researchers with next generation magnetic environments for materials characterization and analysis. Korea I. T. S. Co., Ltd. is the authorized Korean agency of HTS-110. Korea I. T. S. Co., Ltd. introduced HTS-110's products for example current lead, specialized magnets and NMR.

Exhibition Materials
- Banners
- Brochures
- PC screen for HTS-110's current lead, magnets, and NMR.

Contact
- Taotao Huang (민정환)
- 1B Quadrant Drive, Lower Hutt, 5010, New Zealand
  (서울시 송파구 백제고분로 101 서일빌딩 4층)
- Tel: 0064 4 5708880 (+82-2421-4022) Fax: 0064 3 4880657(+82-2-421-9022)
  Email: t.huang@hts-110.com (kits@koreaits.com)
- Website: HTS-110.com (www.koreaits.com)

[Booth #N]

Huber Diffraktionstechnik
Huber is a leading supplier for high precision positioning systems and equipment for X-ray and Neutron scattering. For more than 50 years Huber is designing and manufacturing equipment for X-ray labs, synchrotron- and neutron facilities ranging from standard components to highly complex customized multi-axes systems for micro- and nano-positioning. Huber´s large product range can be tailored to specific requirements to suit all applications, no matter if it is in vacuum environment, exposed to high radiation or has to be operated in high magnetic fields.

Exhibition Materials
- Display
- Positioning stages
- Brochures

Contact
- Norman Huber
- Sommerstrasse 4, 83253 Rimsting, Germany
- Tel: +49-(0)8051 6878 0 Fax: +49-(0)8051 6878 10 / Email: norman@xhuber.com
- Website: www.xhuber.com

[Booth #O]

R-DEC Co., Ltd.

We are proud of having contributed to the world of research and development with our state-of-art technology and products such as Neo Dry pumps, DRYFORCE, and RHEED. Kashiyama Neo Dry pumps are handy, air cooled, and low-maintenance dry pumps. The DRYFORCE pumping units provide clean and powerful pumping by combination of a turbo pump and dry roots pump. Our RHEED is durable, stable and reliable with a very bright beam spot.

Exhibition Materials

- DRY PUMP
- DRYFORCE
- RHEED
- VACUUM EQUIPMENT
- COMPONENTS

Contact

- Mr. Kenji, Kurihara
- 1-16-10 Ninomiya, Tsukuba, Ibaraki, 305-0051 Japan
- Tel: +81-29-858-0211 Fax: +81-29-855-9877 / Email: kuri@rdec.co.jp
- Website: http://www.rdec.co.jp

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