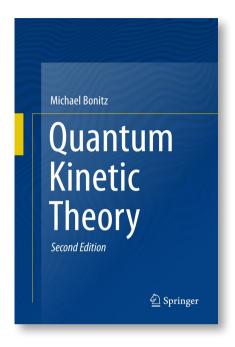


# springer.com



2nd ed. 2016, XVIII, 406 p. 61 illus., 52 illus. in color.



### Hardcover

- ▶ 94,99 € | £71.00 | \$109.00
- ► \*101,64 € (D) | 104,49 € (A) | CHF 104.50



#### Available from your library or

springer.com/shop



## Printed eBook for just

- ▶ € | \$ 24.99
- springer.com/mycopy

#### M. Bonitz

## **Quantum Kinetic Theory**

- ► Provides a general introduction to many-particle dynamics in quantum systems
- ► Gives a broad overview on density operator methods and nonequilibrium Green functions
- Covers modern time-dependent many-body methods that have emerged in various fields of physics and chemistry
- ► Supports learning and teaching with added problems and solutions
- ► Represents a tremendous resource for high energy density physics

This book presents quantum kinetic theory in a comprehensive way. The focus is on density operator methods and on non-equilibrium Green functions. The theory allows to rigorously treat nonequilibrium dynamics in quantum many-body systems. Of particular interest are ultrafast processes in plasmas, condensed matter and trapped atoms that are stimulated by rapidly developing experiments with short pulse lasers and free electron lasers. To describe these experiments theoretically, the most powerful approach is given by non-Markovian quantum kinetic equations that are discussed in detail, including computational aspects.



Order online at springer.com ► or for the Americas call (toll free) 1-800-SPRINGER ► or email us at: customerservice@springer.com. ► For outside the Americas call +49 (0) 6221-345-4301 ► or email us at: customerservice@springer.com.

The first  $\in$  price and the £ and \$ price are net prices, subject to local VAT. Prices indicated with \* include VAT for books; the  $\in$ (D) includes 7% for Germany, the  $\in$ (A) includes 10% for Austria. Prices indicated with \*\* include VAT for electronic products; 19% for Germany, 20% for Austria. All prices exclusive of carriage charges. Prices and other details are subject to change without notice. All errors and omissions excepted.