Supplementary Data

Results of elemental analysis of all the compounds of the synthesized series I$n_{a\text{-}e}$ were found to be satisfactory (S1). Since almost identical infrared and ^{1}H NMR spectra were observed for all the members of the five homologous series (**I***n*$_a$ – **I***n*$_e$), FT-IR and ^{1}H NMR spectral data of the *n*-octyloxy derivatives (**I***8*$_{a\text{-}e}$), as examples, are given below:

For **I***8$_a$*, FT-IR (KBr, $\upsilon_{max.}$ cm^{-1}): 3067 (C–H aromatic) 2923, 2853 (alkyl group), 1506 (–C=C– aromatic), 1732, 1252 (–COO– group), 1601 (–N=N– group), 839 (p-sub. benzene rings).

^{1}H NMR (300 MHz, $CDCl_3$) δ ppm: 0.89 (t, 3H, $–CH_3$), 1.28–1.77 (m, 12H, 6 × $–CH_2–$), 4.08–4.10 (t, 2H, $–OCH_2–$), 3.79-3.81 (s, 3H, Ar–OCH_3), 7.02-7.25, 7.95-8.02, 8.29-8.32 (m, 12 H, p-subst. benzene rings).

For **I***8$_b$*, FT-IR (KBr, $\upsilon_{max.}$ cm^{-1}): 3046 (C–H aromatic) 2919, 2851 (alkyl group), 1505 (–C=C– aromatic stre,), 1734, 125160 (–COO– group), 1601 (–N=N– group), 840 (p-sub. benzene rings). ^{1}H NMR (300 MHz, $CDCl_3$) δ ppm: 0.88 (t, 3H, $–CH_3$), 1.15–1.77 (m, 12H, 6 × $–CH_2–$), 2.35-2.44 (s, 3H, Ar–CH_3), 4.11 (t, 2H, $–OCH_2–$), 7.17-7.27, 7.94-8.01, 8.32 (m, 12 H, p-sub. benzene rings).

For **I***8$_c$*, FT-IR (KBr, $\upsilon_{max.}$ cm^{-1}): 3062(C–H aromatic) 2921, 2853 (alkyl group), 1496 (–C=C– aromatic), 1733, 1259 (-COO– group), 1600 (–N=N– group), 839 (p-sub. benzene rings).

^{1}H NMR (300 MHz, $CDCl_3$) δ ppm: 0.87–0.88 (t, 3H, $–CH_3$), 1.28–1.77 (m, 12H, 6 × $–CH_2–$), 4.10–4.14 (t, 2H, $–OCH_2–$), 7.14-7.51, 7.90–8.02, 8.3-8.4 (m, 12 H, p-sub. benzene rings).

For **I***8$_d$*, FT-IR (KBr, $\upsilon_{max.}$ cm^{-1}): 3063 (C–H aromatic) 2920, 2851 (alkyl group), 1487 (–C=C– aromatic), 1733, 1258 (–COO– group), 1599 (–N=N– group), 1061 (C–Br aromatic), 842 (p-sub. benzene rings).

^{1}H NMR (300 MHz, $CDCl_3$) δ ppm: 0.88 (t, 3H, $–CH_3$), 1.30–1.77 (m, 12H, 6 × $–CH_2–$), 4.12 (t, 2H, $–OCH_2–$), 7.15-7.36, 7.67, 7.97-8.30 (m, 12 H, p-sub. benzene rings).

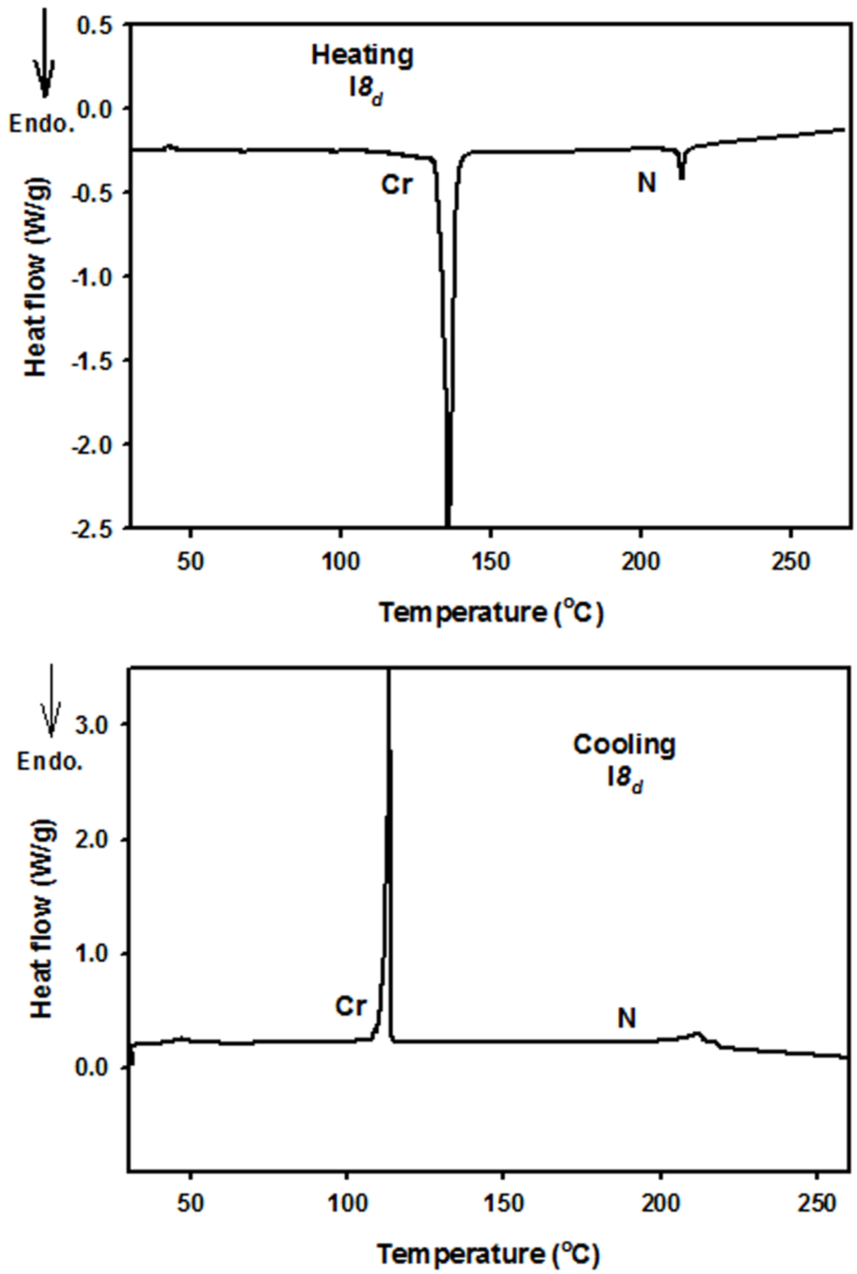
For **I***8$_e$*, FT-IR (KBr, $\upsilon_{max.}$ cm^{-1}): 3068 (C–H aromatic) 2923, 2854 (alkyl group), 2238 (–CN), 1501 (–C=C– aromatic), 1732, 1253 (–COO– group), 1601 (–N=N– group), 836 (p-sub. benzene rings). ^{1}H NMR (300 MHz, $CDCl_3$) δ ppm: 0.87 (t, 3H, $–CH_3$), 1.28–1.76 (m, 12H, 6 × $–CH_2–$), 4.08–4.10 (t, 2H, $–OCH_2–$), 7.14-7.16, 7.58-7.60, 7.97-8.01, 8.31-8.33 (m, 12 H, p-sub. benzene rings).

S1: Elemental analyses of the azo/esters, **I***n*$_{a\text{-}f}$.

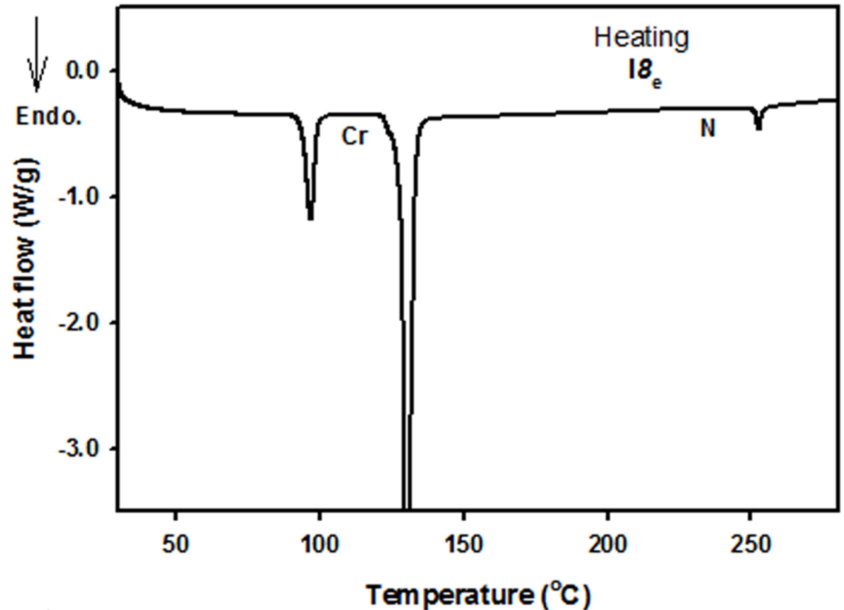
$C_nH_{2n+1}O\text{-}C_6H_4\text{-}N{=}N\text{-}C_6H_4\text{-}COO\text{-}C_6H_4\text{-}X$

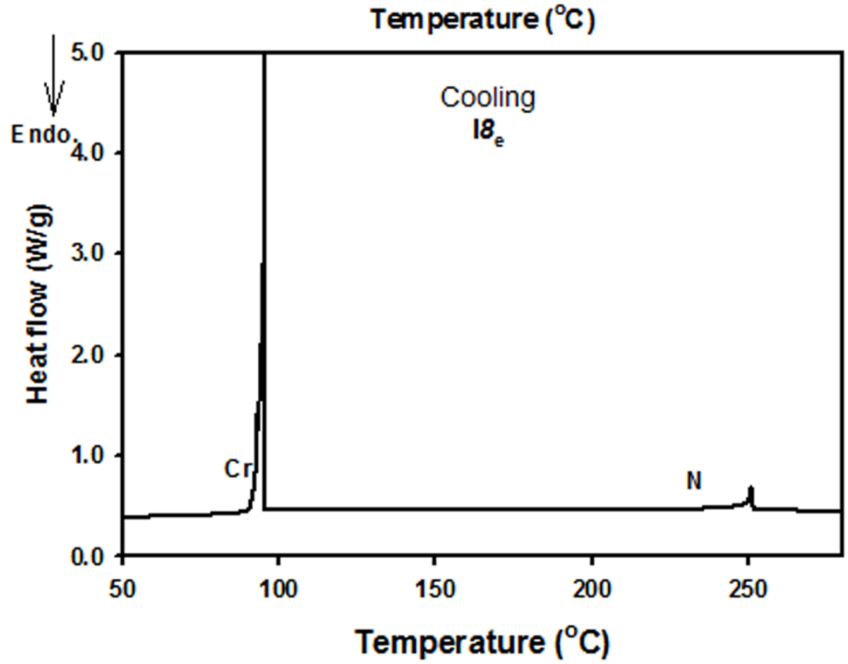
Comp No.	*N*	X	Mol. Wt.	Elemental Analyses Cal. (Found) % C	% H	% N	%Br
I8_a	8	CH_3O	460.58	73.02 (73.15)	7.00 (7.21)	6.08 (5.97)	-
I8_b	8	CH_3	444.58	75.65 (75.74)	7.26 (7.34)	6.30 (6.13)	-
I8_c	8	H	430.55	75.32 (75.41)	6.97(7.21)	6.51 (6,64)	-
I8_d	8	Br	509.45	63.37 (63.12)	5.74 (5.83)	5.50 (5.42)	15.69(15.81)
I8_e	8	CN	455.56	73.82 (74.01)	6.42 (6.28)	9.22 (9.01)	-
I10_a	10	CH_3O	488.80	73.72 (73.60)	7.42 (7.45)	5.73 (5.91)	-
I10_b	10	CH_3	472.63	76.24 (76.40)	7.68 (7.45)	5.93 (5.76)	-
I10_c	10	H	458.60	75.95 (75.81)	7.47 (7.35)	6.11 (5.97)	-
I10_d	10	Br	537.50	64.48 (64.61)	6.19 (6.34)	5.21 (5.03)	14.87 (14.70)
I10_e	10	CN	483.61	74.51(74.38)	6.88 (8.62)	5.79 (5.63)	-
I12_a	12	CH_3O	516.85	74.36 (74.24)	7.80 (8.12)	5.42 (5.24)	-
I12_b	12	CH_3	500.68	76.80 (76.63)	8.01(7.96)	5.60 (5,45)	-
I12_c	12	H	486.85	76.48 (76.32)	7.87(7.69)	5.75 (5.68)	-
I12_d	12	Br	565.56	65.83 (66.12)	6.59 (6.45)	4.95 (5.21)	14.13 (14.34)
I12_e	12	CN	511.67	75.12 (74.93)	7.29 (7.36)	8.21(8.45)	-
I14_a	14	CH_3O	544.87	74.94 (75.22)	8.14 (8.25)	5.14 (5.32)	-
I14_b	14	CH_3	528.74	77.24 (77.51)	8.39 (8.48)	5.30 (5.16)	-
I14_c	14	H	513.91	77.13 (77.39)	8.24 (8.11)	5.45 (5.62)	-
I14_d	14	Br	593.61	66.77 (77.55)	6.96 (7.16)	4.72 (4.91)	13.46 (13.71)
I14_e	14	CN	539.72	75.66 (75.34)	7.66 (7.43)	7.79 (7.92)	-
I16_a	16	CH_3O	572.92	75.47 (75.52)	8.27 (8.41)	4.89 (4.76)	-
I16_b	16	CH_3	556.79	77.66 (77.89)	8.51(8.78)	5.03 (4.86)	-
I16_c	16	H	541.96	77.57 (77.34)	8.37 (8.55)	5.17 (5.03)	-
I16_d	16	Br	621.66	67.62 (67.47)	7.13 (7.31)	4.51 (4.73)	12.85(13.11)
I16_e	16	CN	567.77	76.16 (76.41)	7.81(8.03)	7.40 (7.24)	-

DSC-Curves

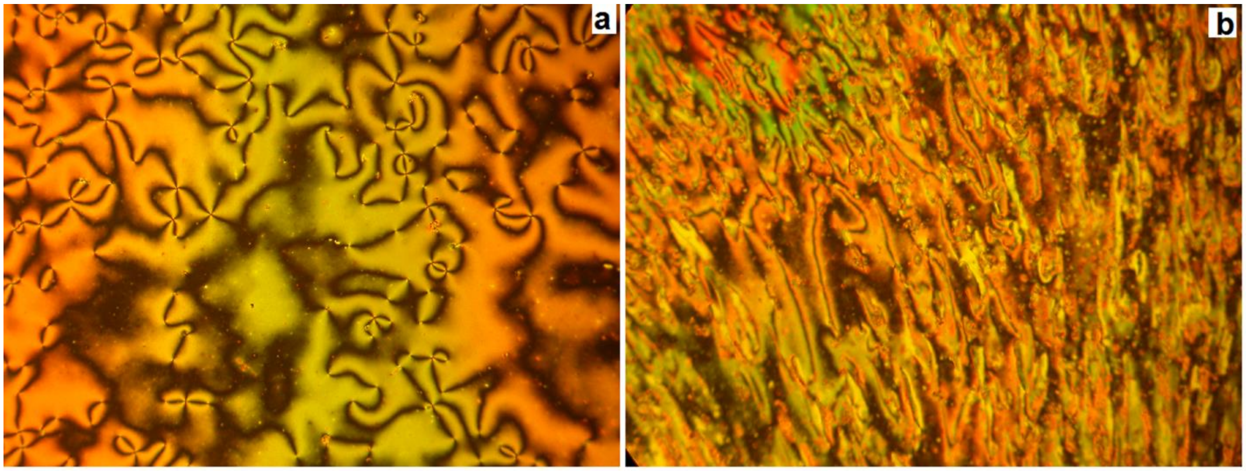


Supplementary figure 1. Heating and cooling DSC scans for **I***8*d.





Supplementary figure 2. Heating and cooling DSC scans for **I***8*e.



Supplementary figure 3. Polarized optical micrographs obtained from cooling of isotropic phases of (a) nematic phase of **I**8_d at 200^{o}C and (b) of **I**8_e at 220^{o}C.