## **Supporting Information**

for

Synthesis of guanidinium-sulfonimide ion pairs: towards novel ionic liquid crystals

Martin Butschies, Manuel M. Neidhardt, Markus Mansueto, Sabine Laschat\*, Stefan Tussetschläger

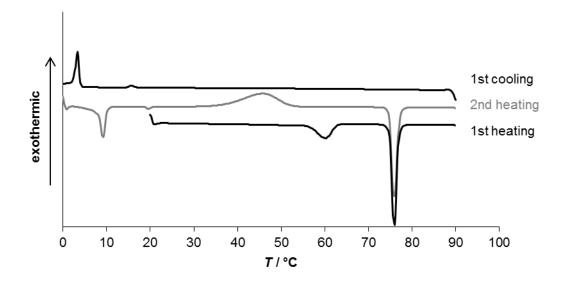
Address: Institut für Organische Chemie, Universität Stuttgart, Pfaffenwalring 55, 70569 Stuttgart, Germany

Email: Sabine Laschat - sabine.laschat@oc.uni-stuttgart.de

\*Corresponding author

DSC traces of compounds 2a,b, 3a and X-ray data of compound 3b

## DSC traces of compounds (2a,b) and (3a):



**Figure S1:** DSC trace of compound **3a** (heating/cooling rate 10 K min<sup>-1</sup>).

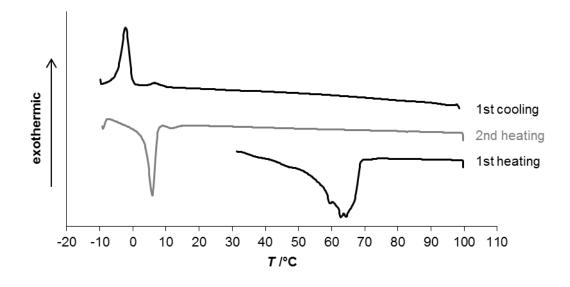
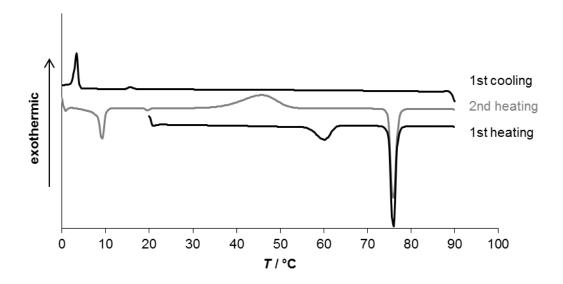


Figure S2: DSC trace of compound 2a (heating/cooling rate  $10 \text{ K min}^{-1}$ ).



**Figure S3:** DSC trace of compound **2b** (heating/cooling rate 10 K min<sup>-1</sup>).

## X-ray data of compound (3b):

Table S1: Temperature-dependent layer spacing of compound 3b.

Temperature	Layer spacing		
<i>T</i> /[°C]	$d_{001}/[ ext{Å}]$		
75.2	34.19		
59.5	34.16		
43.8	35.38		
WAXS 59.5	4.74 (halo)		

 Table S2: Water content of selected compounds.

Comp.	Sample	Weight of	Concentration	Weight of	Detected	% H <sub>2</sub> O
	weight	$CH_2Cl_2$	(sample weight/	the solution	mass of	
	[mg]	[mg]	weight of CH <sub>2</sub> Cl <sub>2</sub> )	in [mg]	H <sub>2</sub> O in [μg]	
CH <sub>2</sub> Cl <sub>2</sub>	1369.8	_	_	1369.8	32.0 <sup>(a)</sup>	$2.34 \cdot 10^{-3}$
$CH_2Cl_2$	1098.9	_	_	1098.9	26.6 <sup>(a)</sup>	$2.42 \cdot 10^{-3}$
<b>7</b> ·I	51.25	2988.71	$1.69 \cdot 10^{-2}$	932.7	42.2	0.13
<b>2b</b>	47.38	2076.88	$1.56 \cdot 10^{-2}$	1656.0	136.8	0.38
3a	41.45	2606.73	$1.37 \cdot 10^{-2}$	2012.4	145.3	0.36

<sup>(</sup>a)  $\emptyset = 23.8 \ \mu g \ H_2O \ in \ 1 \ g \ abs. \ CH_2Cl_2$