Supporting Information

Metastable micelles and true liquid crystal behaviour of newly designed "cataniomeric" surfactants

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Table S1. X-Ray Diffraction Data for a 54.6% OOJ sample at 10°C indexed to the space group *Im3m* with a lattice parameter a = 7.4 nm

hkl	$(h^2+k^2+l^2)^{1/2}$	d_{obs} (nm)	d_{cal} (nm)	I_{obs}*
110	√2	5.2	5.2	vvs
200	√4	3.7	3.7	s
211	√6	3.0	3.0	s

* *I_{obs} are the observed intensities, which are ranged from vvs (extremely strong) to s (strong).*

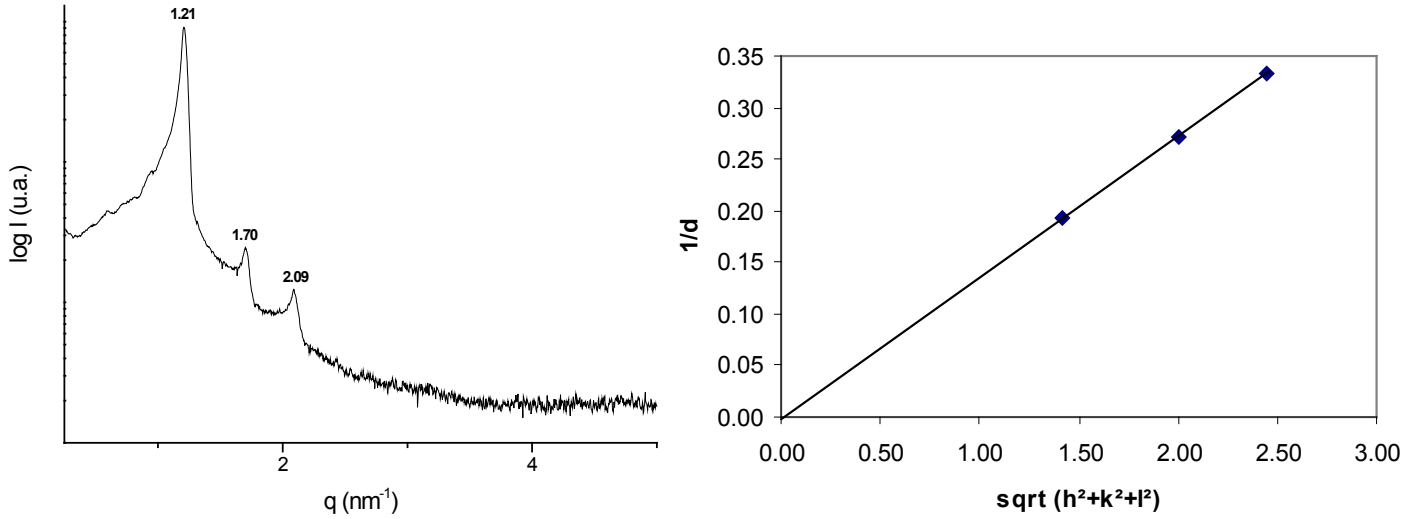

Figure S1. SAXS diffraction patterns obtained from a 54.6% OOJ sample at 10°C (left) and the plot of the reciprocal d spacing ($1/d_{hkl}$) of the reflections observed (right).

Table S2. X-Ray Diffraction Data for a 40.0% SSJ sample at 20°C indexed to the space group Fm3m with a lattice parameter a = 10.7 nm

hkl	$(h^2+k^2+l^2)^{1/2}$	d_{obs} (nm)	d_{cal} (nm)	I_{obs}*
111	√3	6.2	6.2	vs
200	√4	5.4	5.4	m
220	√8	3.8	3.8	s
311	√11	3.2	3.2	m

* *I_{obs} are the observed intensities, which are ranged from vs (very strong) to m (medium).*

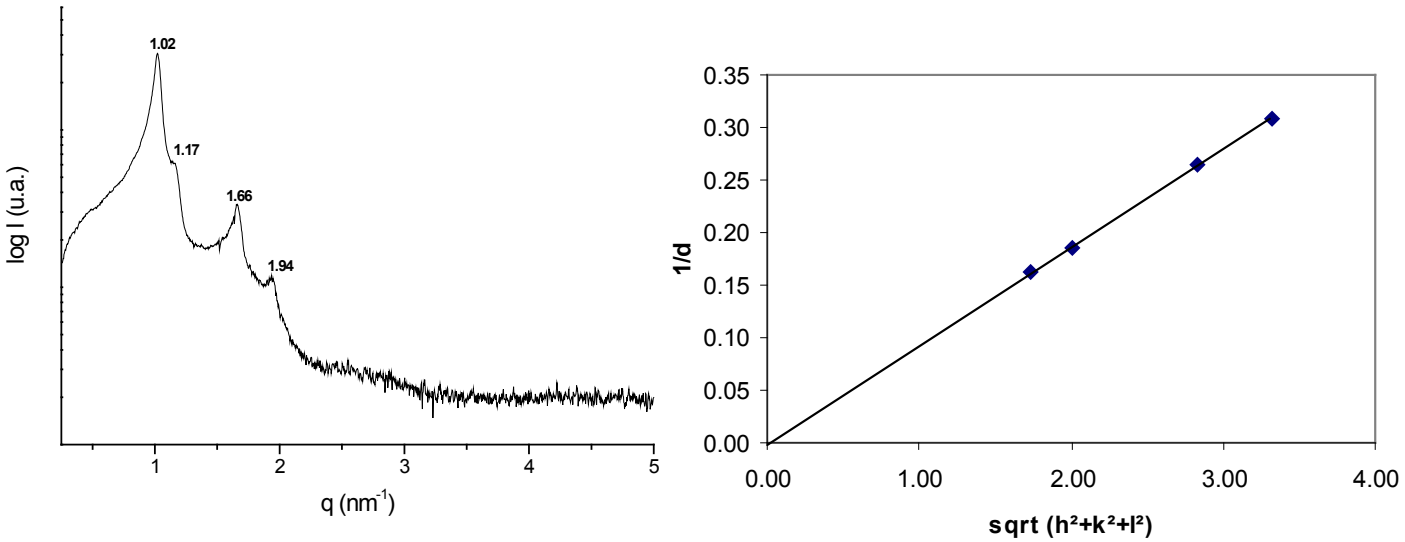

Figure S2. SAXS diffraction patterns obtained from a 40.0% SSJ sample at 20°C (left) and the plot of the reciprocal d spacing ($1/d_{hkl}$) of the reflections observed (right).

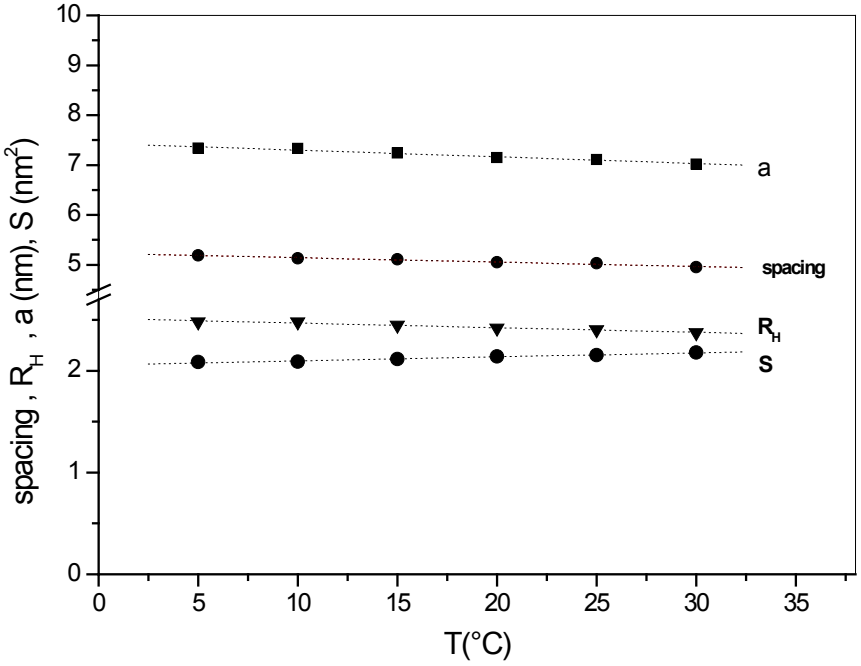

Figure S3. Variation of the d spacing and of the structure parameters of the *Im3m* cubic phase of 47 wt% MOJ as a function of the temperature

Table S3. Molar volumes of the hydrophobic part of the surfactant, V_B and of the surfactant V_S for all studied systems. (considering ρ_{EO} =1.13, ρ_{alkyl} = 0.9 and ρ_{PPO} =1)

	V_B	V_S
LMJ	944.4	1400
MMJ	975.6	1428
LOJ	1004.4	1454
MOJ	1035.6	1482
MSJ	1037.8	1484
OOJ	1095.6	1536
SOJ	1097.8	1538
SSJ	1100.0	1540