

Supplementary Materials for

Bicontinuous gyroid phase of a water-swollen wedge-shaped amphiphile: studies with in-situ grazing-incidence X-ray scattering and atomic force microscopy

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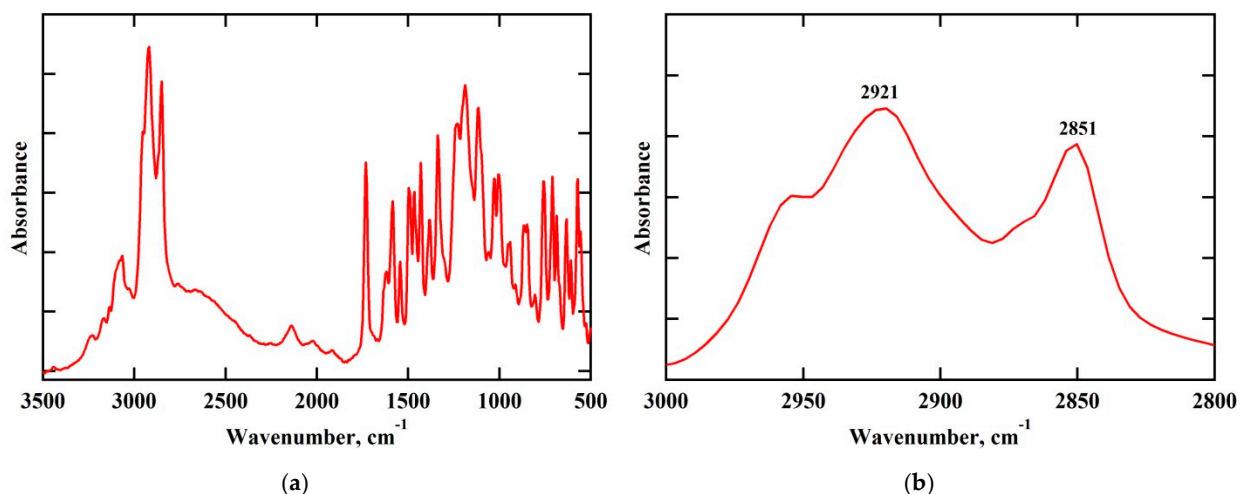


Figure S1. (a) FTIR spectrum of C8AzoPyr powder after long-term storage at room temperature; (b) magnified region of (a) with anti-symmetric and symmetric stretching vibration modes of CH_2 groups.

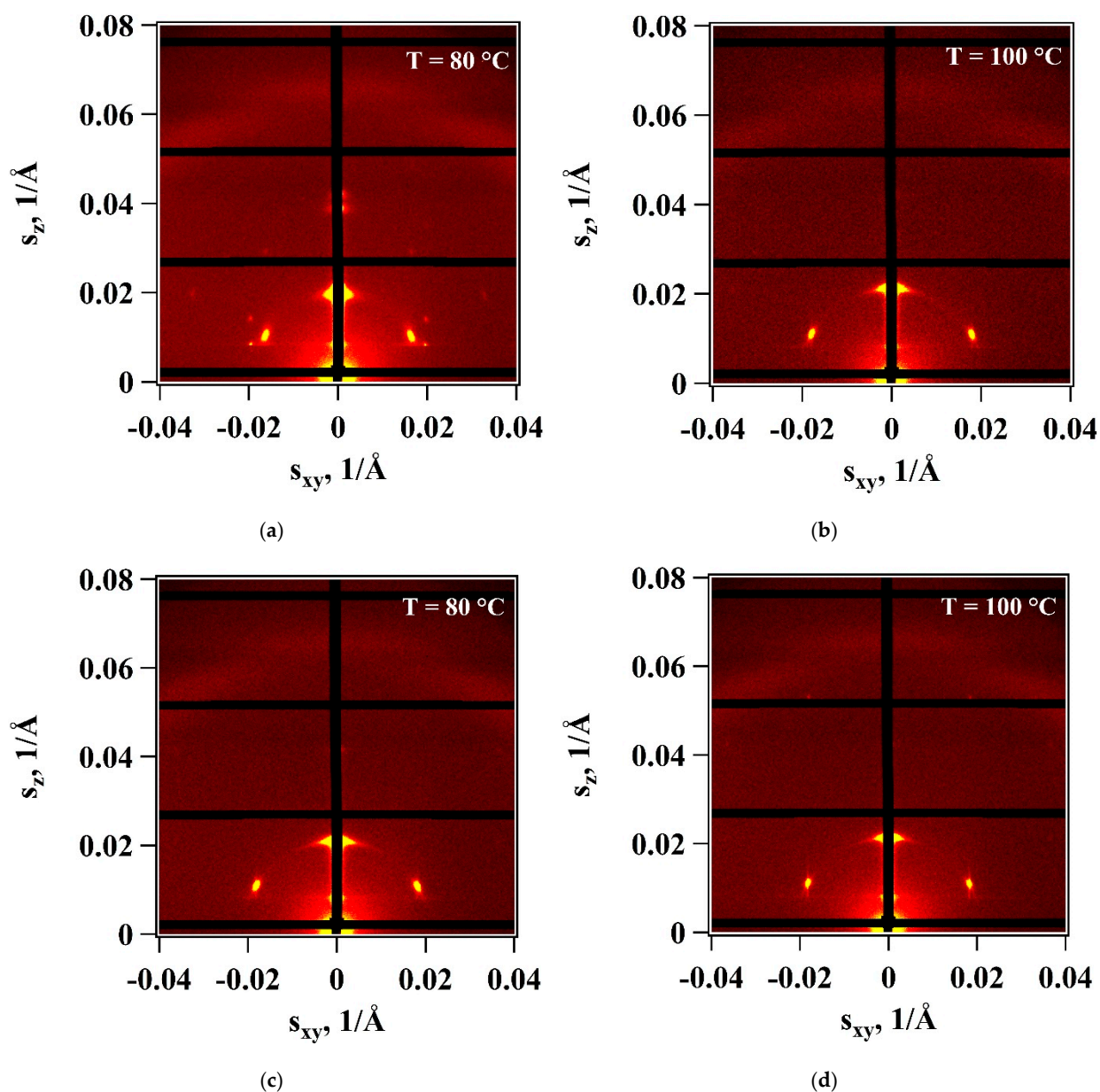


Figure S2. 2D GISAXS patterns of a dry C8AzoPyr thin film recorded during first heating from 25 $^\circ\text{C}$ at 80 $^\circ\text{C}$ (a) and at 100 $^\circ\text{C}$ (b), and during second heating from 25 $^\circ\text{C}$ at 80 $^\circ\text{C}$ (c) and at 100 $^\circ\text{C}$ (d).

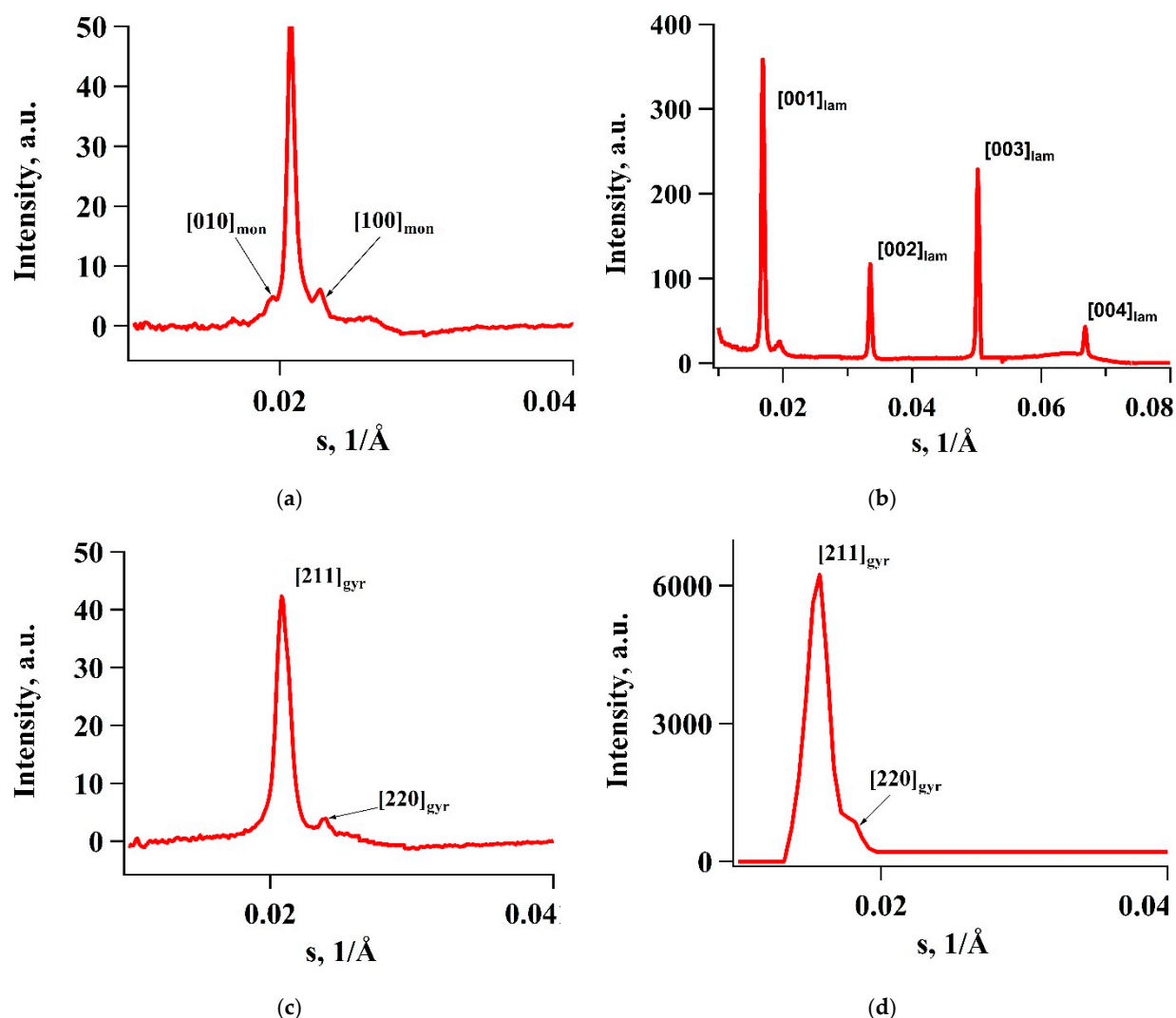


Figure S3. 1D-reduced GISAXS pattern of a dry C8AzoPyr thin film. (a) Columnar monoclinic (Col_{mon}) phase formed after long-term annealing at room temperature; (b) lamellar phase (lam) formed upon swelling in methanol vapors for two hours at room temperature; (c) double gyroid phase (Cub_{gyr}) generated after long-term annealing at ambient conditions; (d) Cub_{gyr} phase swollen in water vapors for two days at room temperature.

References

1. Gafskaia, K.N.; Anokhin, D.V.; Zimka, B.I.; Izdelieva, I.A.; Zhu, X.; Ivanov, D.A. An “on–off” switchable cubic phase with exceptional thermal stability and water sorption capacity. *Chem. Comm.* **2017**, *53*, 13217–13220.