Electronic Supplementary Material (ESI) for Journal of Materials Chemistry A.

Supporting information for:

Novel Dual Superlyophobic Materials in Water-Oil Systems: Under Oil Magneto-fluid Transportation and Oil-Water Separation

Chang-Lian Xu, Yu-Zhong Wang*

Center for Degradable and Flame-Retardant Polymeric Materials (ERCPM-MoE), College of Chemistry, State Key Laboratory of Polymer Materials Engineering, National Engineering Laboratory of Eco-Friendly Polymeric Materials (Sichuan), Sichuan University, Chengdu 610064, China.

*Corresponding author. E-mail: yzwang@scu.edu.cn.

Tel: 86-28-85410755; Fax: 86-28-85410755

Figures:

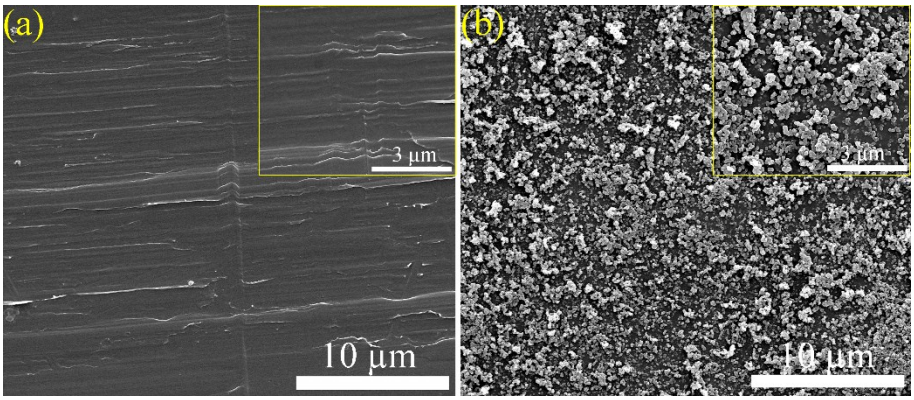

Figure S1. FE-SEM images of the sample obtained as the same synthetic feed ratio (catechol and

HMT) and condition of PI-6 without the feed of $FeSO_4$. (a) hydrothermal synthesis of 3 h and (b) hydrothermal synthesis of 24 h.

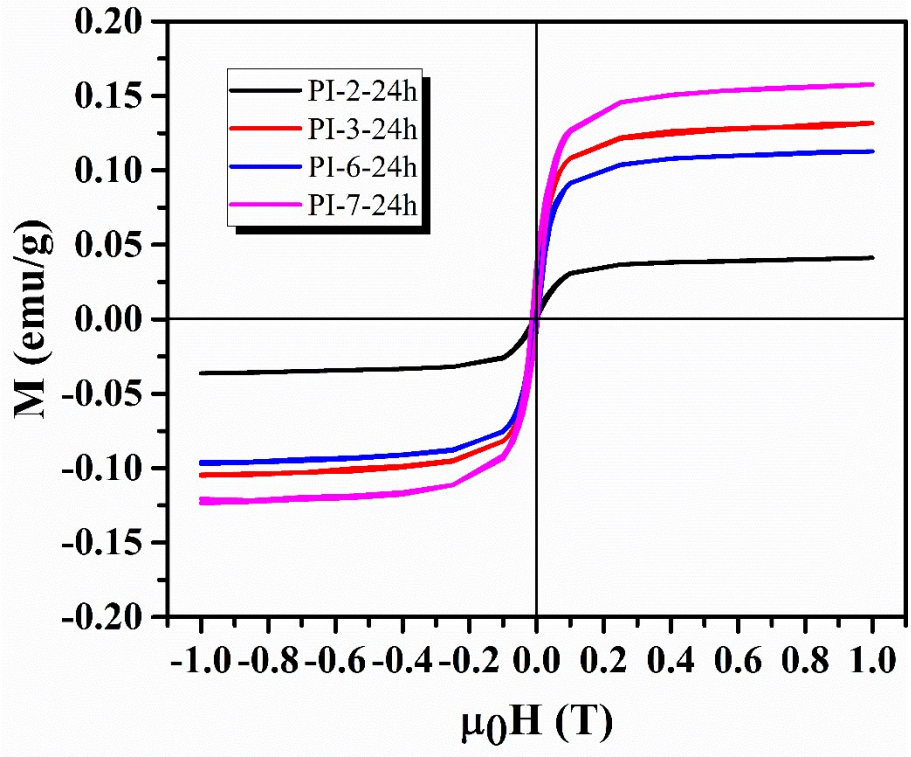

Figure S2. VSM profiles of samples obtained from the autoclaves of preparing PI-2-24h, PI-3-24h, PI-6-24h and PI-7-24h films. No signals were detected for the samples taken from the autoclaves of preparing PI-2, PI-3, PI-6, and PI-7 films.

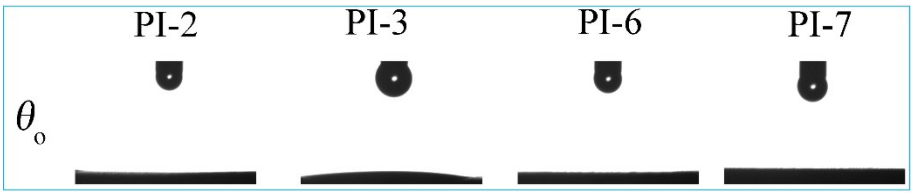

Figure S3. Illustration of represent θ_o (hexane CA) in air. The θ_o for PI-2, PI-3, PI-6 and PI-7 are all nearly zero. The petroleum ether and dichloromethane CAs in air are not shown any more since they are also closed to zero.

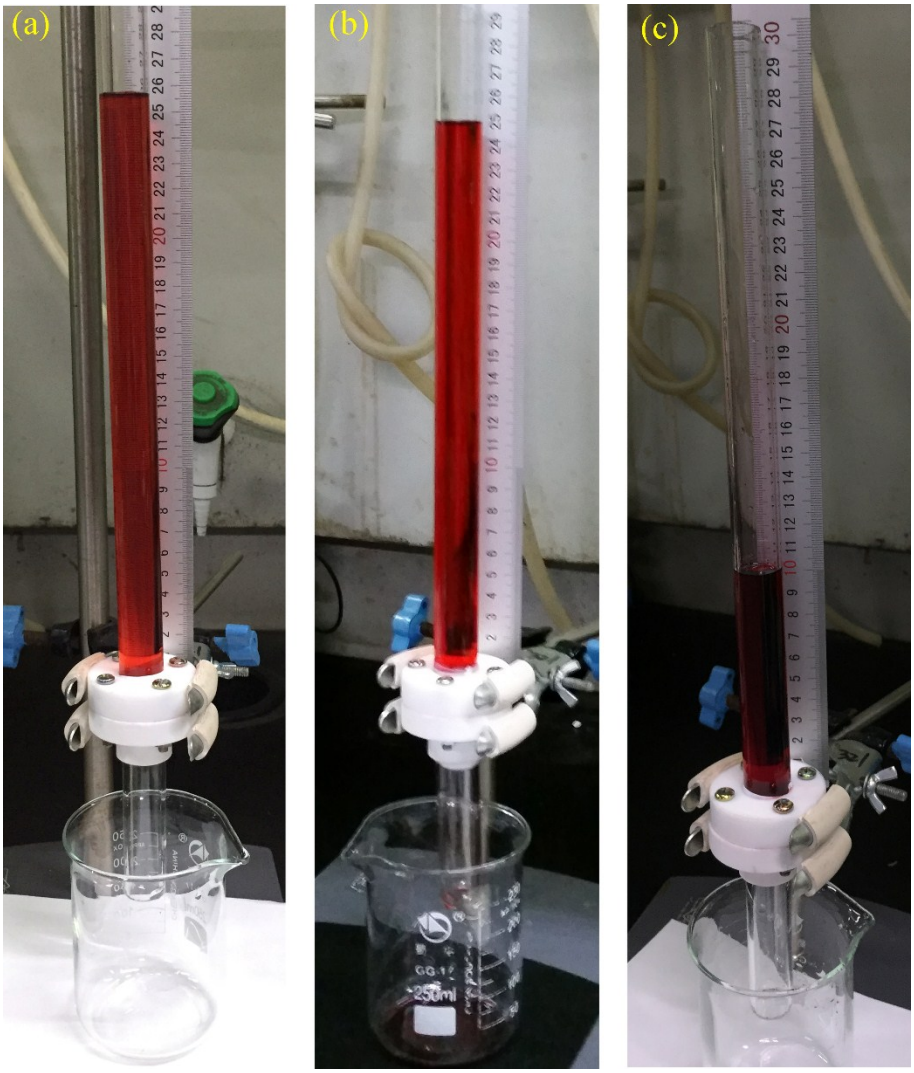

Figure S4. The experimental intrusion pressures of (a) hexane, (b) petroleum ether and (c)

dichloromethane.