

Supporting Information

Metal–Organic-Framework-Mediated Fast Self-Assembly 3D Interconnected Lignin-Based Cryogels in Deep Eutectic Solvent for Supercapacitor Applications

Rui Lou ^{1,*}, Qihang Cao ¹, Taoyuan Niu ¹, Yiyi Zhang ¹, Yanan Zhang ¹, Guodong Wei ¹, Zhiwei Wang ² and Xiao Zhang ^{3,*}

¹ College of Physics and Energy, Materials Institute of Atomic and Molecular Science, Shaanxi University of Science and Technology, Xi'an 710021, China

² Key Laboratory of Clean Pulp & Papermaking and Pollution Control of Guangxi, Guangxi University, Nanning 530004, China

³ Voiland School of Chemical Engineering & Bioengineering, Washington State University, Richland, WA 99354, USA

* Correspondence: lourui@sust.edu.cn; x.zhang@wsu.edu

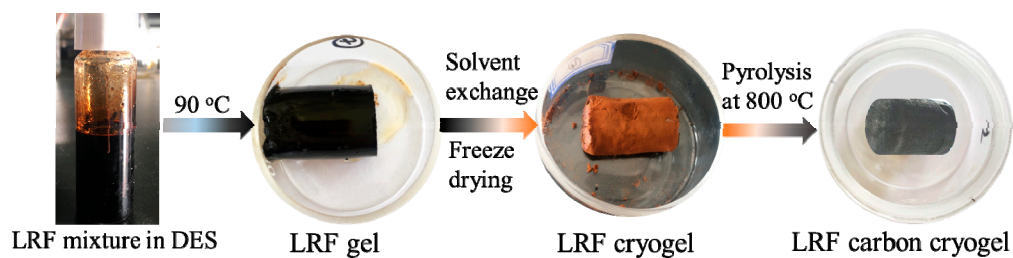


Figure S1 Flow chart of the LRF carbon cryogels preparation.

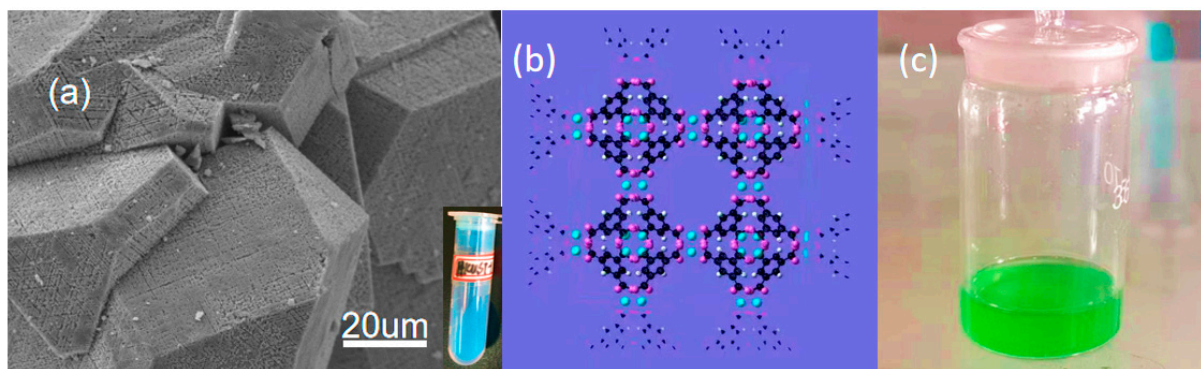


Figure S2 A typical MOF of HKUST-1. ((a) SEM image; (b) molecular lattice structure; (c) HKUST-1 dissolved in DES ratio of 1:5 at room temperature).

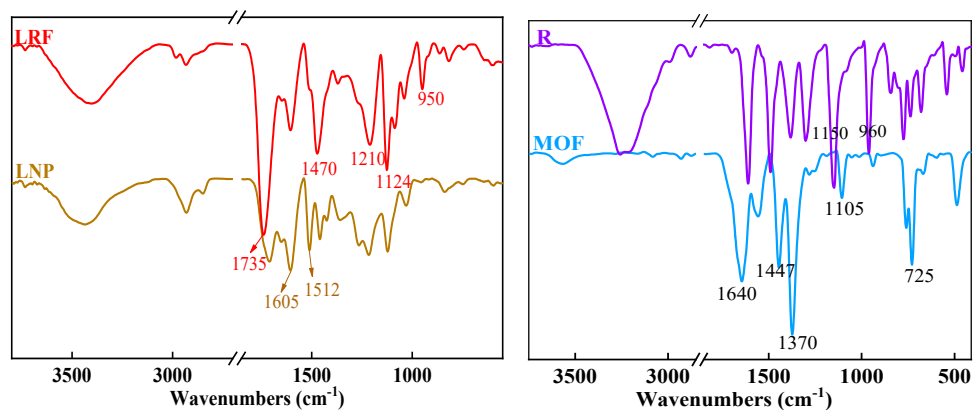


Figure S3 FTIR spectra of the LRF cryogel (DES1:5+5%MOF), LNP, MOF and resorcinol (R).

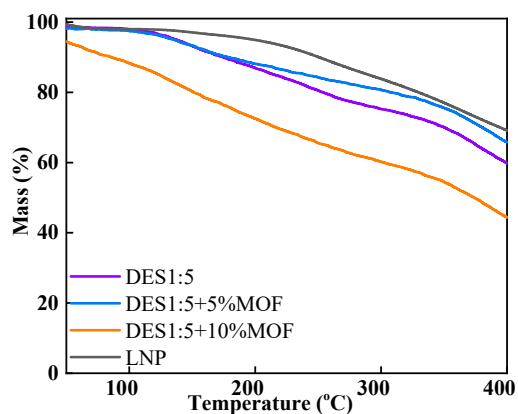


Figure S4 Thermal stability of the LRF cryogels and LNP.

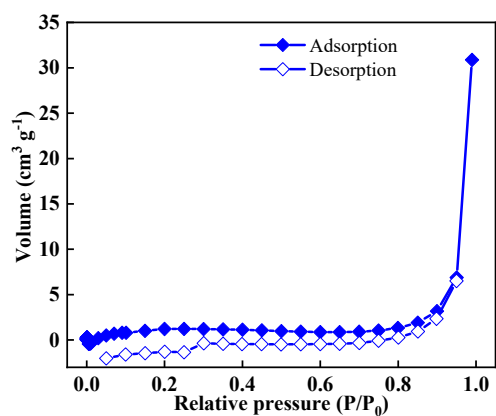


Figure S5 N₂ adsorption-desorption isotherms of the LRF cryogel (DES1:5+5%MOF).

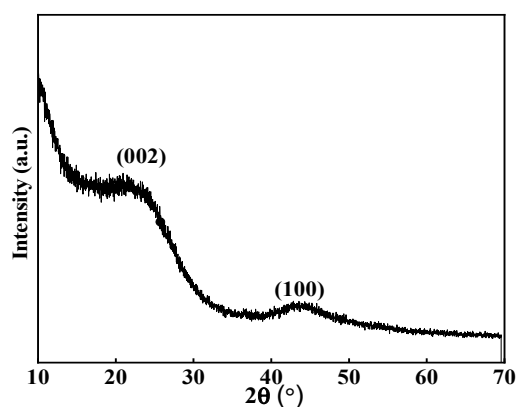


Figure S6 XRD pattern of the LRF carbon cryogel (DES1:5+5%MOF).

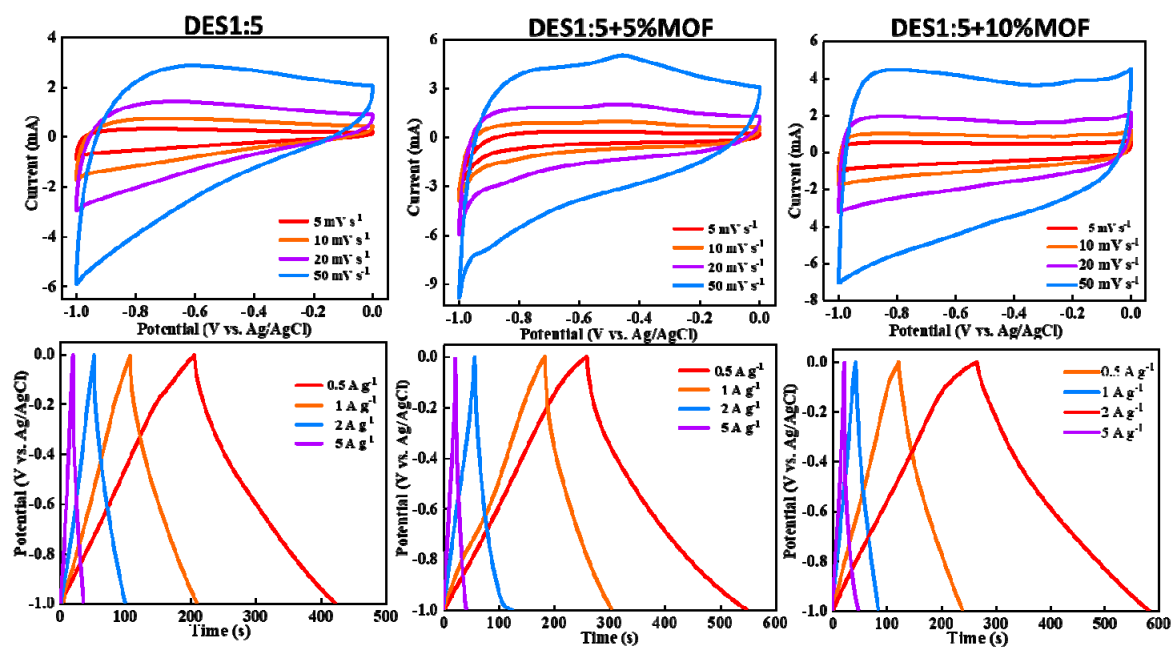


Figure S7 CV and GCD curves of the LRF carbon cryogels (DES1:5, DES1:5+5%MOF, and DES1:5+10%MOF).