

Supplementary Information

Hypercrosslinked Porous Polymer Nanosheets: 2D RAFT Agent Directed Emulsion Polymerization for Multifunctional Applications

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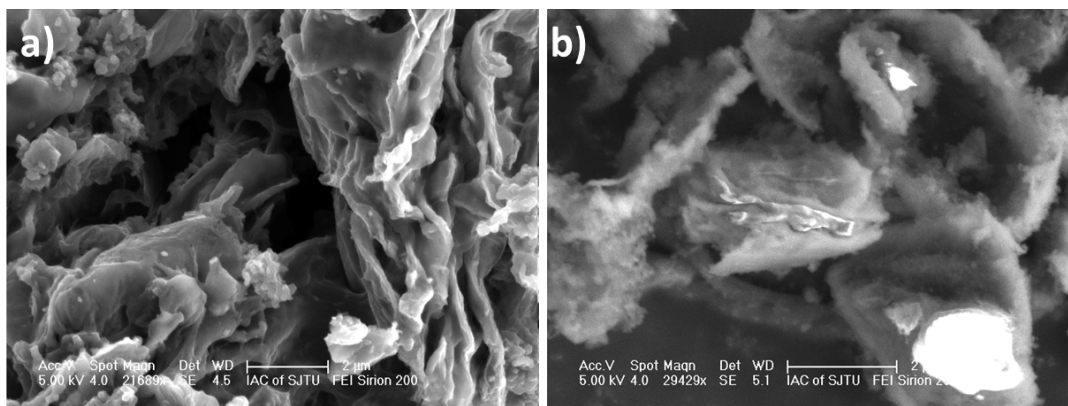


Figure S1. SEM images of a) GHCP-1 and b) GHCP-2

Figure S2. TEM image HCP.

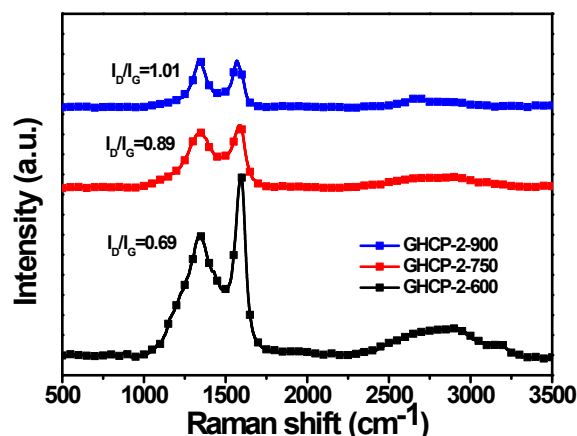


Figure S3. Raman spectra of GHCP-2-X (X=600, 750, 900)

Raman spectroscopy has been widely used to characterize the structure of carbon materials, particularly the defects and the degree of ordering of carbon.¹ Typically, GHCP-2 was pyrolyzed at different temperatures for 2h under inert atmosphere. The produced porous carbon materials were denoted as GHCP-2-X (X= 600, 750, 900 °C). The Raman spectra of GHCP-2-X were shown in Figure S3. There are two prominent peaks at 1338.5 and 1595.5 cm⁻¹, corresponding to the D and G bands, respectively. As is known, the G band is related to the E_{2g} vibration mode of sp² carbon domains, which can be used to explain the degree of graphitization, while the D band is associated with structural defects and partially disordered structures of sp² domains.² The I_D/I_G ratio of GHCP-2-X (0.69–1.01) indicates less defects and disordering under high temperature treatment, which implies that the graphitic degree for carbonized samples is improved at these temperatures.

- 1 C. A. Cao, X. Zhuang, Y. Su, Y. Zhang, F. Zhang, D. Wu, X. Feng, *Polym. Chem.*, 2014, **5**, 2057.
- 2 K. N. Kudin, B. Ozbas, H. C. Schniepp, R. K. Prud'homme, I. A. Aksay, R. Car, *Nano Lett.*, 2008, **8**, 36.