

Electronic Supporting Information

Facile Synthesis of Microcellular Foams Catalysts with Adjustable Hierarchical Porous Structure, Acid-base Strength and Wettability for Biomass Energy Conversation

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Content

Table S1 The acidic and basic content of the MFCs	2
Fig. S1 Phenomemon of reaction products in different reaction time	3
Fig. S2 CLSM photos of Pickering HIPes	4
Fig. S3 FT-IR spectra of the MFCs and the particles	5
Fig. S4 NH ₃ -TPD curves of unsulfonation MFCs-3	6
Fig. S5 SEM images of MFCs-3 after MFCs-3 treated in 200 °C for 5h	7
Fig. S6 ESI-MS spectra of the solution before and after solution treatment	8
Fig. S7 FT-IR spectra of the solution before and after solution treatment	9

Table S1 The acidic and basic contents of the MFCs.

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Samples	S content (mmol g ⁻¹)	Total acidity (mmol g ⁻¹)	N content (mmol g ⁻¹)	Total basicity (mmol g ⁻¹)
MFCs-1	0.755	0.769	0.452	0.480
MFCs-2	1.658	1.732	0.623	0.662
MFCs-3	1.32	1.305	0.782	0.735
MFCs-4	1.293	1.332	0	0
Reused MFCs-3	1.179	1.200	0.582	0.640
Un sulfonated MFCs-3	0	0	0.894	0.873

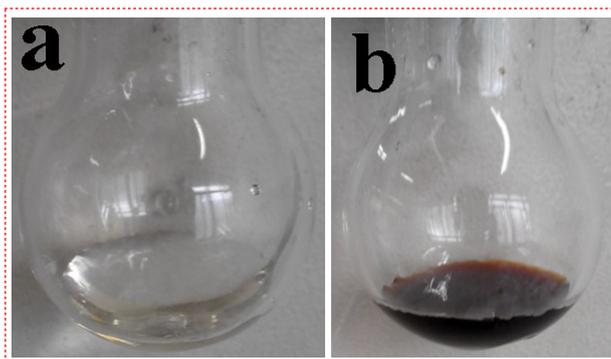


Fig. S1 Phenomemon of reaction products in different reaction time with 20 min (a) in pretreatment process, 20 min (b) in catalytic process at 130 °C.

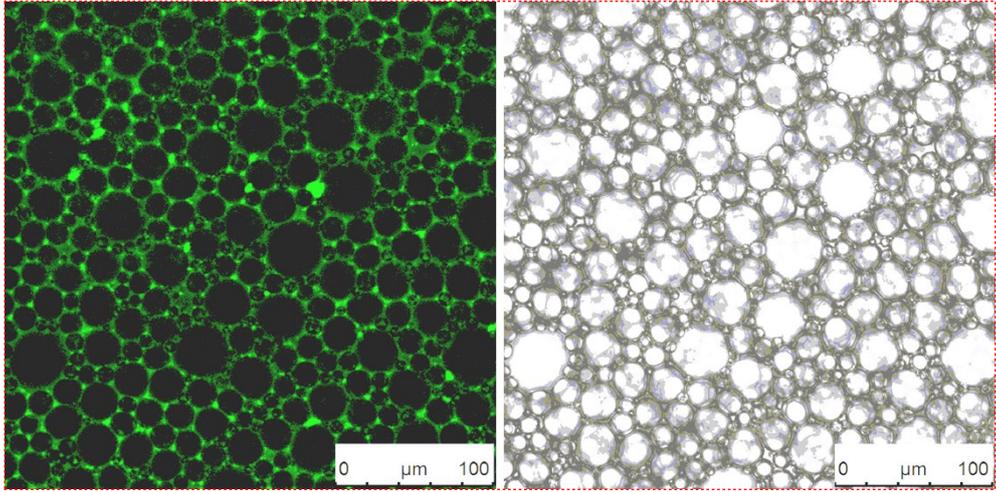


Fig. S2 CLSM photos of Pickering HIPEs.

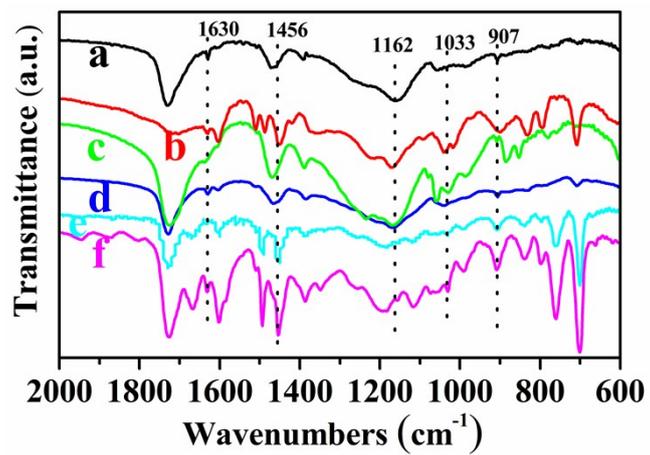


Fig. S3 FT-IR spectra of MFCs-3 (a), MFCs-1 (b), MFCs-4 (c), MFCs-2 (d), S-GMA (e), and S-NH₂ (f).

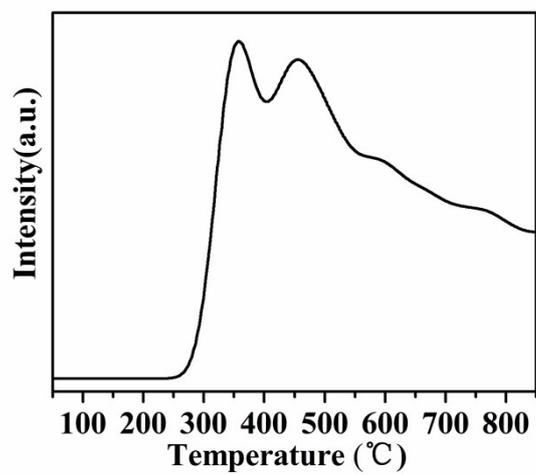


Fig. S4 NH_3 -TPD curve of unsulfonation MFCs-3.

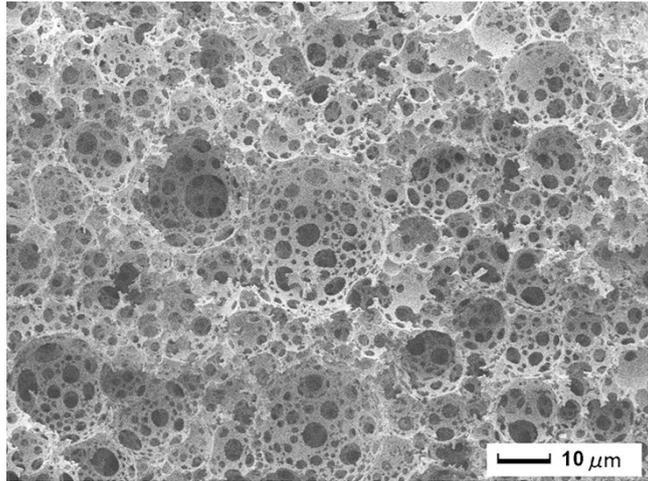


Fig. S5 SEM image of MFCs-3 after treated in 200 °C for 5.0 h.

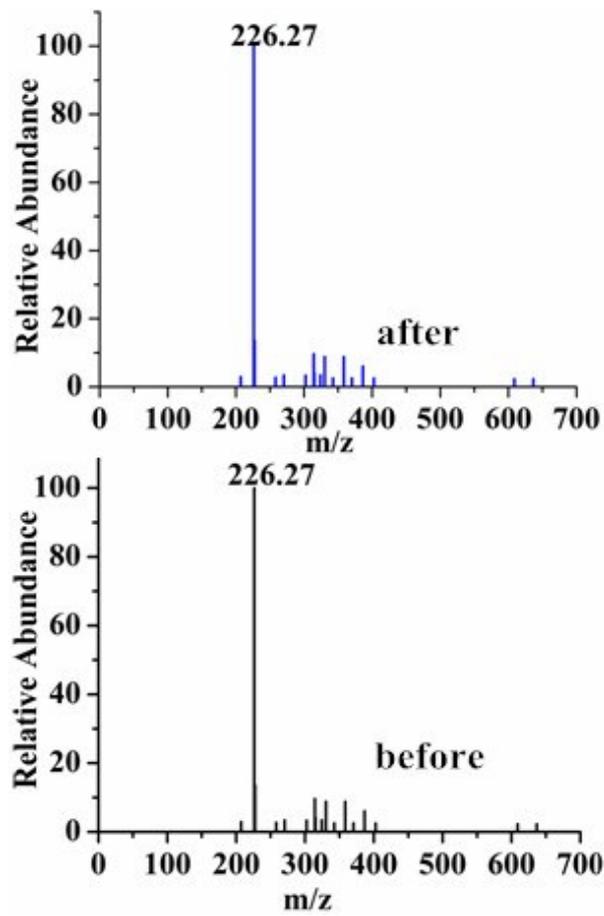


Fig. S6 ESI-MS spectra of the solution before and after solution treatment under the treatment conditions: MFCs-3 power (50 mg) added into hexadecane (2.0 g) and kept 5.0 h in 150 °C under stirring.

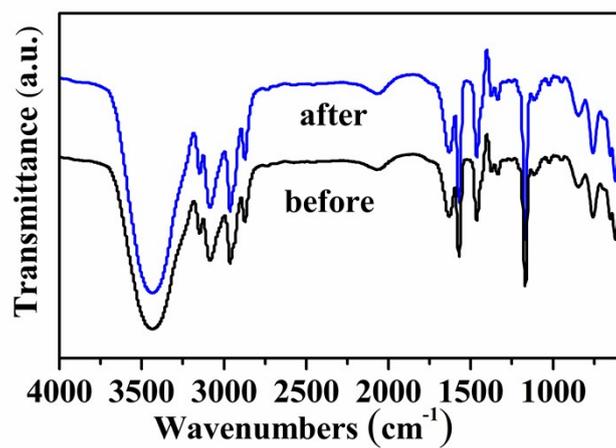


Fig. S7 FT-IR spectra of the solution before and after solution treatment under the treatment conditions: MFCs-3 power (50 mg) added into [EMIM]-Cl (2.0 g) and kept 5.0 h in 150 °C under stirring.