

Online Supplementary Information

Alternate approach to prepare versatile sulfonic acid functionalized periodic mesoporous silicas with superior catalytic applications

Mahendra P. Kapoor, Wataru Fujii, Yuuki Kasama, Masaaki Yanagi,
Hironobu Nanbu, and Lekh R. Juneja

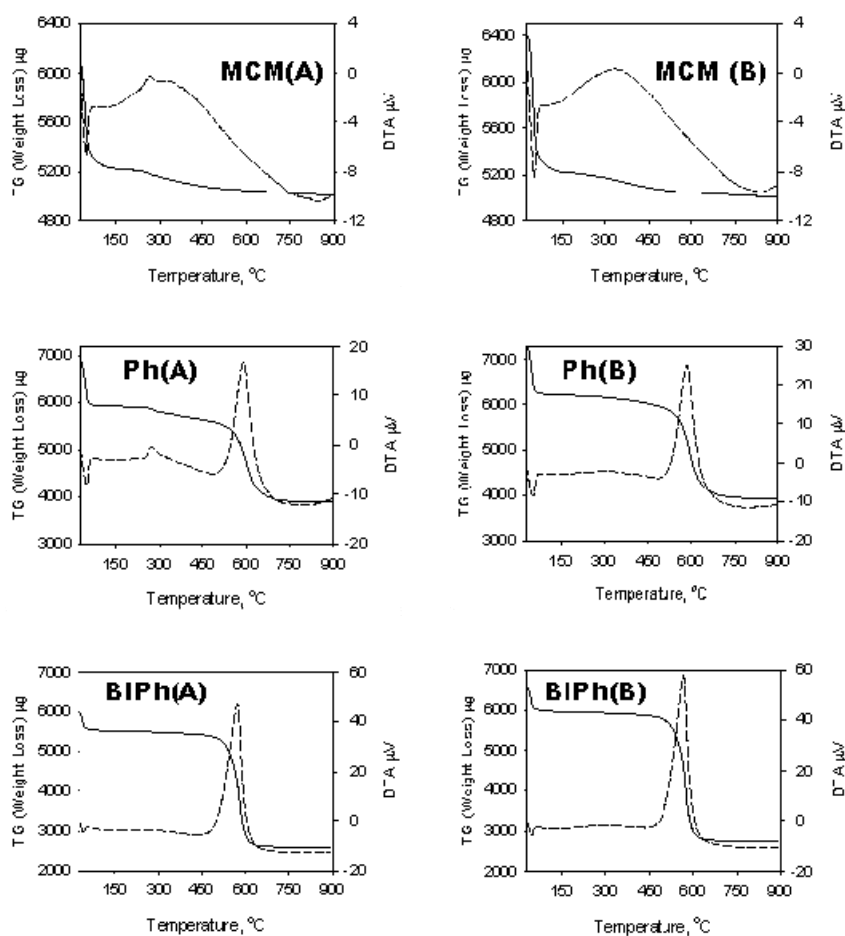


Figure S1. TGA/DTA curves of different mesoporous materials after the modification using epoxide precursors (A) Derived using 2-(3,4 epoxycyclohexyl)ethyltrimethoxysilane, and (B) 3-glycidoxypopyltrimethoxy silane precursors.

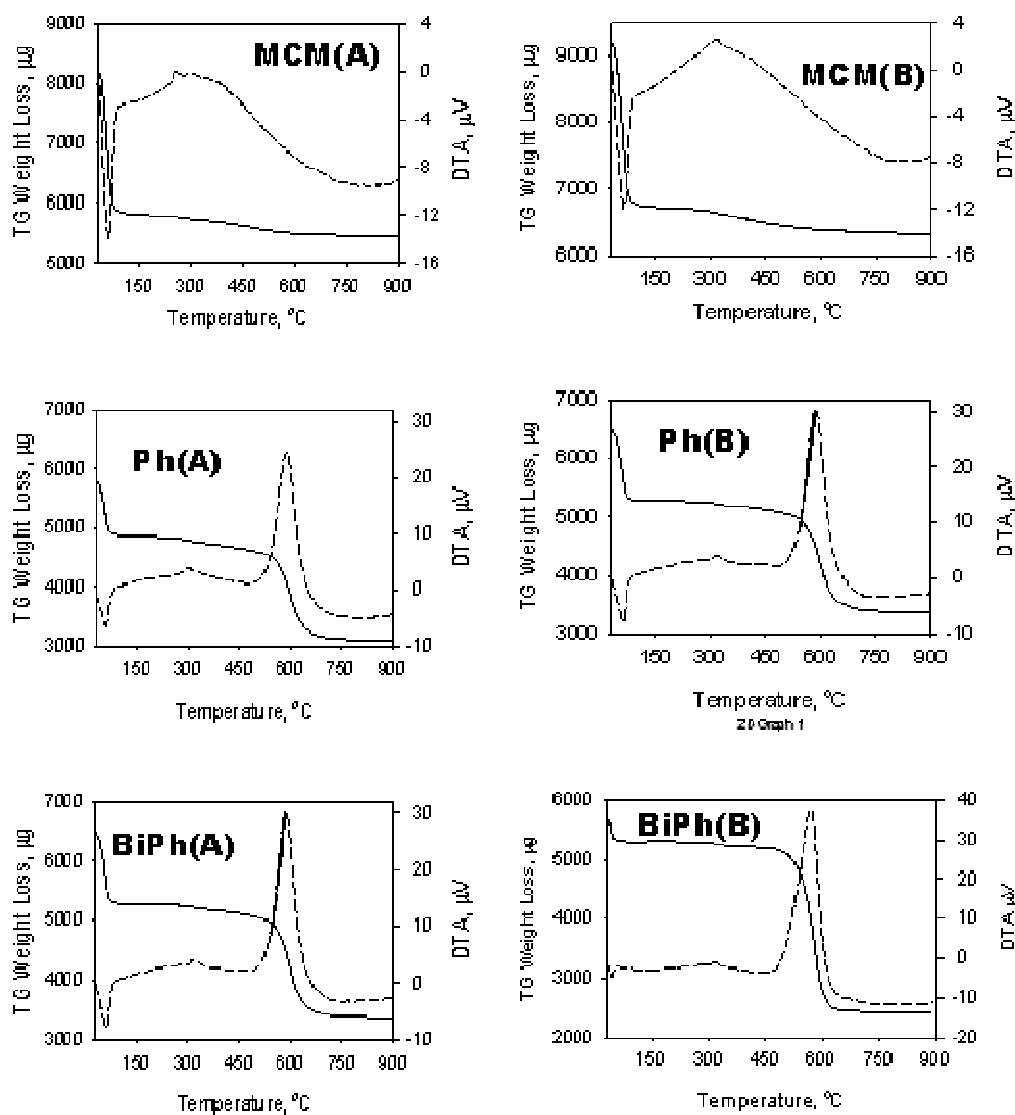


Figure S2. TGA/DTA curves of different mesoporous materials after sulfonic acid functionalization; Meso-SO₃H (A) derived using 2-(3,4 epoxycyclohexyl) ethyltrimethoxysilane, and Meso-SO₃H (B)- derived using 3-glycidoxypopyl trimethoxysilane precursors.

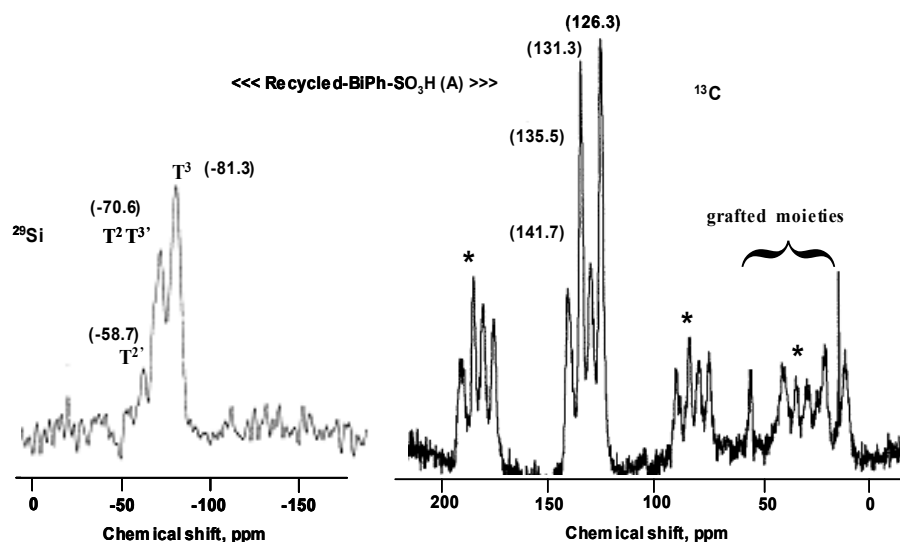


Figure S3. ²⁹Si and ¹³C NMR spectra of recycled sulfonated BiPh-SO₃H (A) hybrid mesoporous materials derived via grafting of 2-(3,4epoxycyclohexyl) ethyltrimethoxysilane precursor.