Supporting online materials for

A Newly Designed Softoxometalate [Bmim]$_2$[Dmim][α-PW$_{12}$O$_{40}$]@Hydrocalumite that Control the Chain Length of Polyacrylic Acid in Presence of Light

Santu Das, Soumyajit Roy*

Content

Dispersion of hydrocalumite and SOM 2  
EDS mapping of SOM 2  
Hydrodynamic radius of hydrocalumite and SOM 2  
SEM image of polyacrylic acid  
HATR-IR spectrum of PAA  
Variation of molecular weight of PAA with time  
Variation of molecular weight distribution with time
Fig S1. a) Dispersion of hydrocalumite. b) Formation of composite $[\text{BMI}_2][\text{DMIm}][\alpha$-$\text{PW}_{12}\text{O}_{40}]@\text{Hydrocalumite (SOM 2).}$ c) Gelation of SOM 2 indicates formation of composite material.
Fig S2. EDS mapping image of SOM 2. a) Selective mapping around pore of hydrocalumite. Where concentration of 1 is less. b) Selective mapping around the surface of SOM 2 where catalyst loaded on hydrocalumite pore. Indicates 1 loaded on surface of hydrocalumite.
Fig S3. Hydrodynamic radius of hydrocalumite and SOM 2, indicates SOM 2 has larger radius compare to hydrocalumite.
Fig S4. SEM image of synthesized polyacrylic acid.
Fig S5. HATR-IR spectrum of synthesized polyacrylic acid.
Fig S6. Variation of molecular weight of PAA with time.
Fig S7. Molecular weight distribution of PAA with time.