

## Supporting Information

### Segregation of confined ionic liquids inducing the formation of super-micropores in the silica matrix

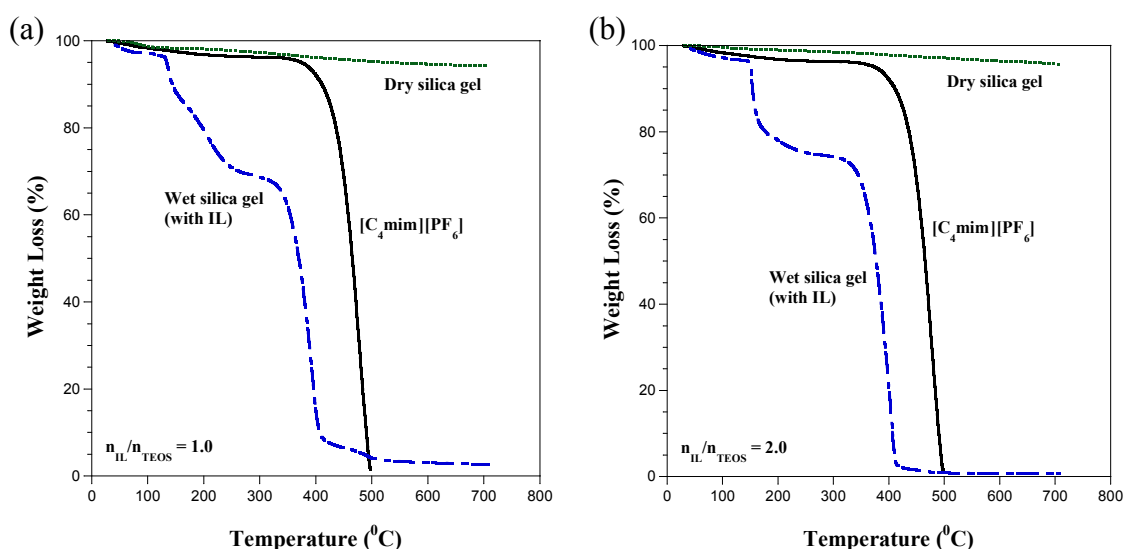
Ching-Mao Wu\* and Szu-Yin Lin

Material and Chemical Research Laboratories, Industrial Technology Research  
Institute, Chutung, Hsin-Chu, 31040, Taiwan.

E-mail: [ChingMaoWu@itri.org.tw](mailto:ChingMaoWu@itri.org.tw)

#### S1. Thermogravimetric analyses (TGA)

TGA was used to examine whether the ionic liquid [C<sub>4</sub>mim][PF<sub>6</sub>] was removed from wet silica gel or not. TGA thermograms of the prepared silica samples were performed with a TA Instruments Q500 high resolution TGA operating at a heating rate of 10 °C/min from room temperature to 700 °C in a high-purity nitrogen atmosphere. Approximately 10–40 mg of the finely ground sample placed in an open platinum crucible was used. As shown in Fig. S1, after solvent extraction and subsequent vacuum drying, the confined IL had been removed.



**Fig. S1** TGA thermograms of bulk IL [C<sub>4</sub>mim][PF<sub>6</sub>] and the synthesized wet silica gels with confined IL and IL-removed dry silica gel: (a)  $n_{IL}/n_{TEOS} = 1.0$  and (b)  $n_{IL}/n_{TEOS} = 2.0$ .