

## Supported Ionic Liquid Phase Catalysis on Functionalized Carbon Nanotubes

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### Supporting Information

Infrared (KBr pellets) spectra performed on a Perkin Elmer spectrometer

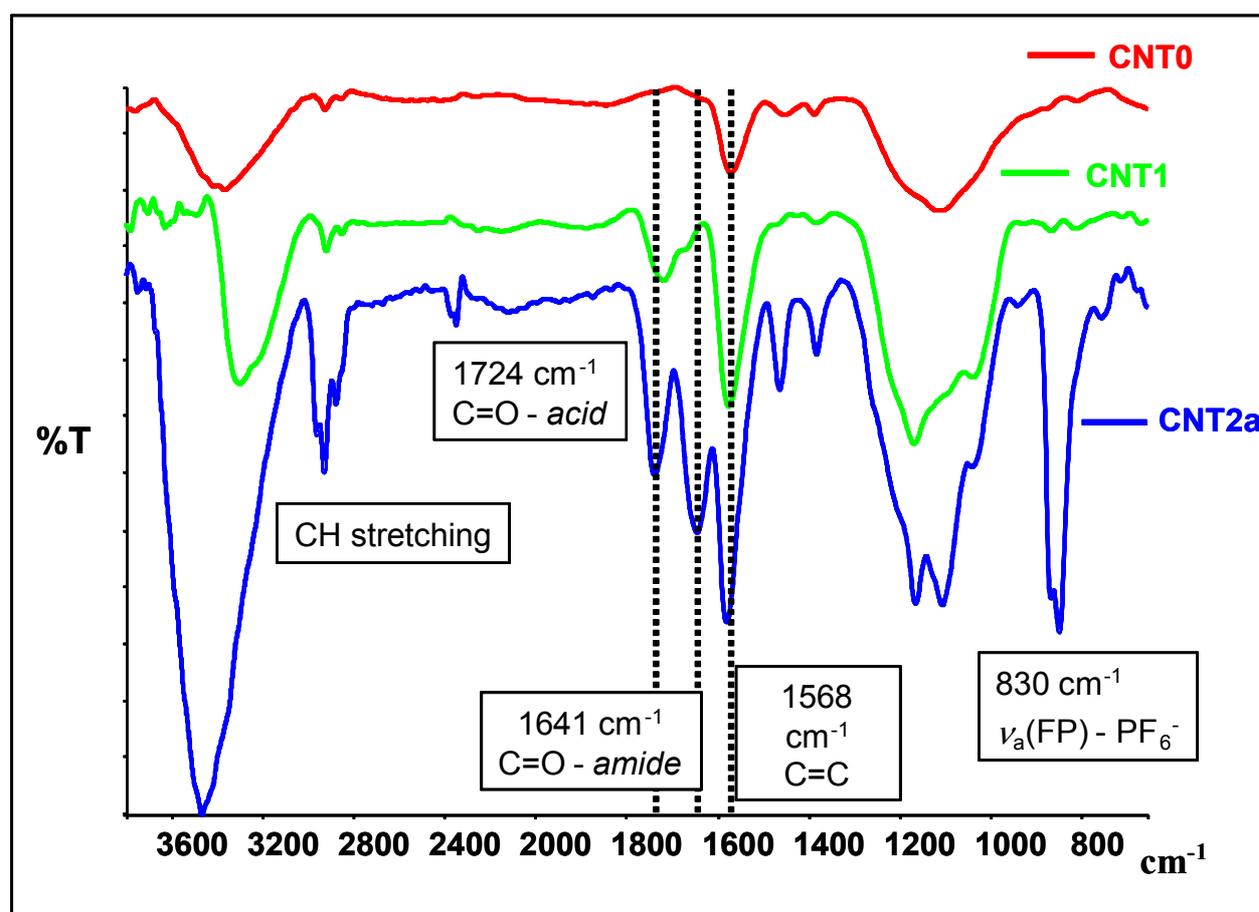


Figure S-1. Infrared spectra (KBr pellets) of CNT0, CNT0 and CNT2a

### Thermogravimetric analyses

Thermogravimetric analyses (TGA) were conducted under air in a Setaram apparatus. The sample (~ 5 mg) was placed in a platinum crucible and heated with a  $10^{\circ}\text{C}\cdot\text{min}^{-1}$  ramp between 25 and  $1000^{\circ}\text{C}$ , followed by an isotherm at that temperature for 30 minutes.

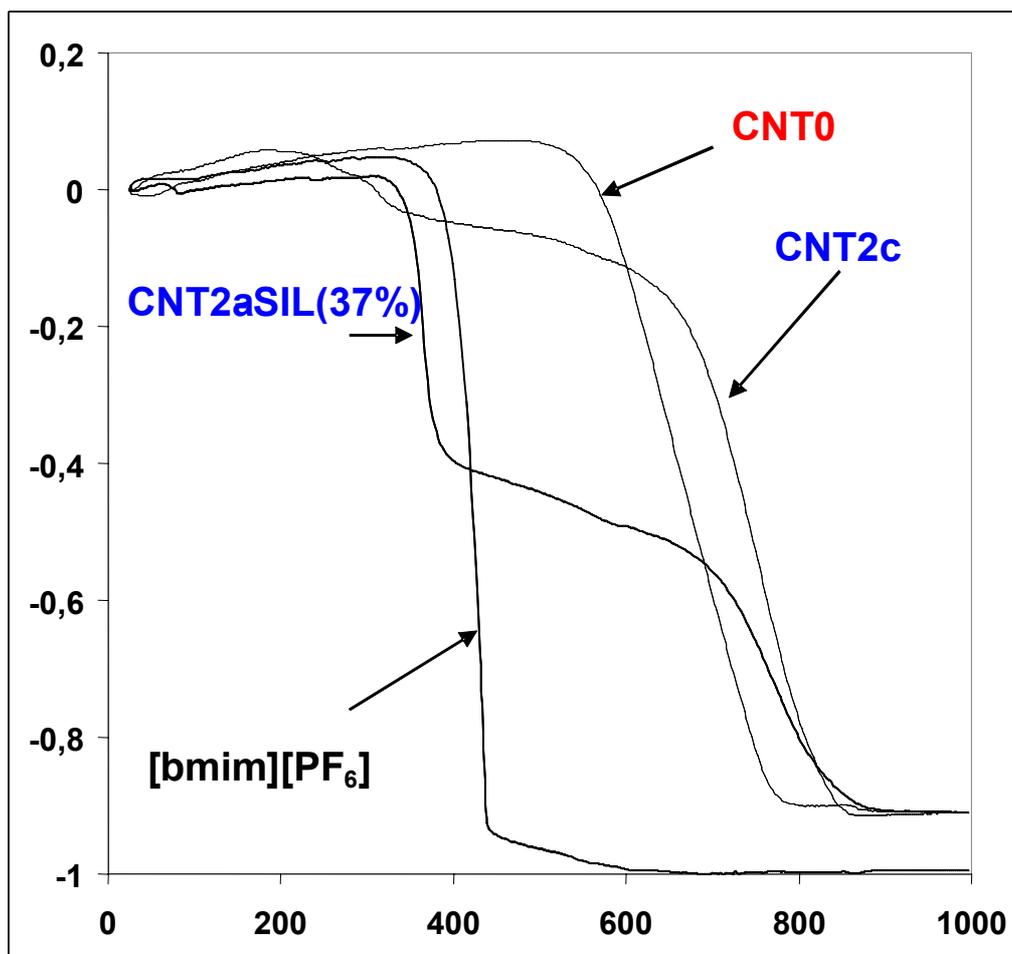
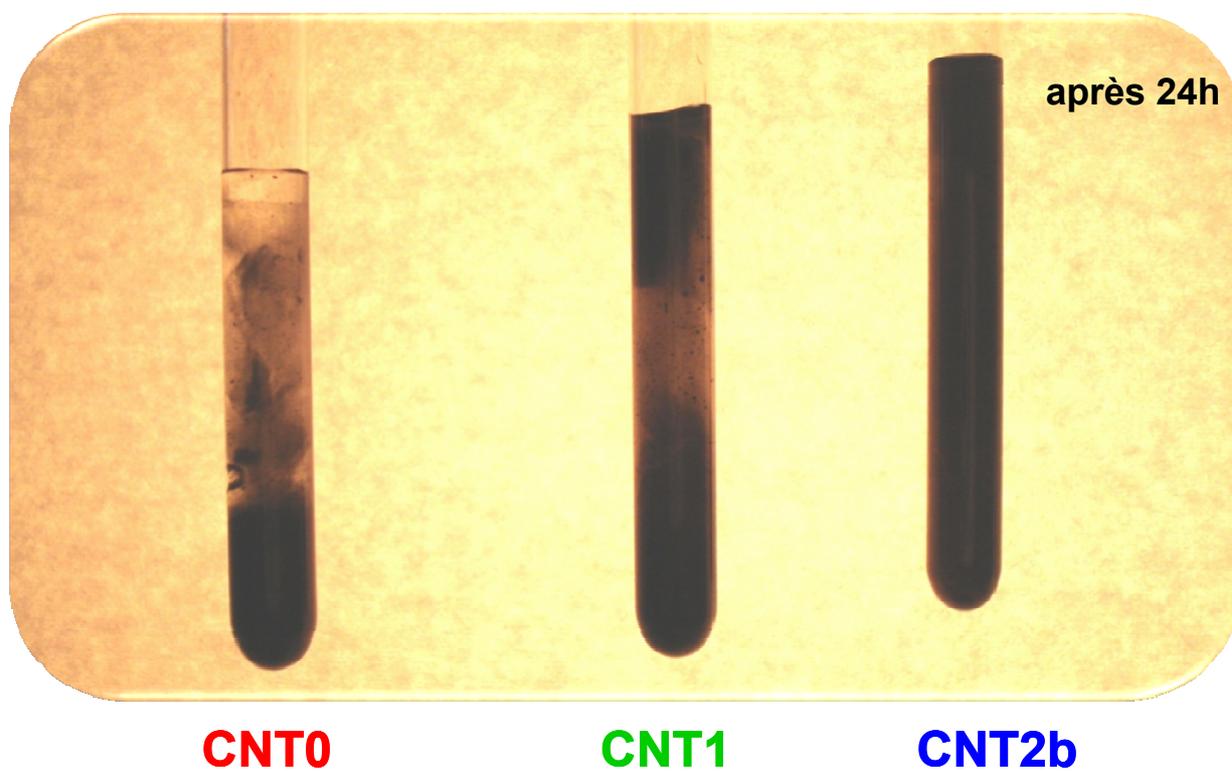


Figure S-2. TGA under air of CNT0, CNT2c, CNT2a-SIL(37%) and pure [bmim][PF<sub>6</sub>].

**Dispersibility of CNTs in [bmim][PF<sub>6</sub>]**



**Figure S-3. Optical photograph of CNT dispersions in [bmim][PF<sub>6</sub>] (after 24 h).**

### Mean CNT diameter for CNT0 and CNT2b-SIL(55%) – TEM observations

The TEM micrographs were obtained using a Philips CM12 microscope operating at 120 kV. The CNTs samples were dispersed in ethanol, sonicated for 5 minutes and the resulting suspension was dropped onto a holey carbon copper grid and the solvent was allowed to evaporate.

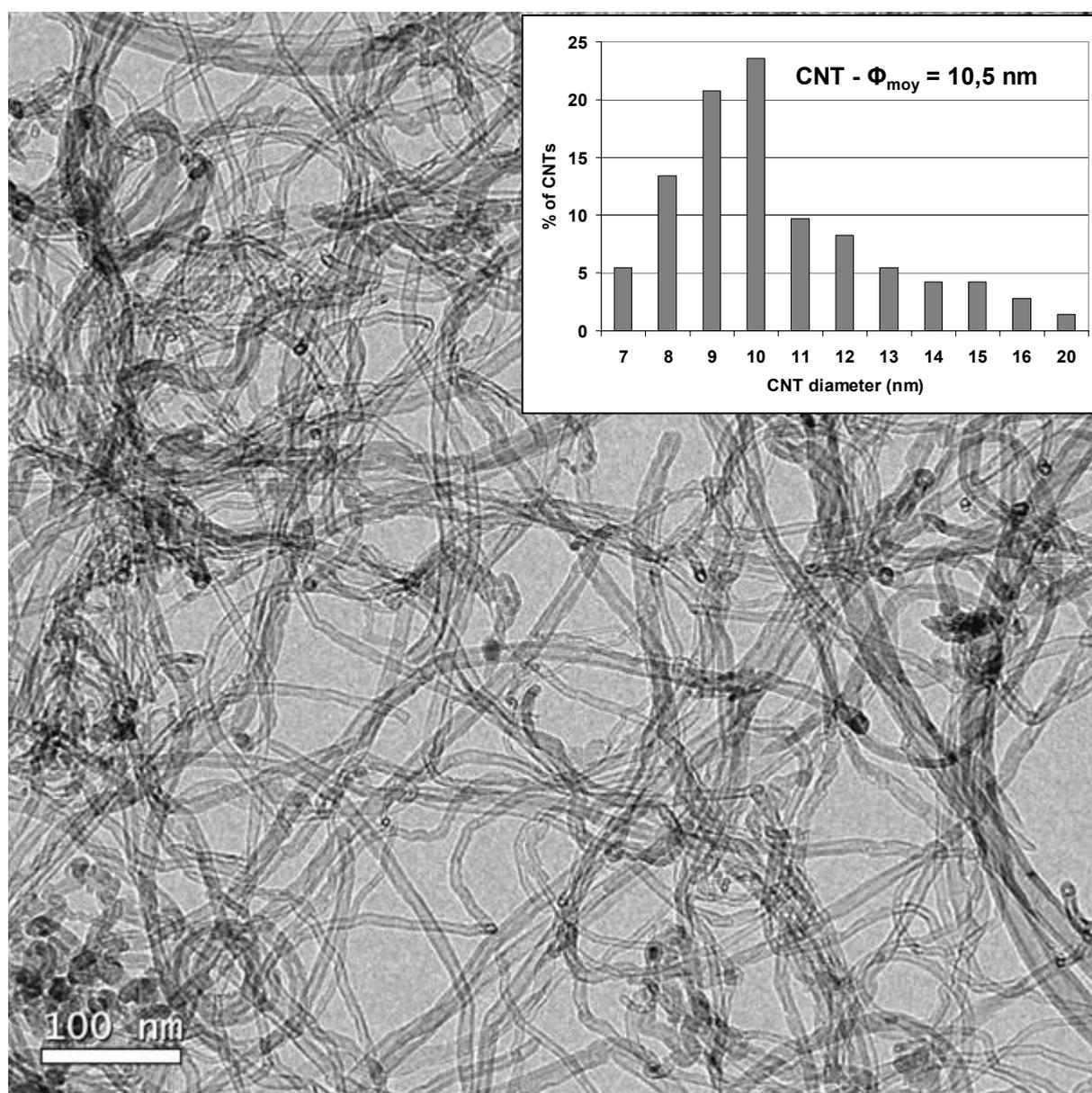
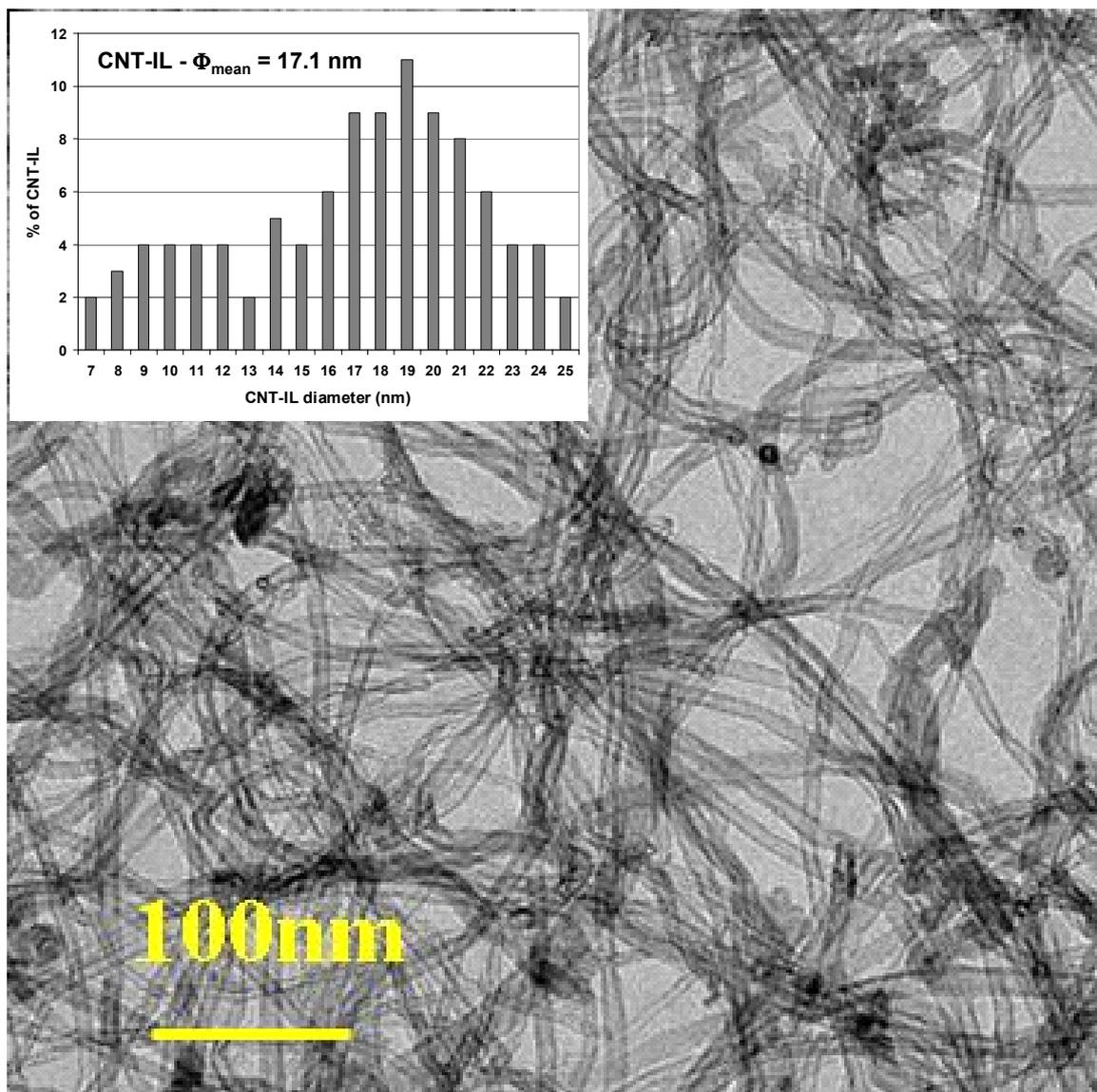


Figure S-4. TEM micrographs and histogram of CNT diameter (inset) for CNT0.



**Figure S-5. TEM micrographs and histogram of CNT diameter (inset) for CNT2bSIL(55%).**

### XRD analysis

XRD was performed on a Seifert XRD 3000 spectrometer using Cu K $\alpha$  radiation ( $\lambda = 0.15406$  nm).

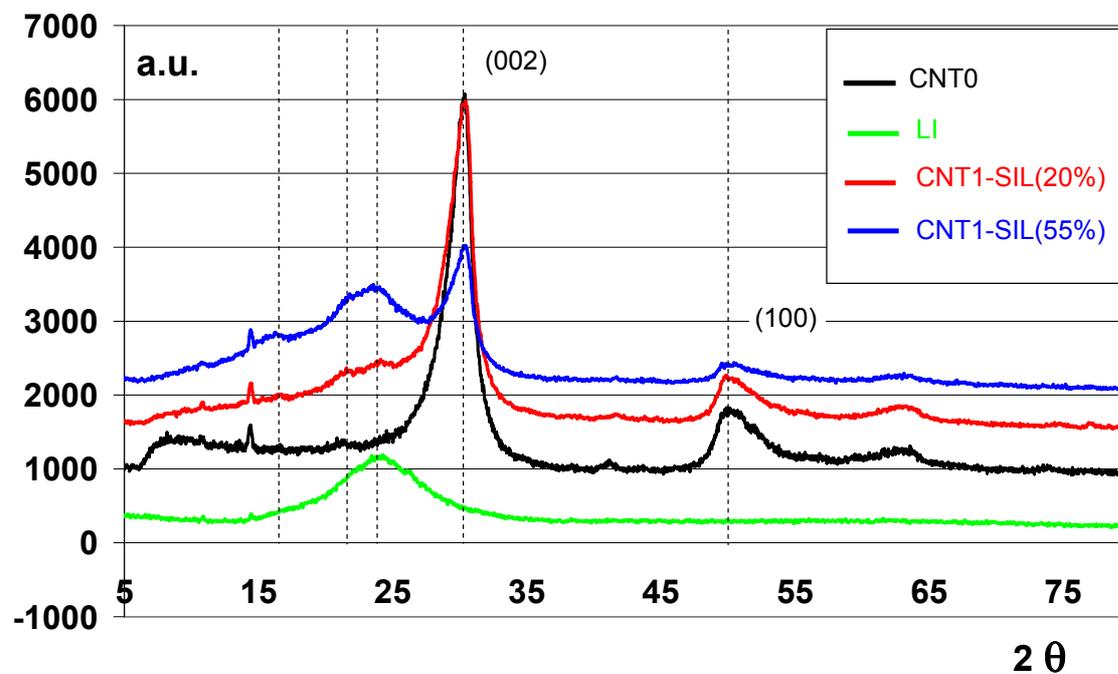


Figure S-6. XRD pattern of CNT0, pure [bmim][PF<sub>6</sub>], CNT1-SIL(20%) and CNT1-SIL(55%).