

Nanostructured polysilsesquioxanes bearing amine and ammonium groups by micelle templating using anionic surfactants

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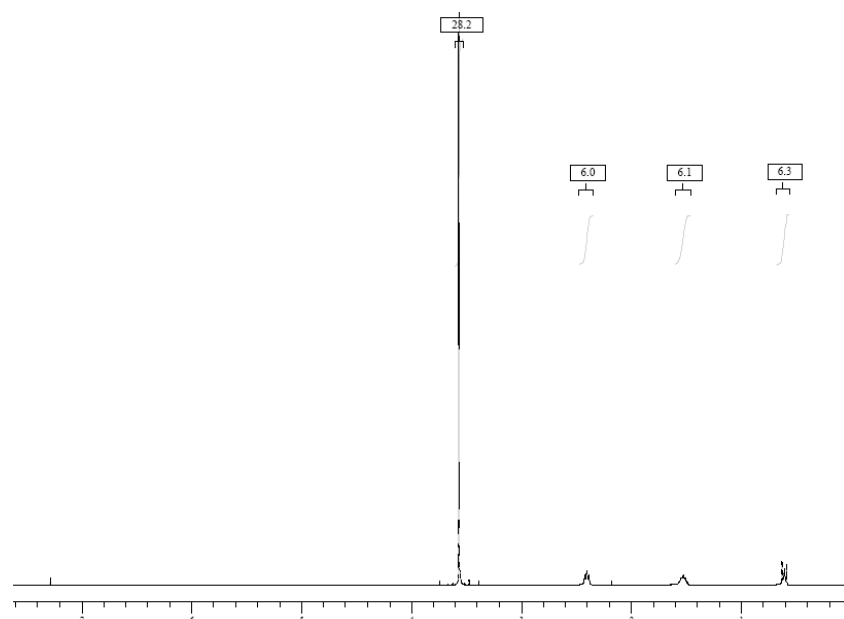
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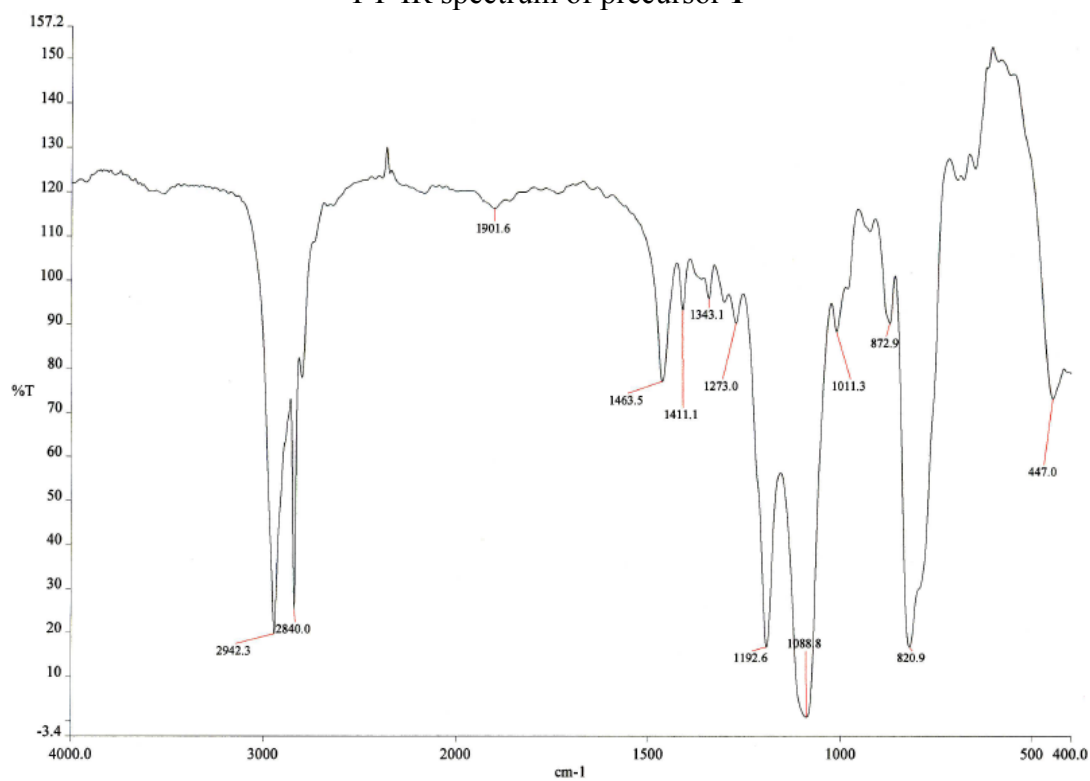
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1. Precursor characterization

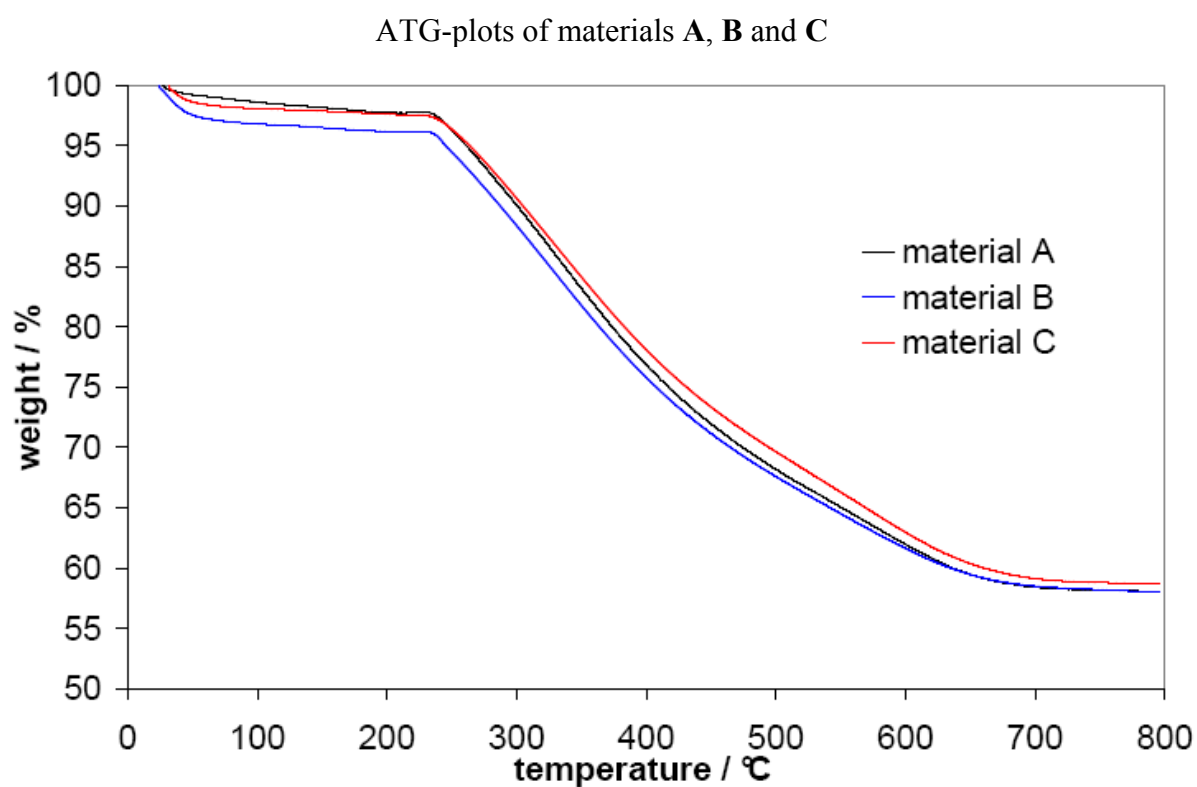
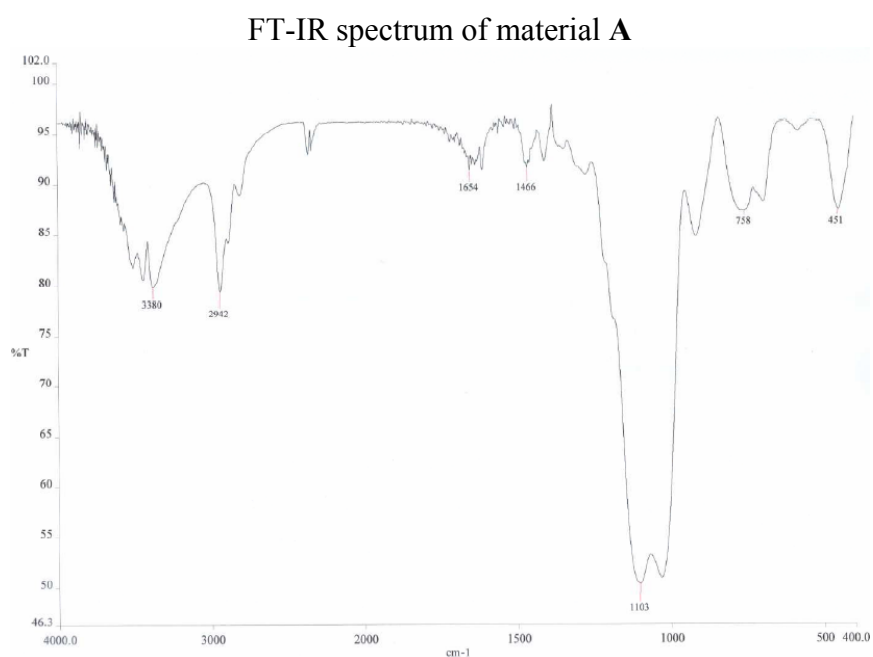
^1H NMR spectrum of precursor **1** (solvent: CDCl_3)



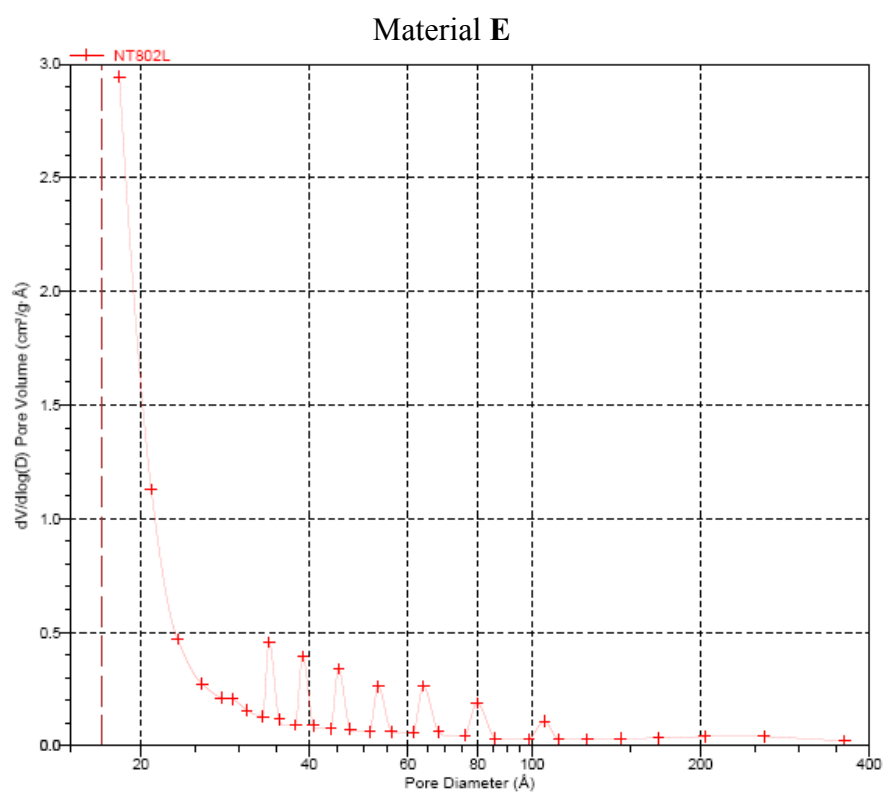
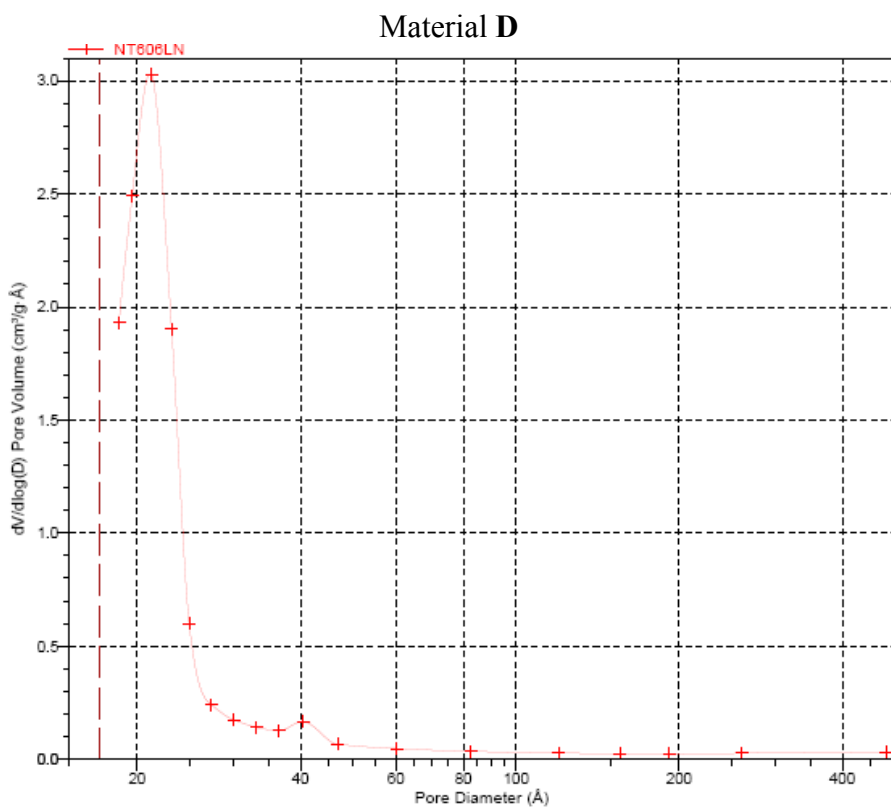
FT-IR spectrum of precursor **1**



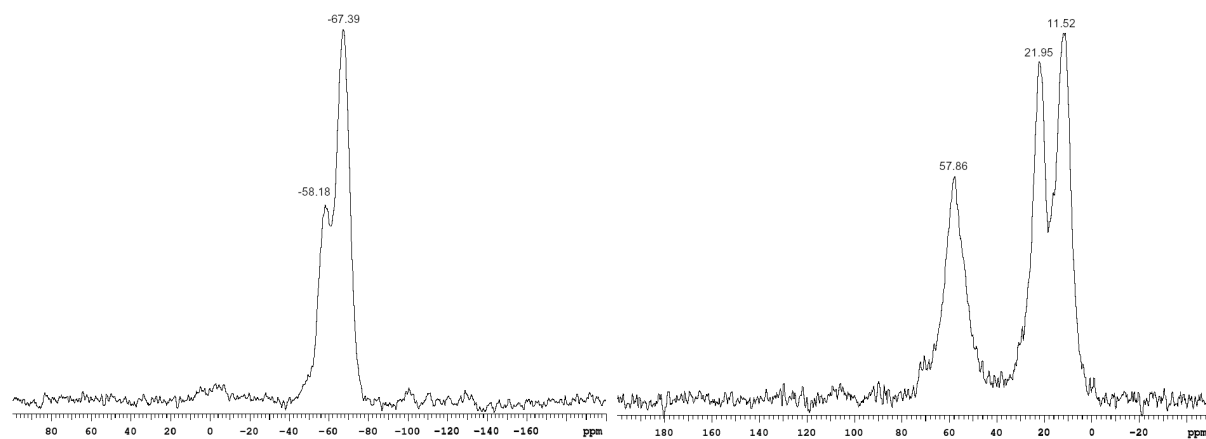
2. Materials characterization



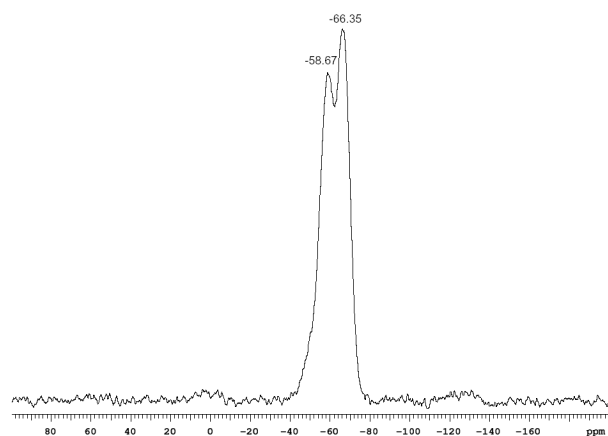
BJH $dV/d\log(D)$ Pore Volume Distribution of Materials **D** and **E**



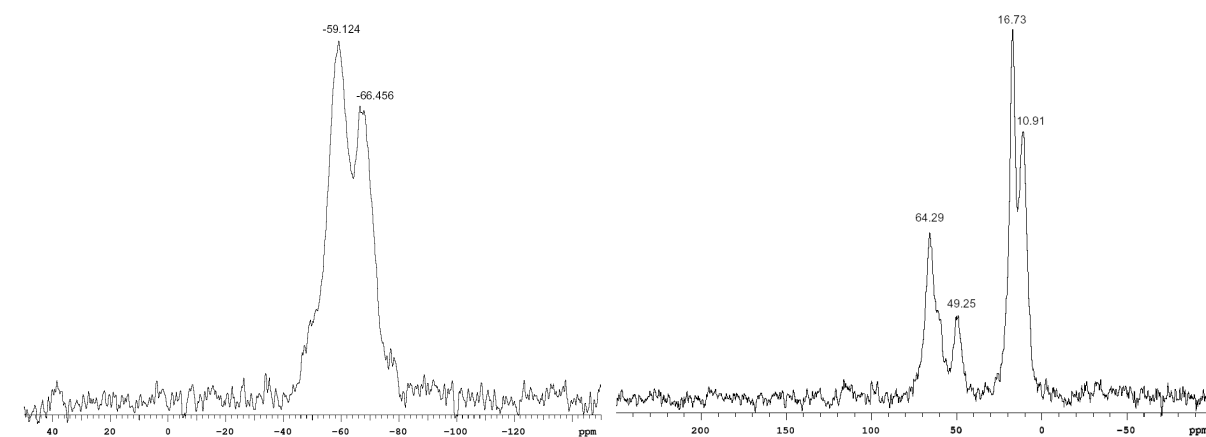
Solid state NMR spectra of materials **B**, **C**, **D** and **E**



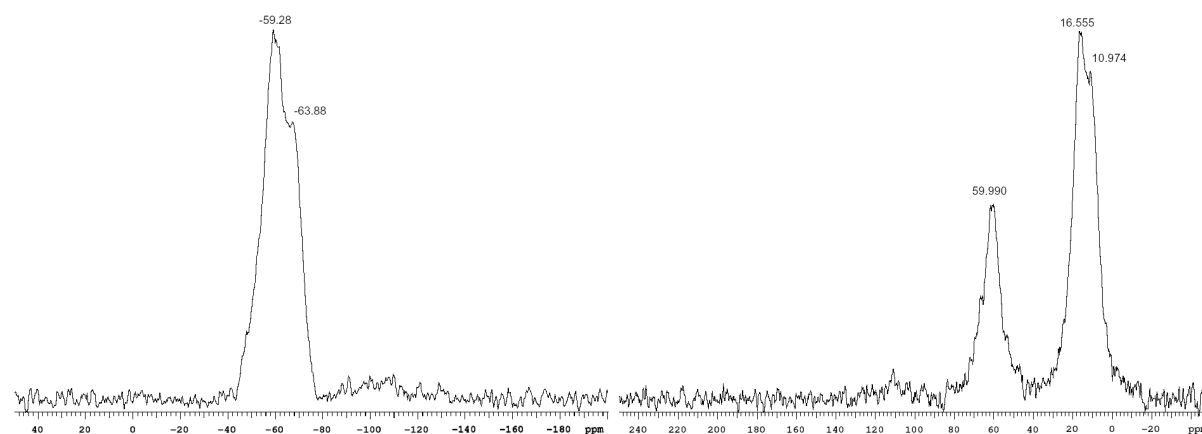
^{29}Si OP MAS NMR spectrum (left) and ^{13}C CP MAS NMR spectrum (right) of material **B**, obtained by hydrolysis-polycondensation of the amine precursor **1** under basic reaction conditions in the presence of cationic surfactant (CTAB)



^{29}Si OP MAS NMR spectrum of material **C**, obtained by hydrolysis-polycondensation of the precursor **1** under acidic reaction conditions in the presence of neutral surfactant (P123)



^{29}Si OP MAS NMR spectrum (left) and ^{13}C CP MAS NMR spectrum (right) of material **D**, obtained by hydrolysis-polycondensation of the ammonium precursor **2**



^{29}Si OP MAS NMR spectrum (left) and ^{13}C CP MAS NMR spectrum (right) of material **E**, obtained by hydrolysis-polycondensation of the ammonium precursor **3**