

Supplementary Information

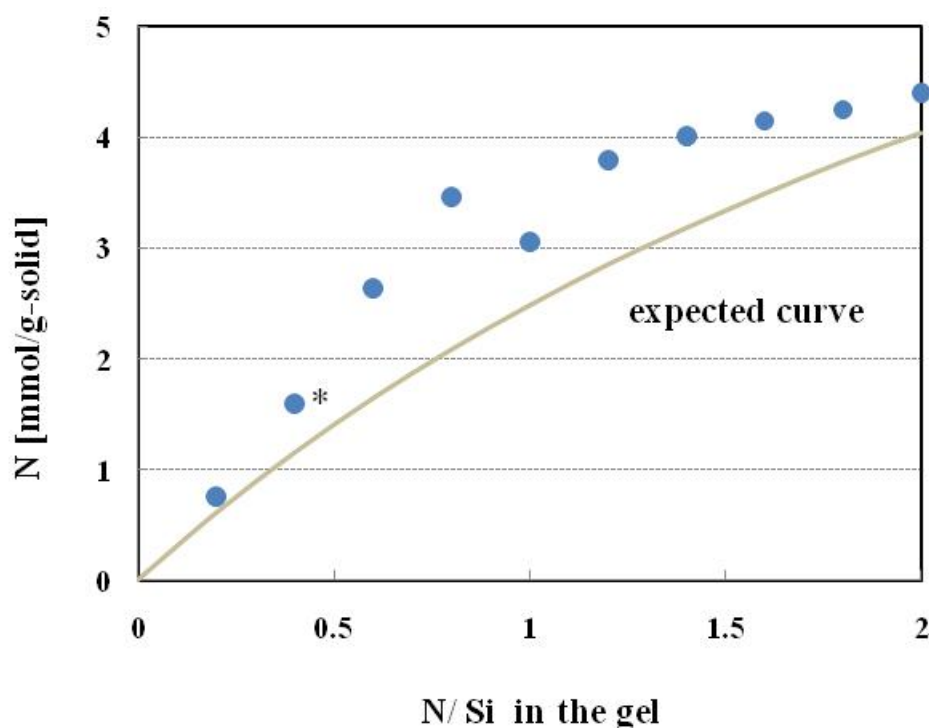


Fig. S1 Nitrogen content measured by elemental analysis is plotted against N/ Si ratio, i.e. $2[\text{AeAPTES}]/([\text{AeAPTES}]+[\text{TEOS}])$, in the sol mixture. The expected curve is calculated for the composition $(\text{C}_{16}\text{SA-NH}_2\text{C}_2\text{H}_4\text{NHC}_3\text{H}_6\text{SiO}_{1.5})_m(\text{C}_{16}\text{OH}-(\text{HO})\text{SiO}_{1.5})_n$ where m-n is the mixing ratio of AeAPTES and TEOS. See text.

*: The N content in S₂₋₈ is based on the weight loss in thermogravimetry.

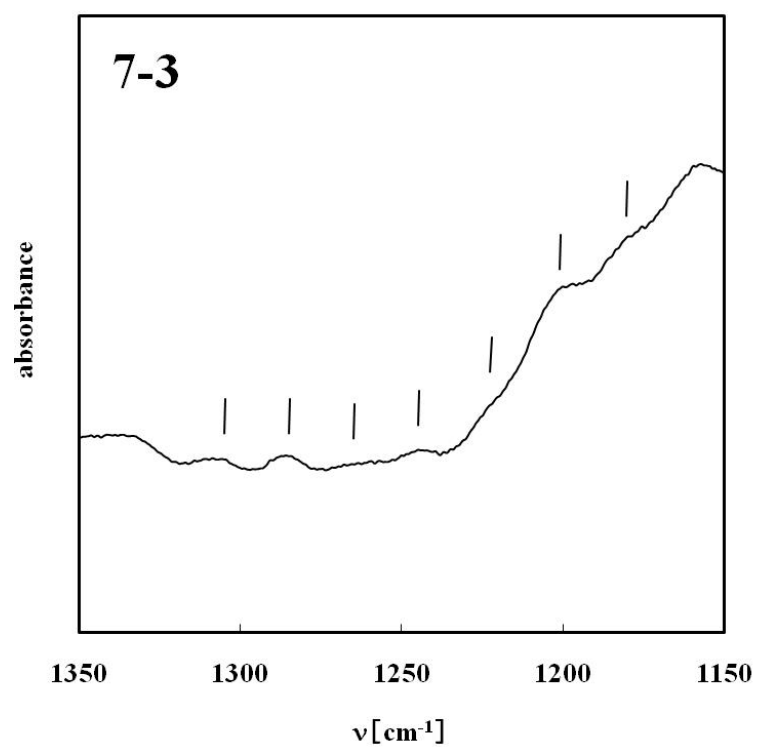


Fig. S2 Fourier transform IR spectrum of lamellar solid S₇₋₃.

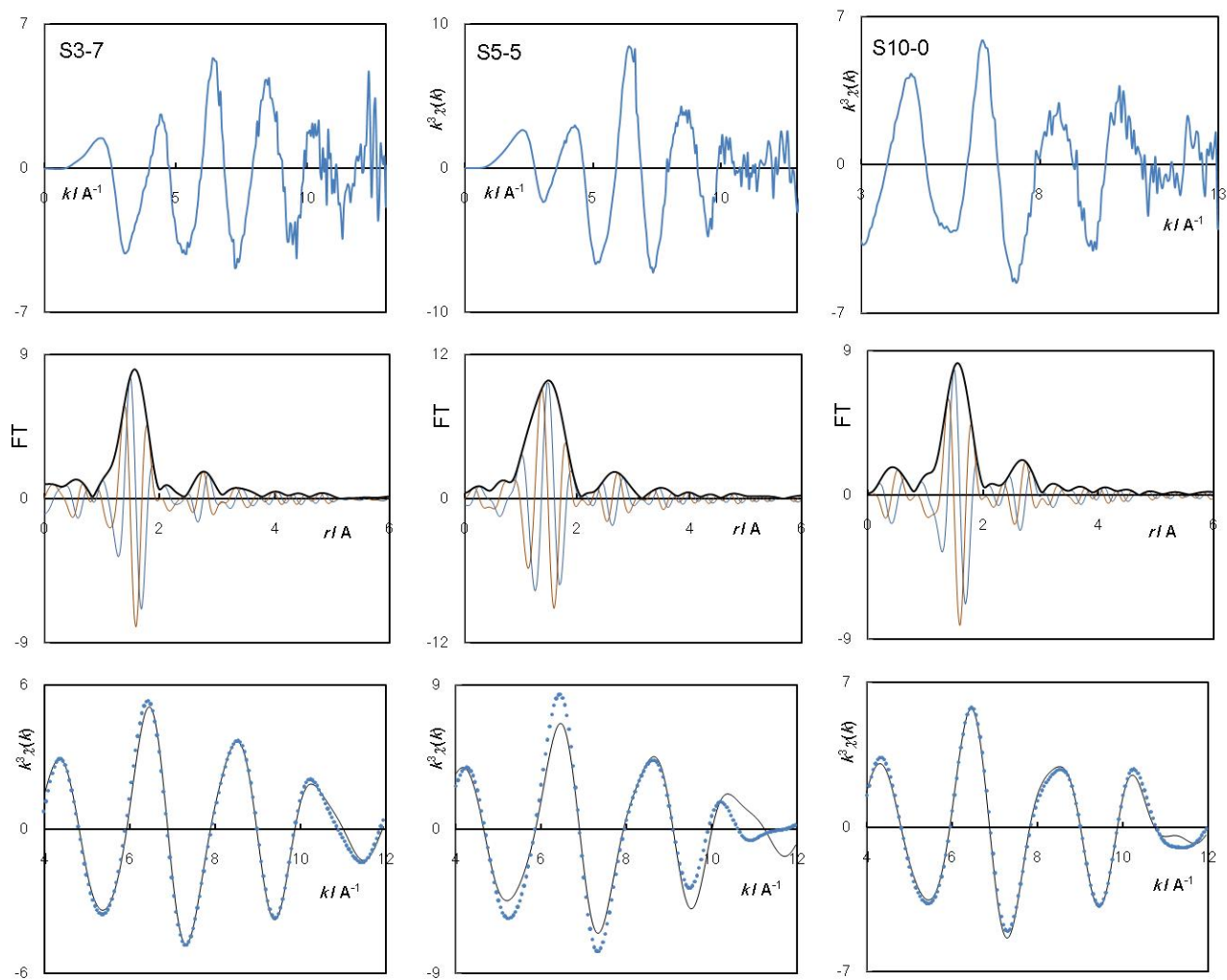


Fig. S3 Cr K edge EXAFS oscillations, their Fourier transforms and curve-fittings of lamellar solids S₁₀₋₀, S₅₋₅ and S₃₋₇ after the adsorption of CrO₄²⁻.