

Supporting Information for:

Vibrational evidence for the “missing link” in structural kinship between kanemite and FSM-16 mesoporous silica

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1. XRD analysis

XRD analysis confirms that the desired structures were obtained (Fig. S1). The XRD pattern of kanemite, shown in Fig. S1 a), is in a good agreement with the relevant JCPDS file (25-1309). X-ray patterns of FSM-16 and MCM-41 are presented in Fig. S1 b). Each contains a series of diffraction peaks corresponding to 100, 110, 200 and 210 planes of hexagonal lattice, indicating that well ordered mesoporous silicas were obtained.

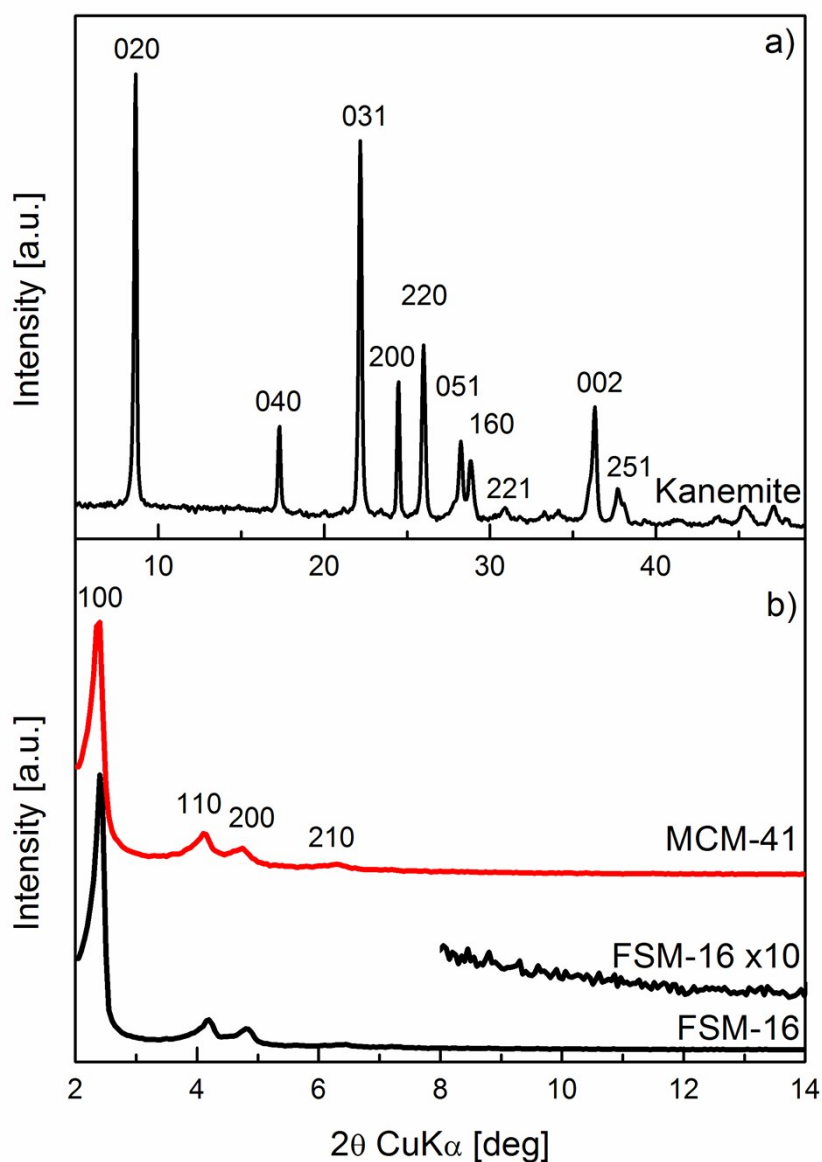


Fig. S1 XRD pattern of a) kanemite, b) FSM-16 and MCM-41 (amplified pattern of FSM-16 has been added)

2. FTIR spectroscopy

Infrared spectra were measured on a Bio-Rad FTS-60V spectrometer. Spectra were collected after 256 scans at 4 cm^{-1} resolution. Samples were prepared by the standard KBr pellets technique. Low temperature spectra were recorded at ca. 10 K using the helium cryogenic refrigeration system (APD Cryogenics, Ins.).