Alkali metal cation doped Al-SBA-15 for carbon dioxide adsorption: Electronic supplementary information

Arnošt Zukal, Jana Mayerová and Jiří Čejka*

J. Heyrovský Institute of Physical Chemistry, Academy of Sciences of the Czech Republic, v.v.i., Dolejškova 3, CZ-182 23 Prague 8, Czech Republic. E-mail: jiři.cejkal@jh-inst.cas.cz

Figure S1. Scanning electron image of starting sample SBA-15.

Figure S2. Scanning electron image of the sample Al-SBA-15.
Figure S3. Nitrogen adsorption isotherms at -196 °C for starting SBA-15 silica and modified samples. (The isotherms for modified samples are offset vertically by 400, 600, 800, 1000, and 1200 cm³/g STP.)

Figure S4. Adsorption isotherms of carbon dioxide at 20 °C on Al-SBA-15/Na⁺ measured immediately after nitrogen isotherm (○) and after next five adsorption/desorption cycles (□).
Figure S5. Adsorption isosteres of carbon dioxide on sample Al-SBA-15/K⁺. Points were calculated by numerical interpolation, lines represent linear fit. All the isosteres are marked with corresponding amount adsorbed in cm³ g⁻¹ STP.