

## **Characterization of mesoporous carbons synthesized with SBA-16 silica template**

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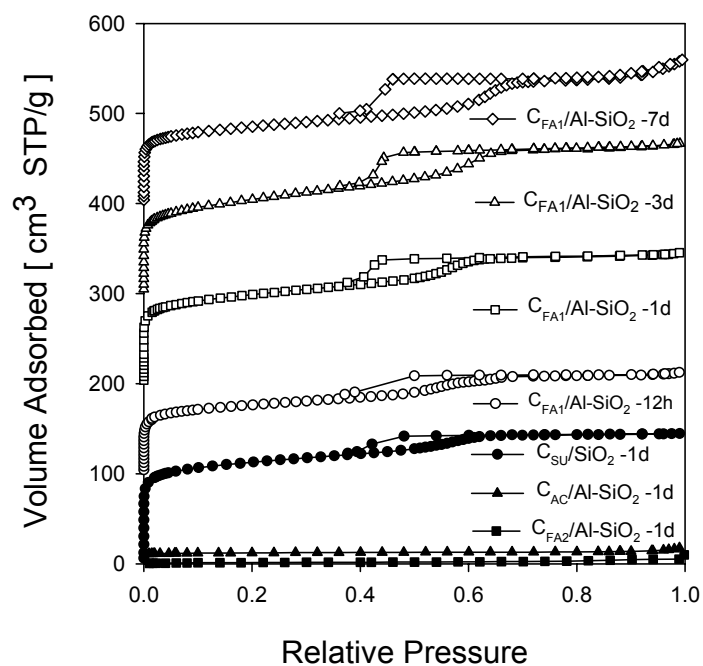
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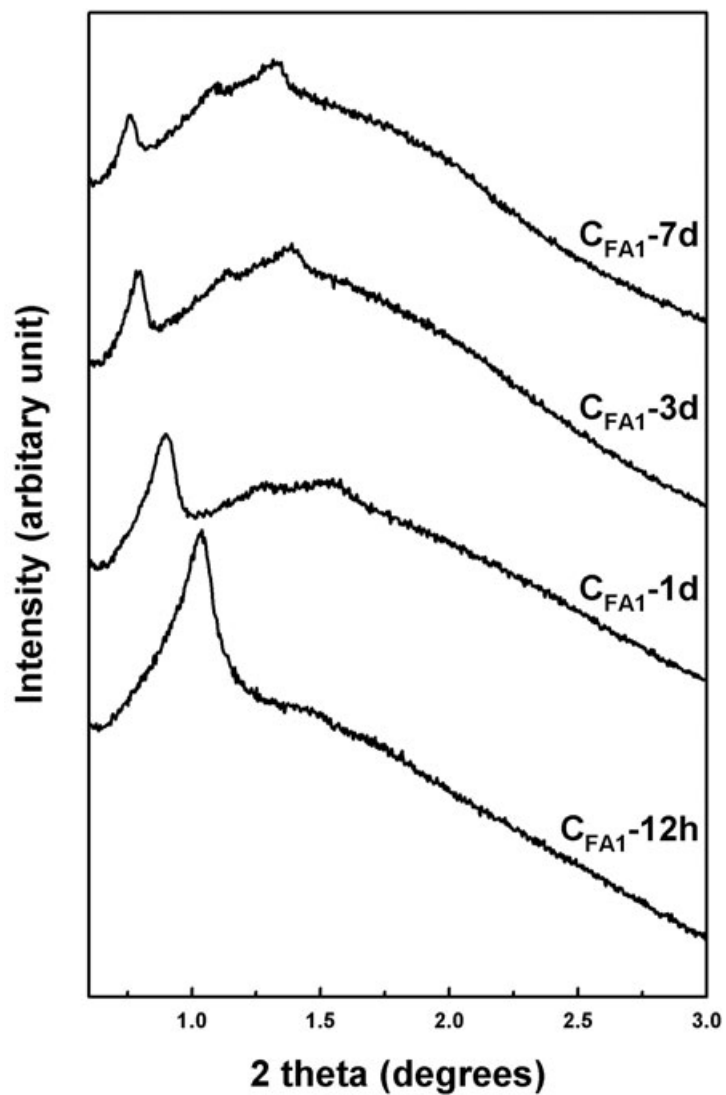
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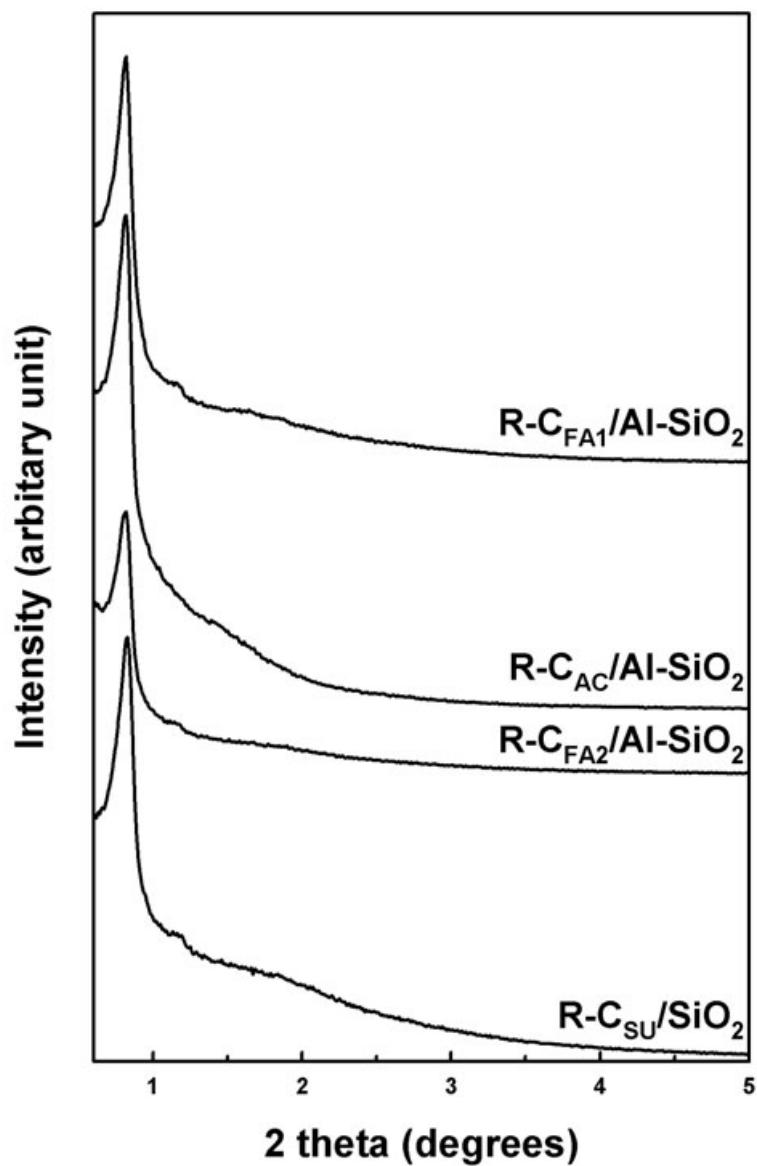
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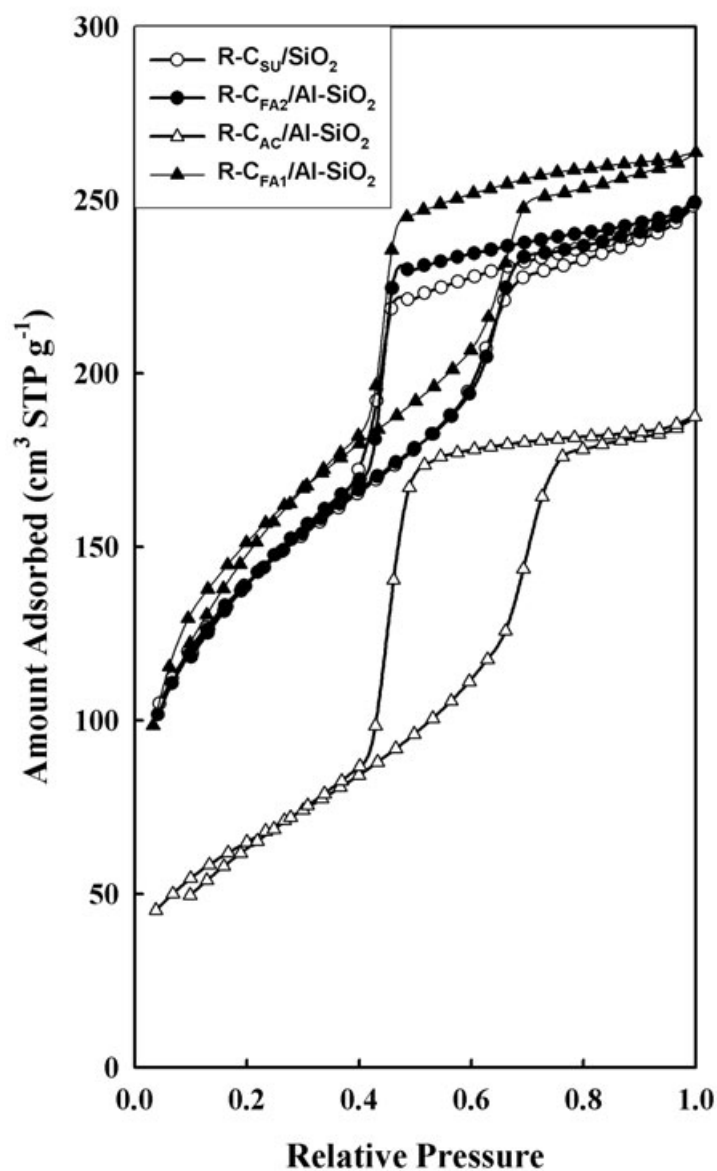
**Fig. 1S** Nitrogen adsorption isotherms for the SBA-16/carbon composites; each isotherm curve, except the first and second ones, was offset vertically by 100 cm<sup>3</sup> STP/g; the second one was offset by 10 cm<sup>3</sup> STP/g.



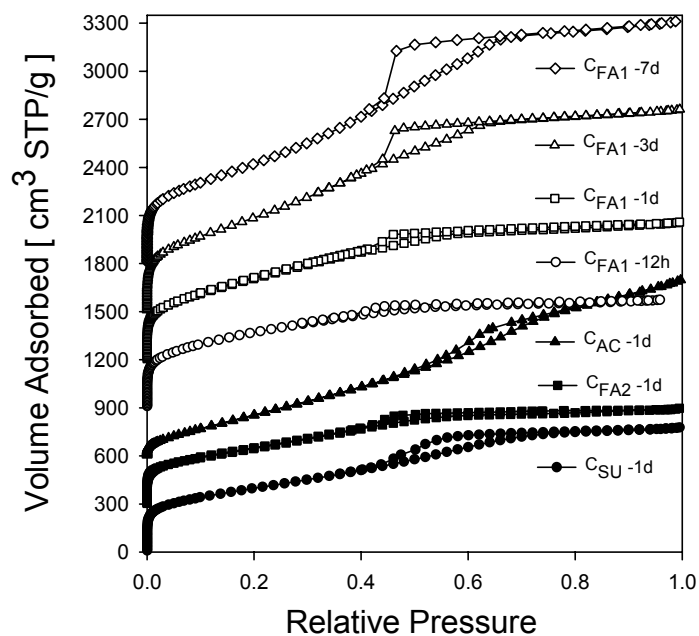
**Fig. 2S** XRD patterns for the  $C_{FA1-t}$  carbons synthesized from the SBA-16 templates obtained by using different time of the hydrothermal treatment.



**Fig. 3S** XRD patterns for the recovered SBA-16 samples obtained from the composites after the carbon was burned out at 873 K for 5 hours. The samples are denoted R-X, where R stands for recovered silica sample and X = C<sub>SU</sub>/SiO<sub>2</sub>, C<sub>FA2</sub>/Al-SiO<sub>2</sub>, C<sub>AC</sub>/Al-SiO<sub>2</sub>, and C<sub>FA1</sub>/Al-SiO<sub>2</sub>.



**Fig. 4S** Nitrogen adsorption-desorption isotherms for the recovered SBA-16 samples obtained from the composites after the carbon was burned out at 873 K for 5 hours. The samples are denoted R-X, where R stands for recovered silica sample and X = C<sub>SU</sub>/SiO<sub>2</sub>, C<sub>FA2</sub>/Al-SiO<sub>2</sub>, C<sub>AC</sub>/Al-SiO<sub>2</sub>, and C<sub>FA1</sub>/Al-SiO<sub>2</sub>.



**Fig. 5S** Nitrogen adsorption isotherms for the carbons; each isotherm curve, except the first one, was offset vertically by 300 cm<sup>3</sup> STP/g.