

Fabrication of Mesoporous Al-SBA-15 as Methylene Blue Capturer *via* a Spontaneous Infiltration Route

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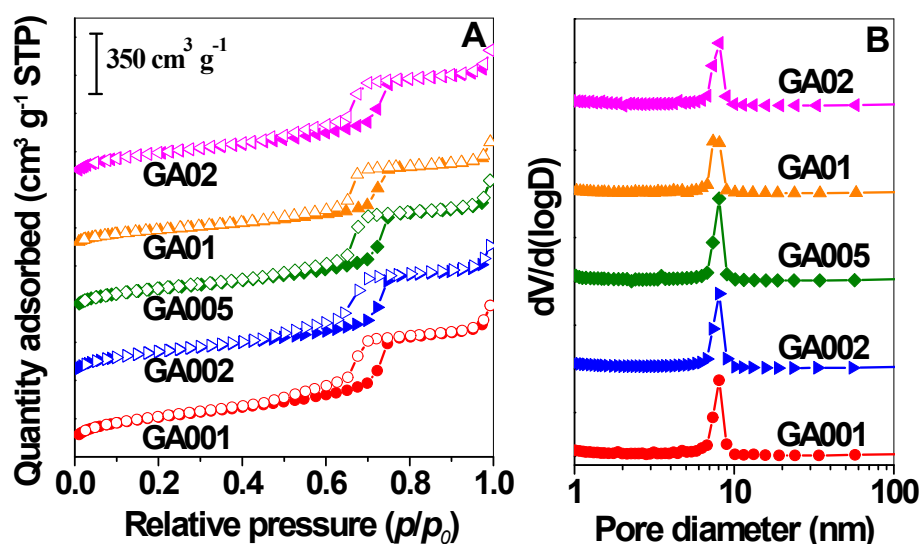


Fig. S1 N₂ adsorption–desorption isotherms (A) and pore size distributions (B) of the 6-runs recycled mesoporous GA_x materials. Curves are offset for clarity.

Table S1. Textural properties of the 6-runs recycled mesoporous GA_x materials.

Sample	Al(td)/ Al(oh)	S_{BET} $\text{m}^2 \cdot \text{g}^{-1}$	V_{p} $\text{cm}^3 \cdot \text{g}^{-1}$	V_{mic} $\text{cm}^3 \cdot \text{g}^{-1}$	D_{p} nm
GA001	8.97	725	1.03	0.06	5.68
GA002	7.46	695	0.99	0.07	5.70
GA005	5.51	633	0.95	0.05	6.00
GA01*	5.23	484	0.77	0.02	6.36
GA02	1.54	664	0.95	0.05	5.72

S_{BET} : BET specific surface area; V_{p} : total pore volume; V_{mic} : micropore volume; D_{p} : the geometrical pore diameter calculated from $D_{\text{p}} = 4000V_{\text{p}}/S_{\text{BET}}$.

*: Textural property of the recycled GA01 sample was detected for twice and the repeated result is similar to the data listed in the Table S1. BET surface area, pore volume and micropore volume for GA01 sample were much lower than those from the other GA_x samples, which is probably due to the existence of Al species with a NMR peak at 12 ppm existing in GA01. Detailed research about this phenomenon still needs to be carried out in the future.

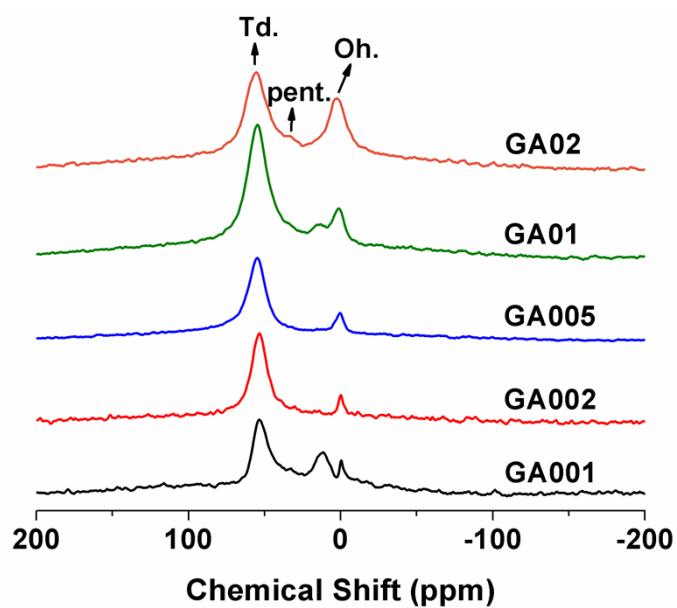


Fig. S2 Solid-state ^{27}Al NMR spectra of the 6-runs recycled mesoporous GA x materials.