Electronic Supplementary Material (ESI) for RSC Advances.

A novel magnetic calcium silicate/graphene oxide composite material for selective adsorption of acridine orange from aqueous solutions

Huan Wang, [a b] Youning Chen,[b] Yinmao Wei[a*]

[a] Key Laboratory of Synthetic and Natural Function Molecule Chemistry of Ministry of Education, College of Chemistry & Materials Science, Northwest University, Xi'an 710069, China. Email: ymwei@nwu.edu.cn

Fax: +86-29-88302604; Tel.: +86-29-88302604

[b] College of Chemistry and Chemical Engineering, Xianyang Normal College, Xianyang 712000,China

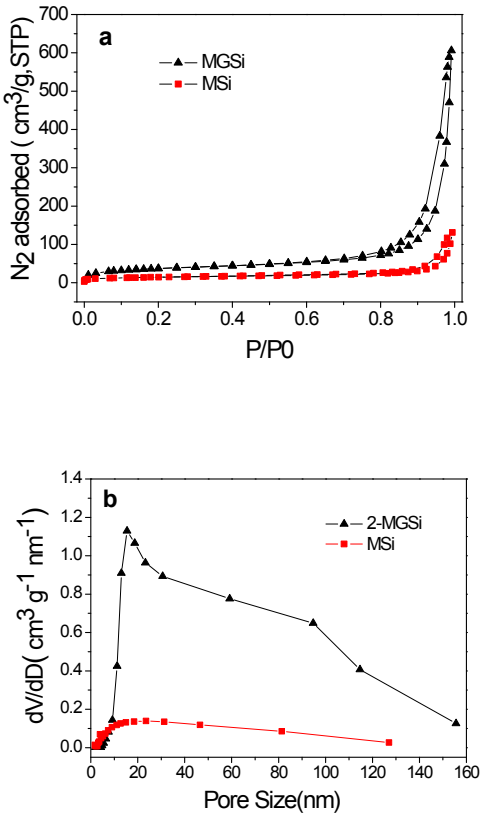


Fig. S1 (a) Nitrogen adsorption–desorption isotherm and

(b) BJH pore size distribution of MSi and 2-MGSi.

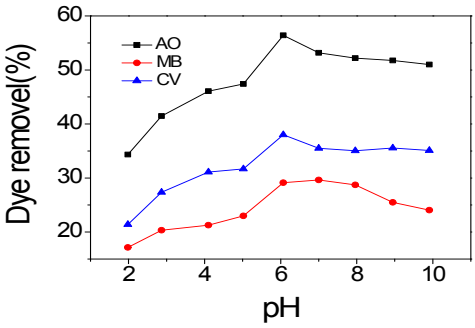
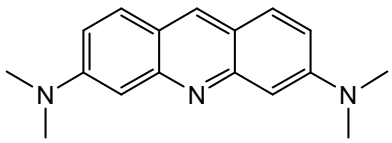
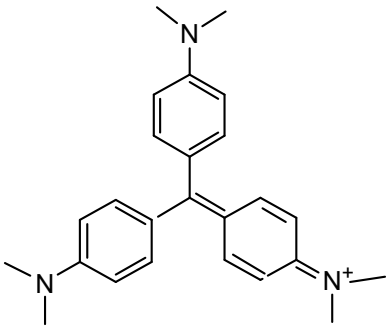


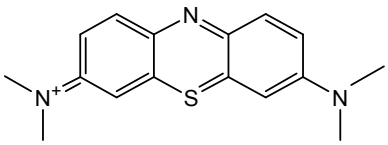
Fig. S2 Effect of initial pH on the removal of AO, MB and CV onto MGSi in ternary systems



acridine orange



crystal violet



methylene blue

Fig. S3 The chemical structure of acridine orange, methylene blue and crystal violet.

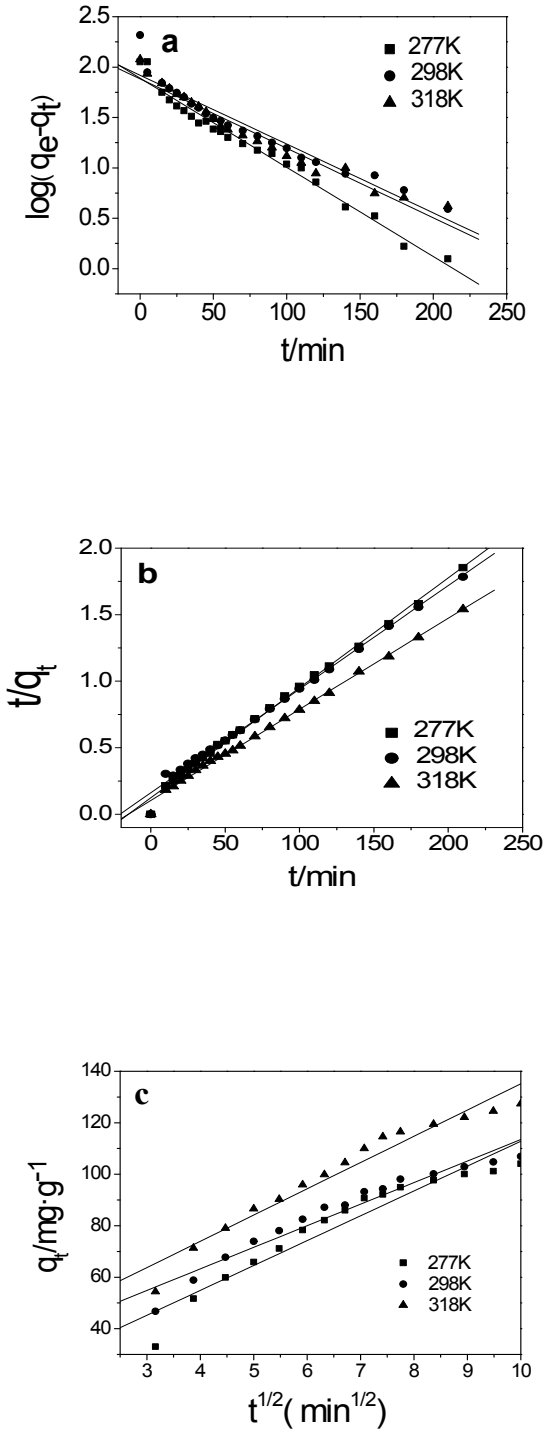


Fig. S4 Kinetics model of AO on MGSi at 277K, 298K and 318K.

a: Pseudo-first-order kinetics model, **b:** Pseudo-second-order kinetics model, **c:** Intra-particle diffusion model

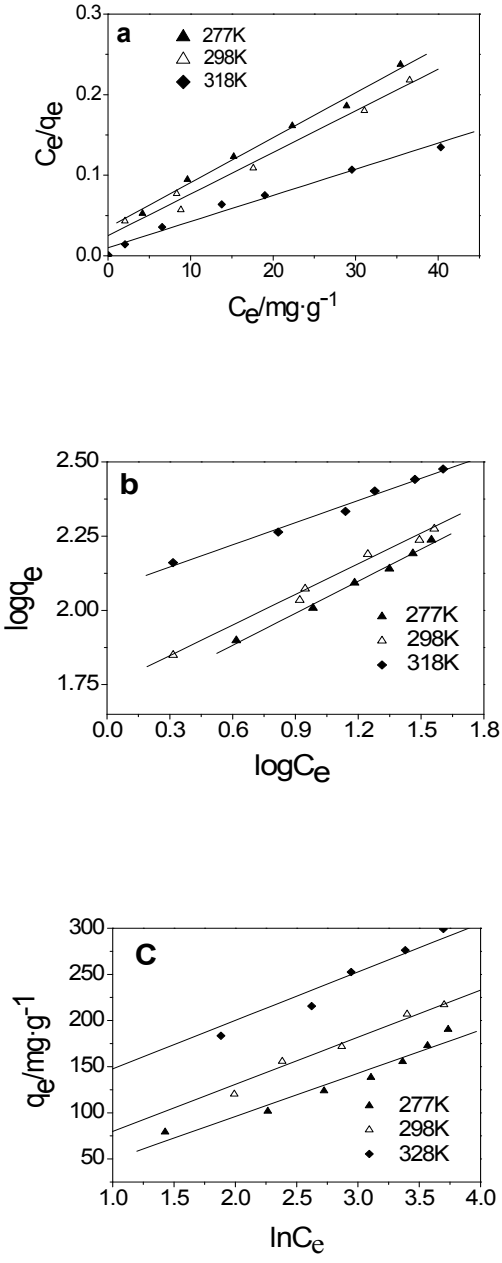


Fig. S5 Isotherm models of AO on MGSi at 277K, 298K and 318K.

a: Langmuir model, **b:** Freundlich model, **c:** Temkin model