

Synthesis of composites based on chitosan and various types of silica phases and their applicability in the adsorption of anionic dyes

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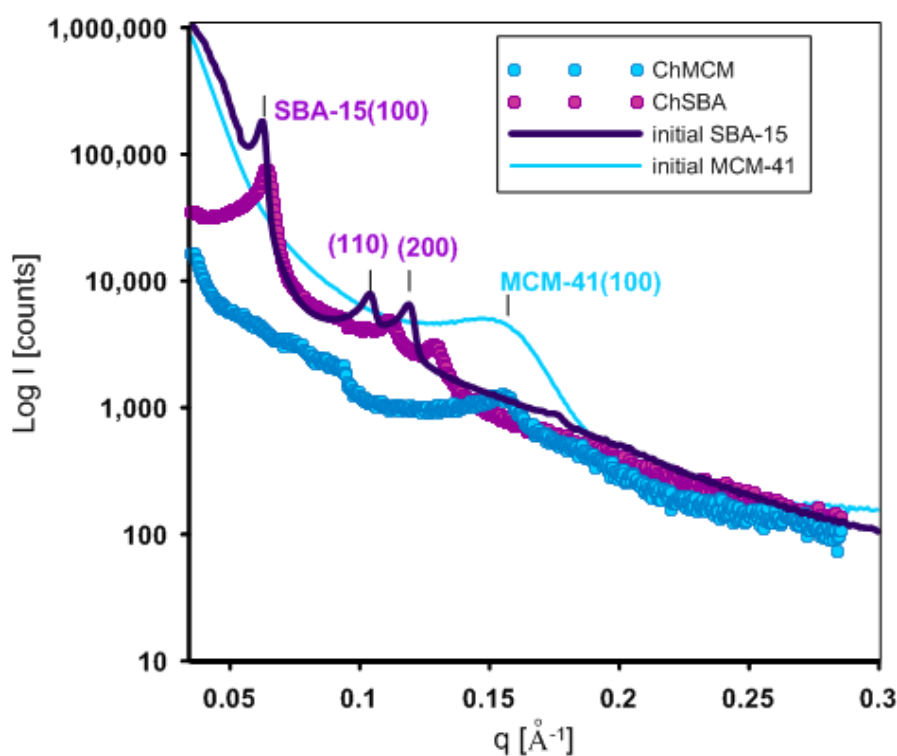


Figure S1. SAXS pattern of chitosan-silica composites ChSBA, ChMCM and initial SBA-15 and MCM-41 components.

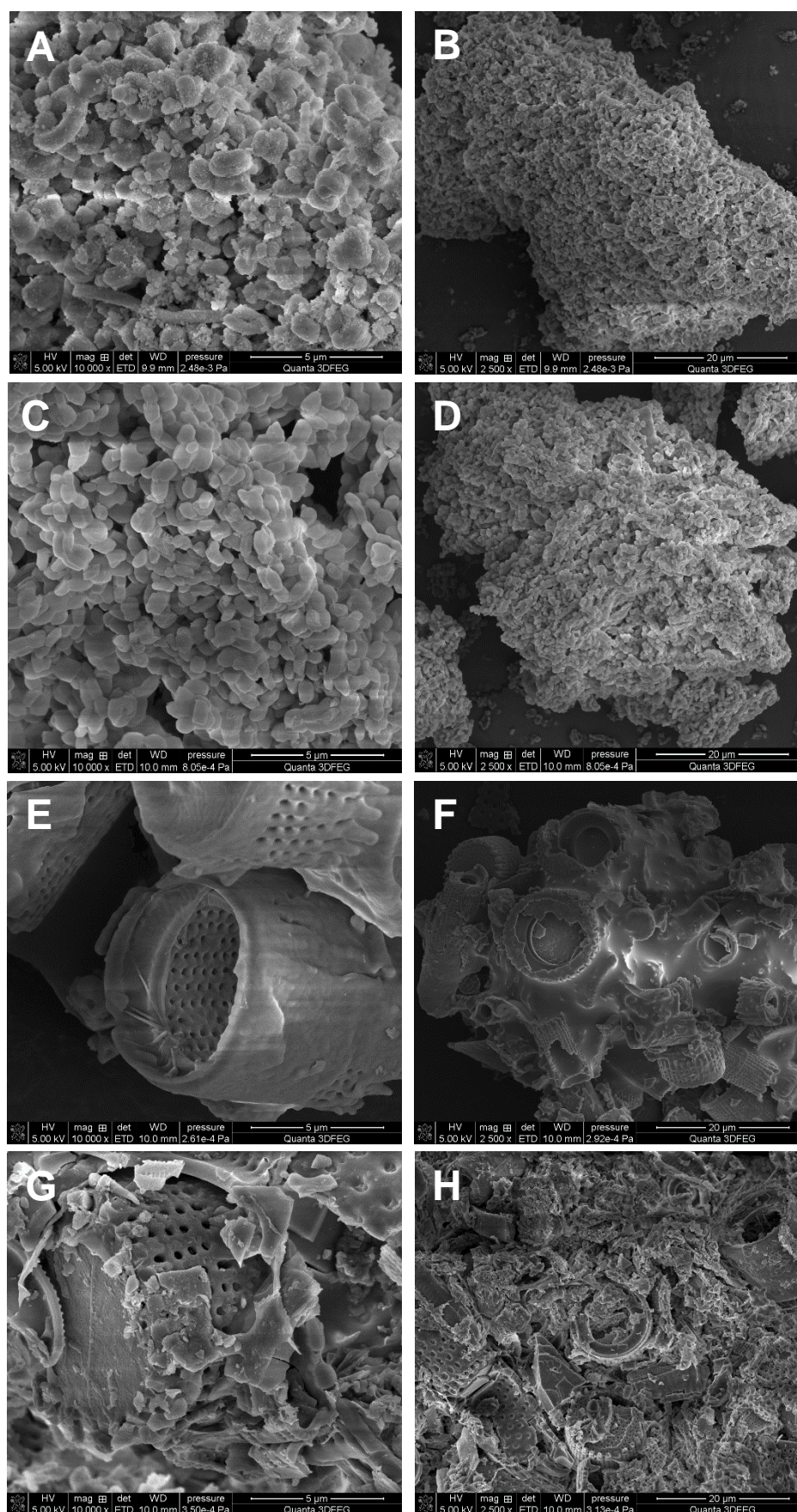
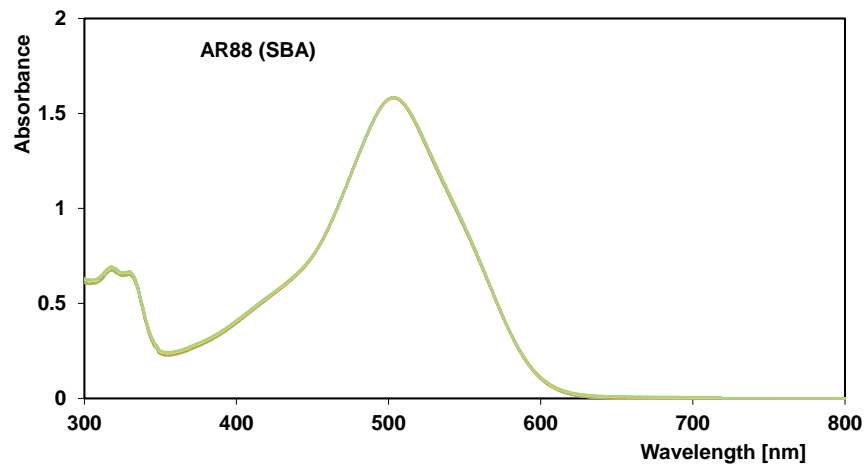
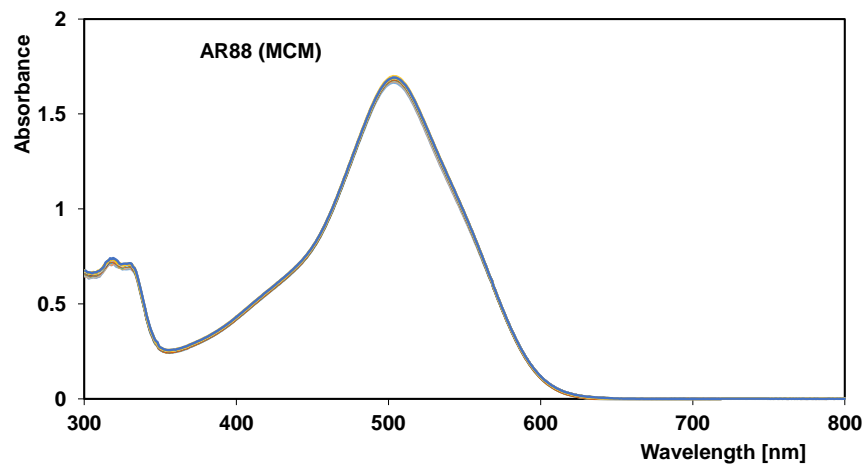


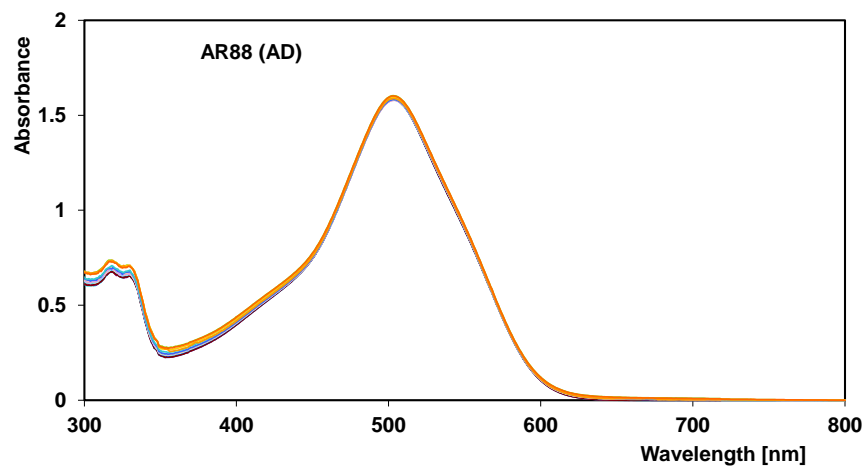
Figure S2. SEM images of chitosan-silica composites: ChMCM (A, B), ChSBA (C, D), ChCD (E, F) and ChAD (G, H).



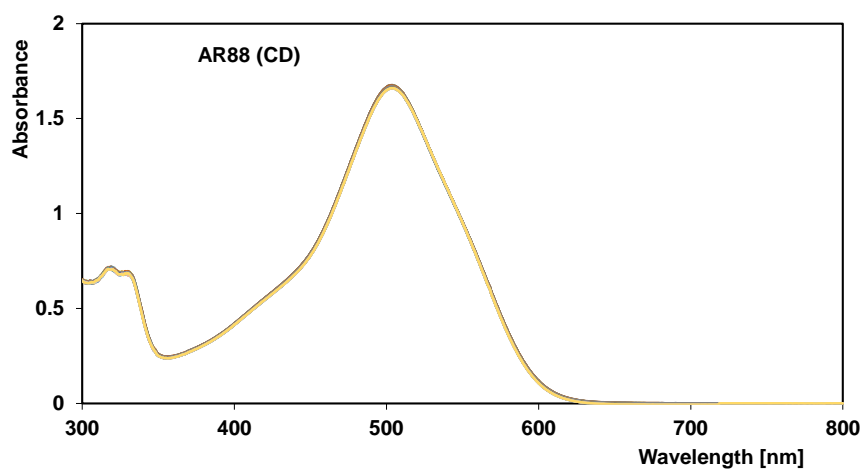
(A)



(B)



(C)



(D)

Figure S3. UV-Vis absorption spectra for AR88 adsorption on mesoporous silica SBA-15 (SBA) (**A**), mesoporous silica MCM-41 (MCM) (**B**), amorphous diatomite (AD) (**C**) and crystalline diatomite (CD) (**D**). (Adsorbent: $m = 0.05$ g; adsorbate solution: $c = 0.076$ mmol/L; $V = 100$ mL; time intervals of measurements: 10x1 min, 10x60 min).

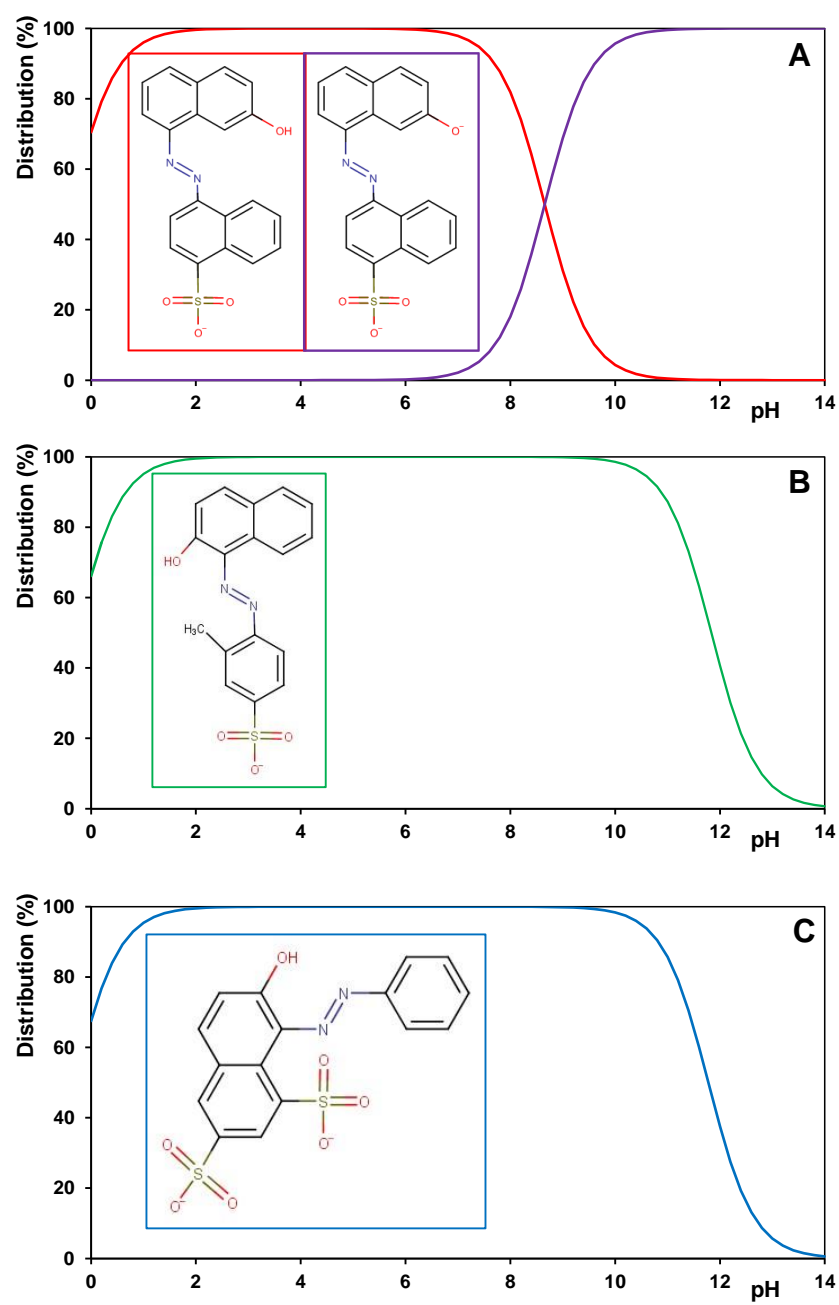


Figure S4. Percentage of the molecular forms of adsorbates under experimental pH for acid red 88 (A), acid orange 8(B), and orange G (C).

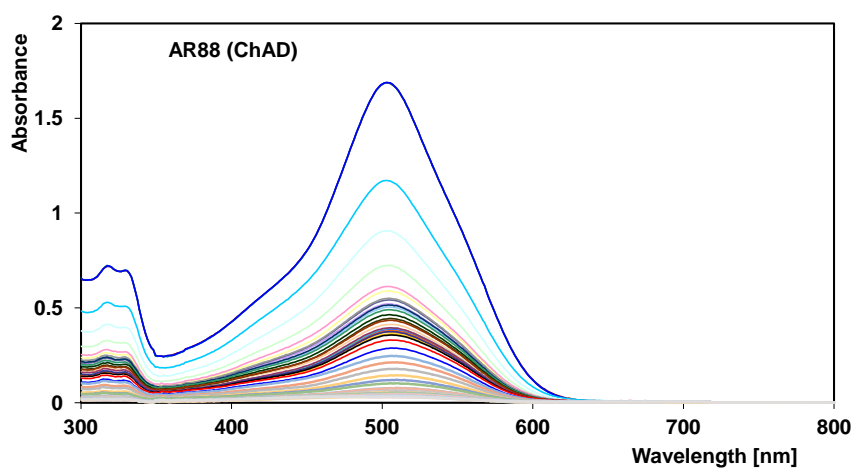


Figure S5. UV-Vis absorption spectra for the exemplary adsorption system AR88 (ChAD). (Adsorbent: $m = 0.05$ g; adsorbate solution: $c = 0.076$ mmol/L; $V = 100$ mL; time intervals of measurements: 10x1 min; 10x3 min; 5x5 min; 5x10 min; 5x20 min; 18x60 min).