

### Supporting information

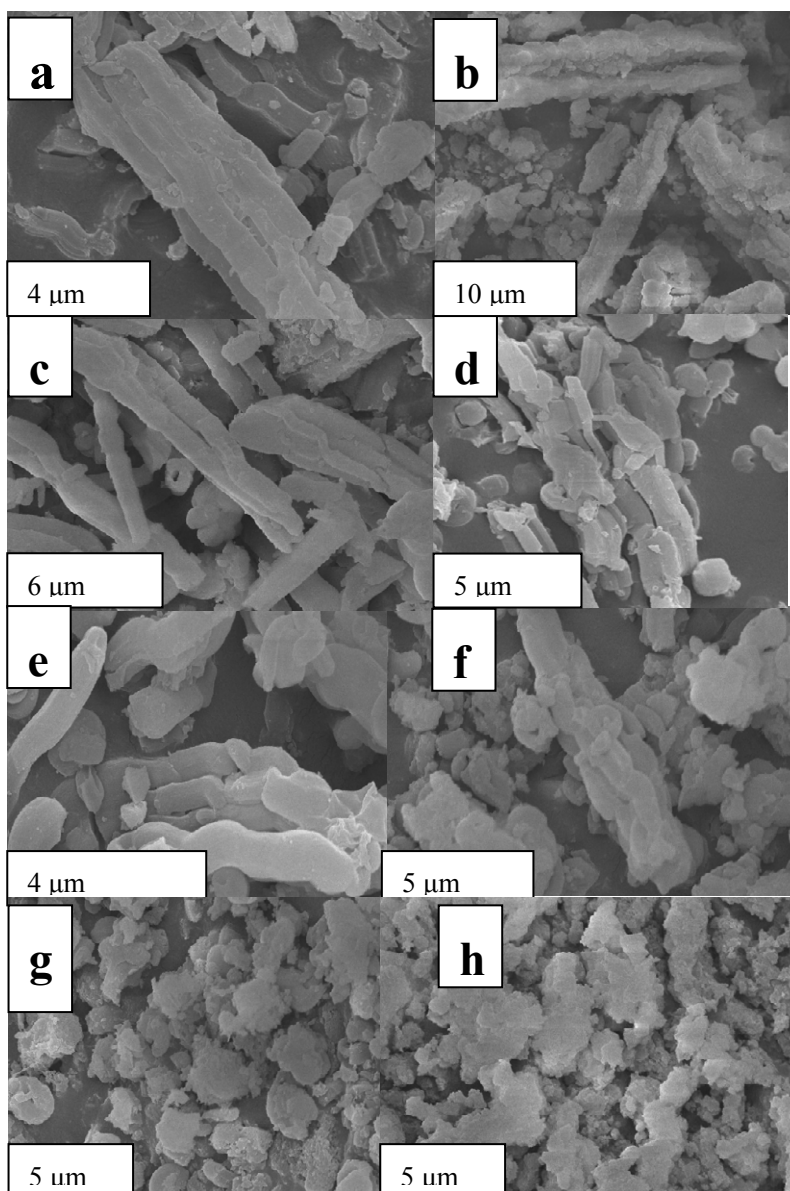


Figure S1. SEM images of the surfactant-free samples (a) SBA-15, (b) PS, (c) AS-100, (d) AS-75, (e) AS-60, (f) AS-45, (g) AS-30 and (h) AS-15.

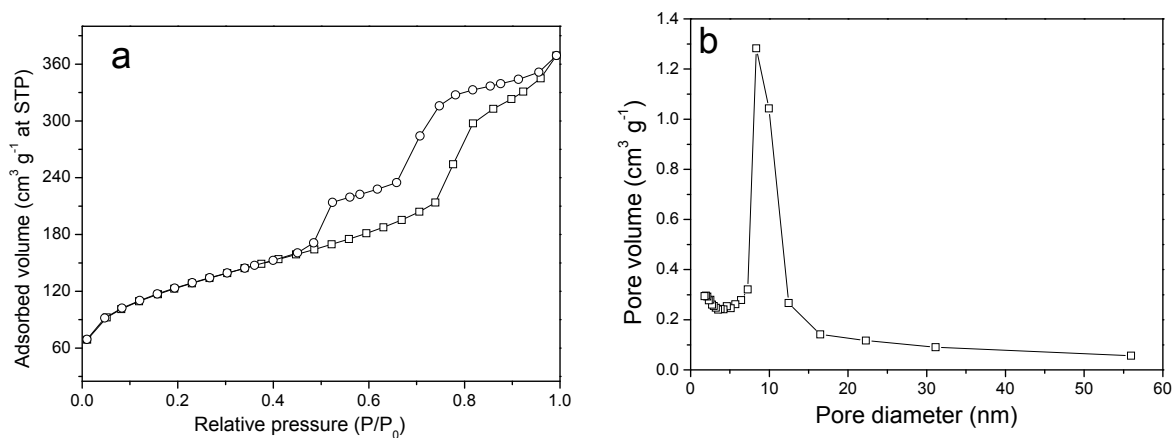


Figure S2. The nitrogen adsorption-desorption isotherms (a) and pore size distribution (b) of AS-30 with heparin in it.

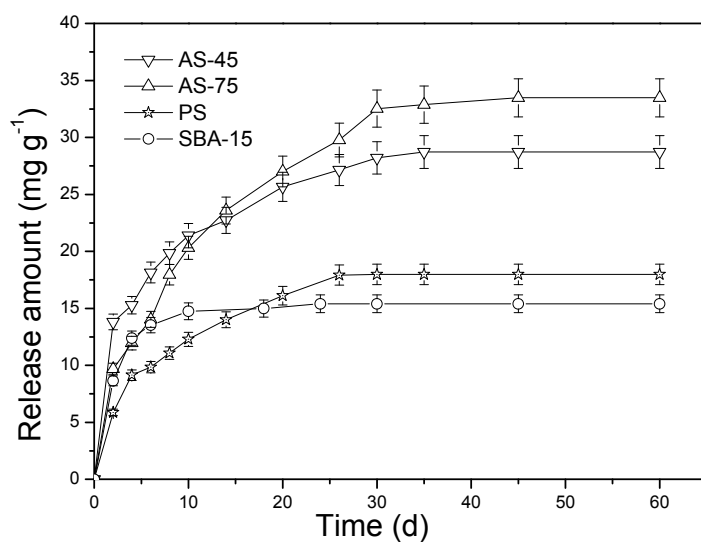


Figure S3. Adsorption isotherms of heparin at 277 K (a) and release profiles (b) from mesoporous materials

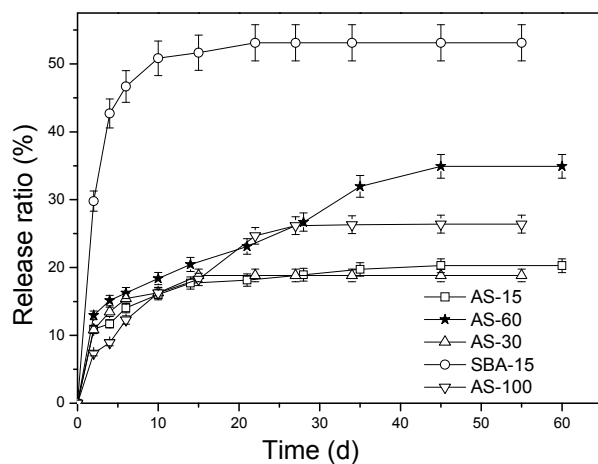


Figure S4. The heparin release ratios of SBA-15 series samples.