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# Highly Selective Separation of Dyes by Using Compressed $CO_2$ and Spherical Polyelectrolyte Brushes

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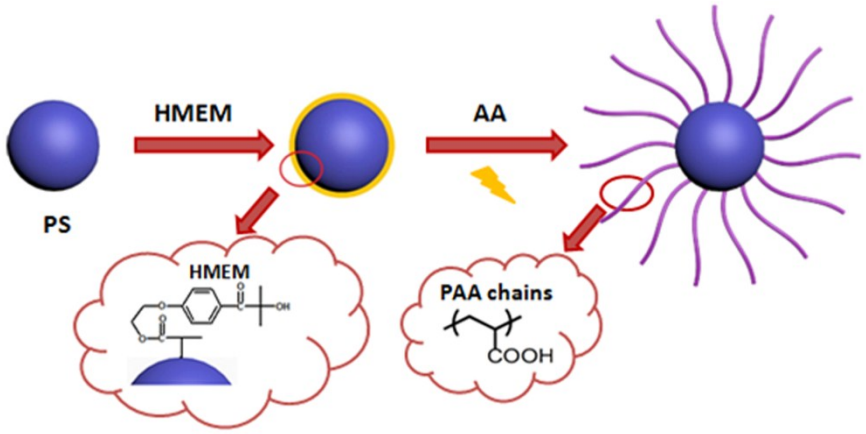


Scheme S1. Synthesis process of PS-PAA.

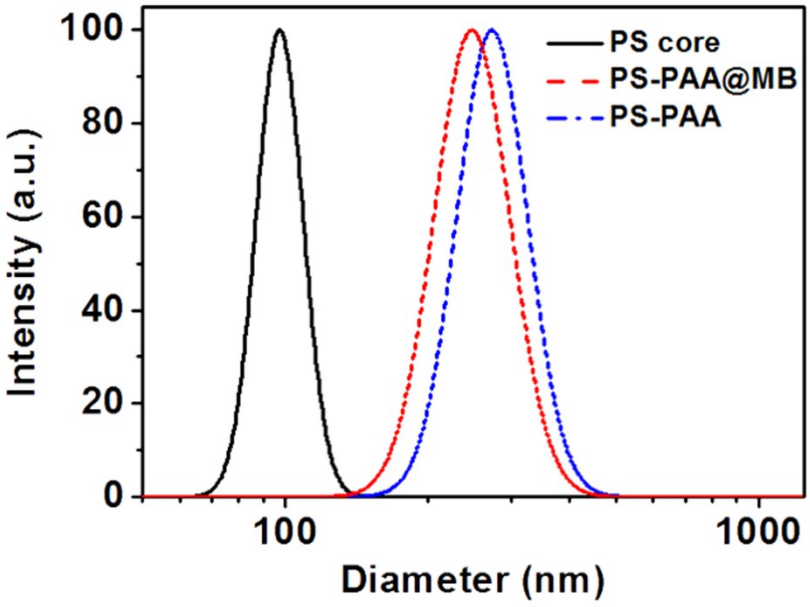


Fig. S1 Diameter of PS core, SPBs and SPBs-MB determined by DLS. Condition: PS core concentration: 200mg/L; PS-PAA concentration: 200mg/L; MB concentration: 3.75mg/L; temperature: 25 °C; stirring time: 1h.

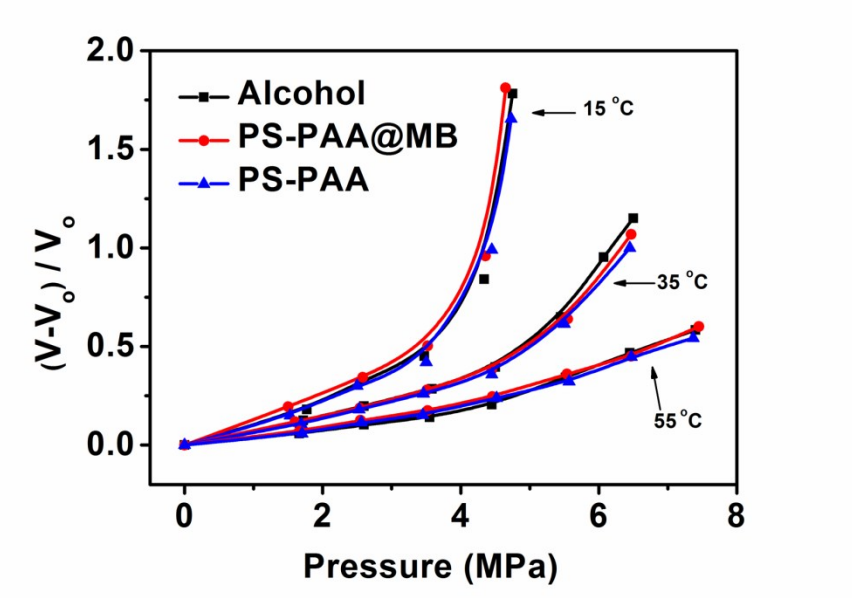


Fig. S2 Dependence of ΔV of different solutions on $CO_2$ pressure at different temperatures. Condition: PS-PAA concentration: 200mg/L; MB concentration: 3.75mg/L; stirring time: 1h.

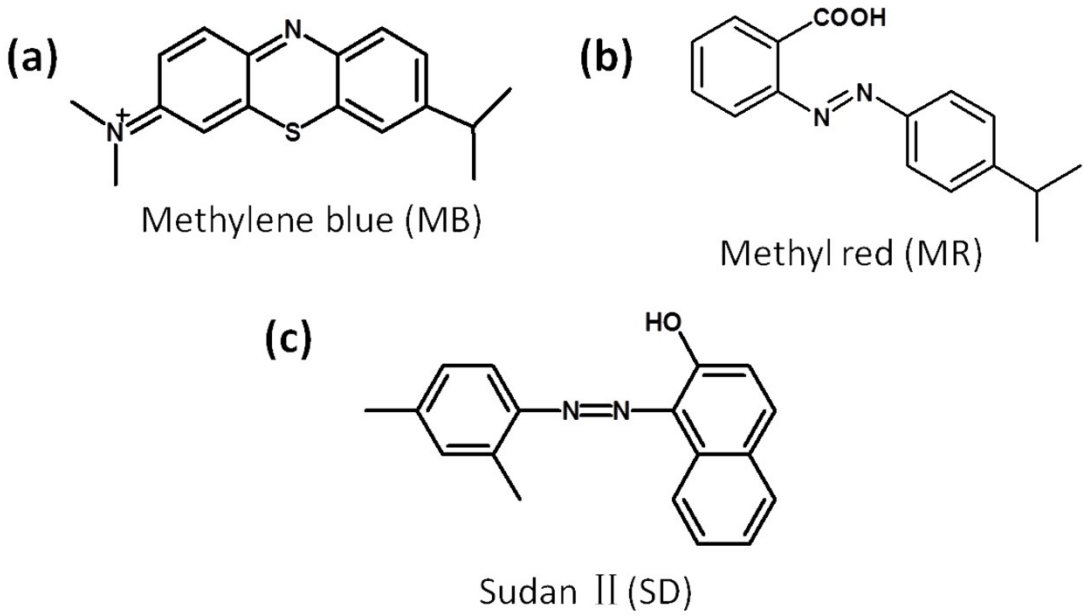


Fig. S3 Chemical structures of cationic dyes (a) methylene blue, anionic dyes (b) methyl red, and neutral dye (c) sudan II.