

## Supporting Information

### **Photonic and magnetic dual responsive molecularly imprinted polymers: preparation, recognition characteristics and properties as novel sorbent for caffeine in complicated samples**

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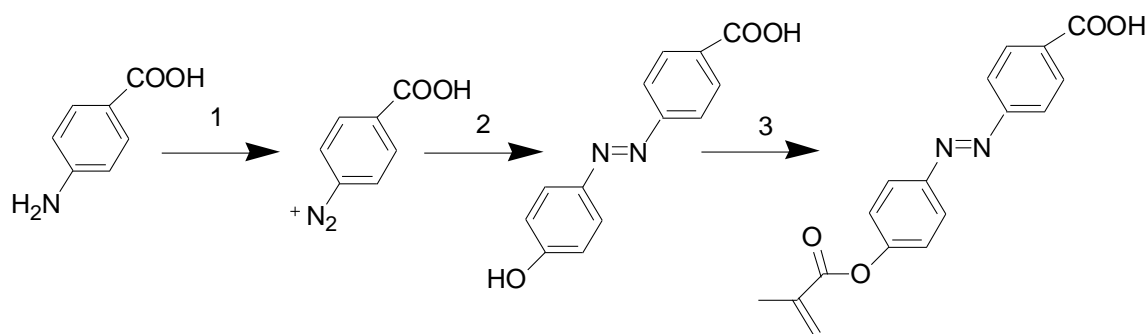
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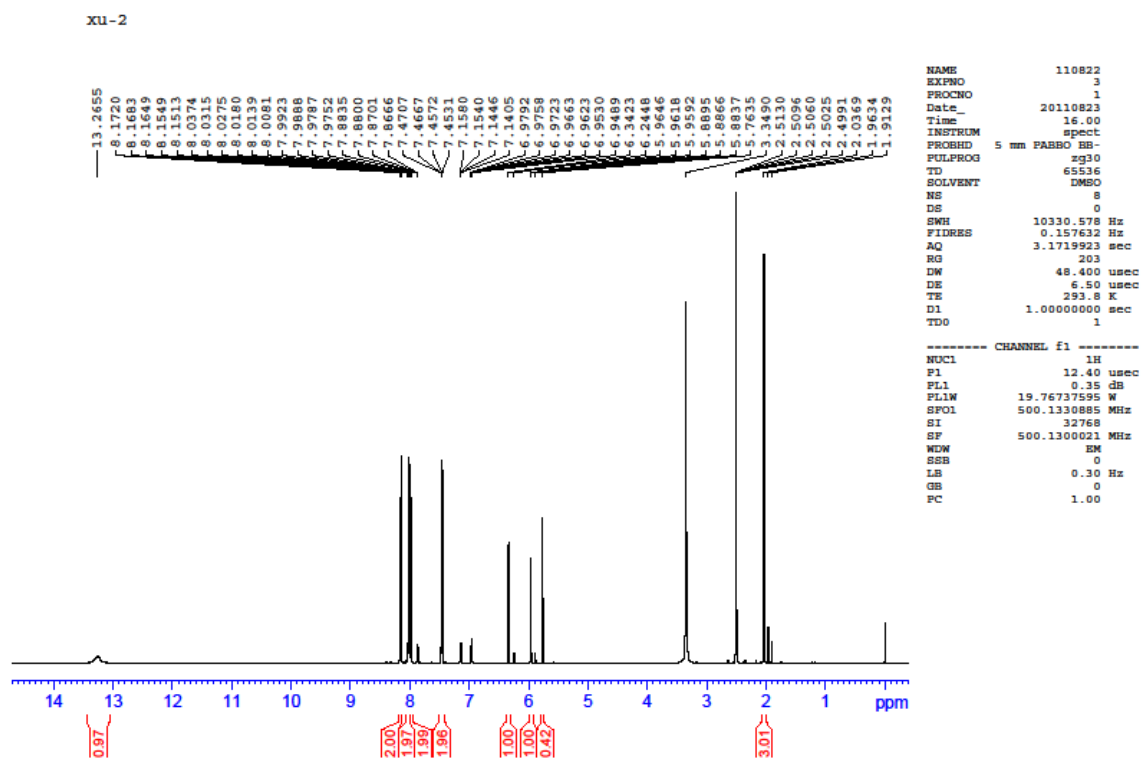
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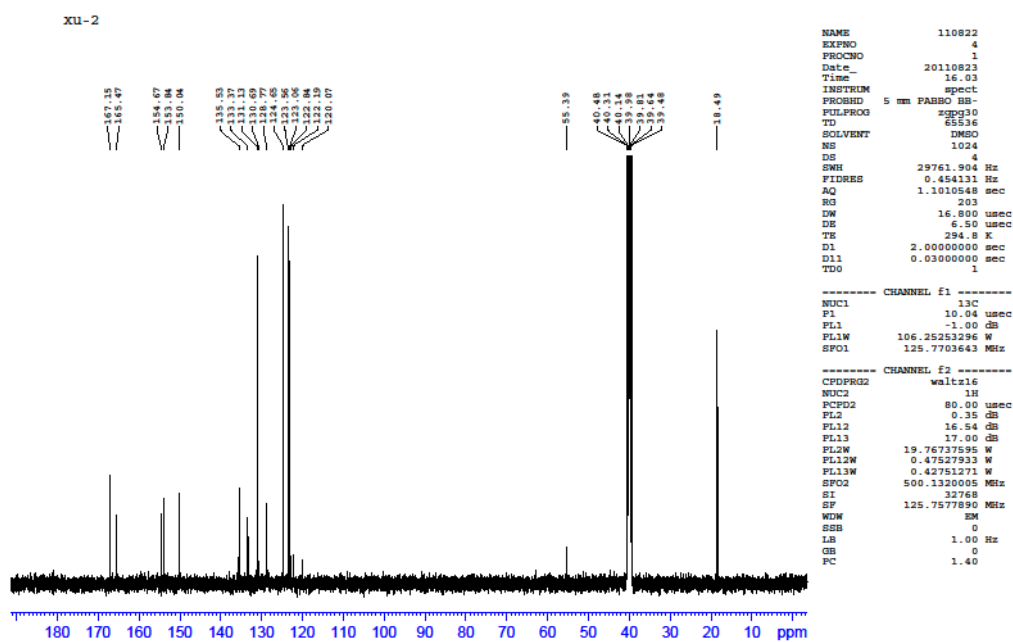
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**Scheme S1.** Synthesis route for the functional monomer 4-[(4-methacryloyloxy)phenylazo]benzoic acid (MPABA). 1)  $\text{NaNO}_2$ , 5 M HCl, 0–3 °C; 2) 3 M NaOH, phenol, 0–3 °C; 3) methacrylic acid anhydride, 4-(dimethylamino)pyridine, triethylamine, 40 °C for 24 h, reflux for 2 h; dry THF.





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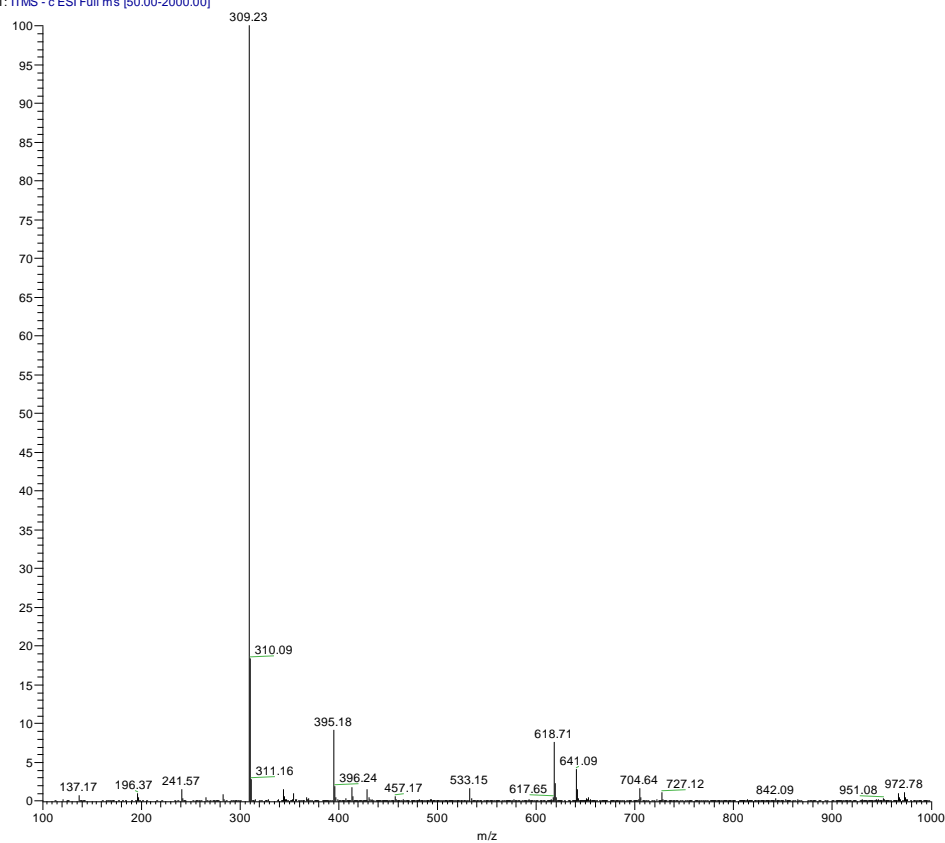
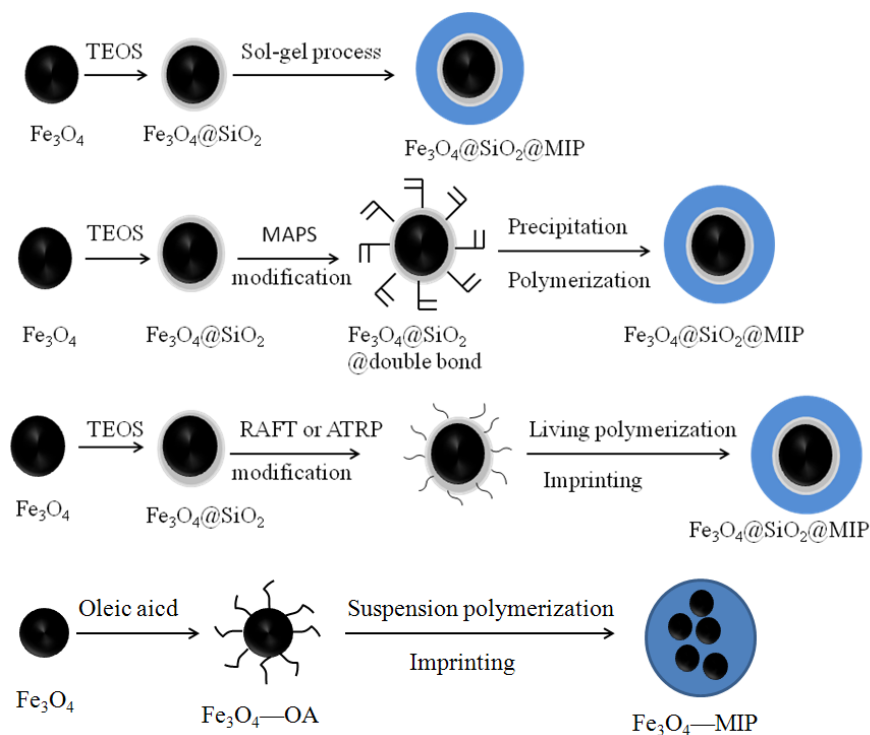
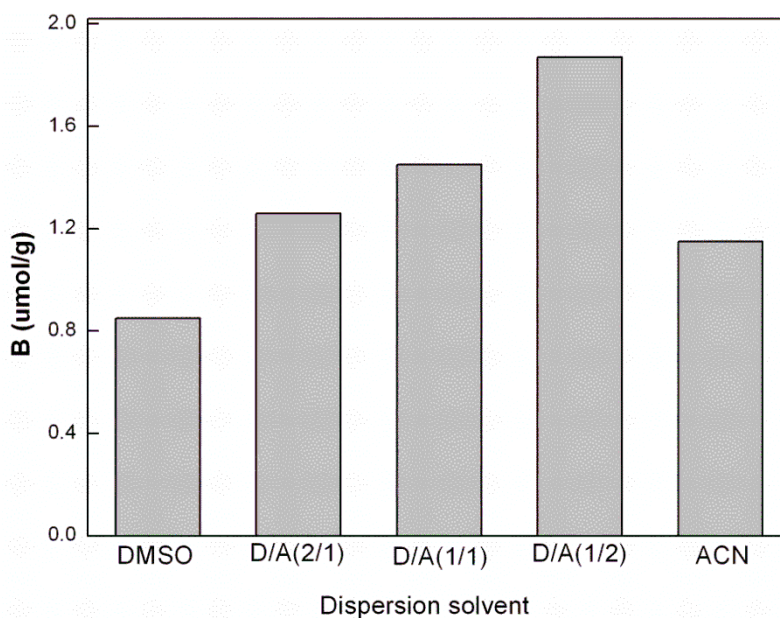


Fig. S1 H-NMR, C-NMR and MS for functional monomer MPABA.



**Scheme S2.** Preparation processes for surface molecular imprinting on magnetic nanoparticles.



**Fig. S2** Effect of dispersion solvent on binding capacity. Experiment conditions:  $\text{Fe}_3\text{O}_4@\text{MIPs}$ , 30 mg;  $C_{\text{caffeine}}$ , 40  $\mu\text{M}$ ; 3 mL dispersion solvent; 25 °C in the dark for 12 h.