Electronic supporting information

A Novel Electrochemical Sensor Modified With a Computer-simulative Magnetic Ion-imprinted Membrane for Identification of Uranyl Ion

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Figure Captions

Figure S1 Optimized conformation of 1H-PPCA, 2-HP, 3-HP, H_2SA, DHP, H_2Pdc, 3-PCA.

Figure S2 The TEM images of (A) Fe_3O_4, (B) Fe_3O_4@SiO_2.

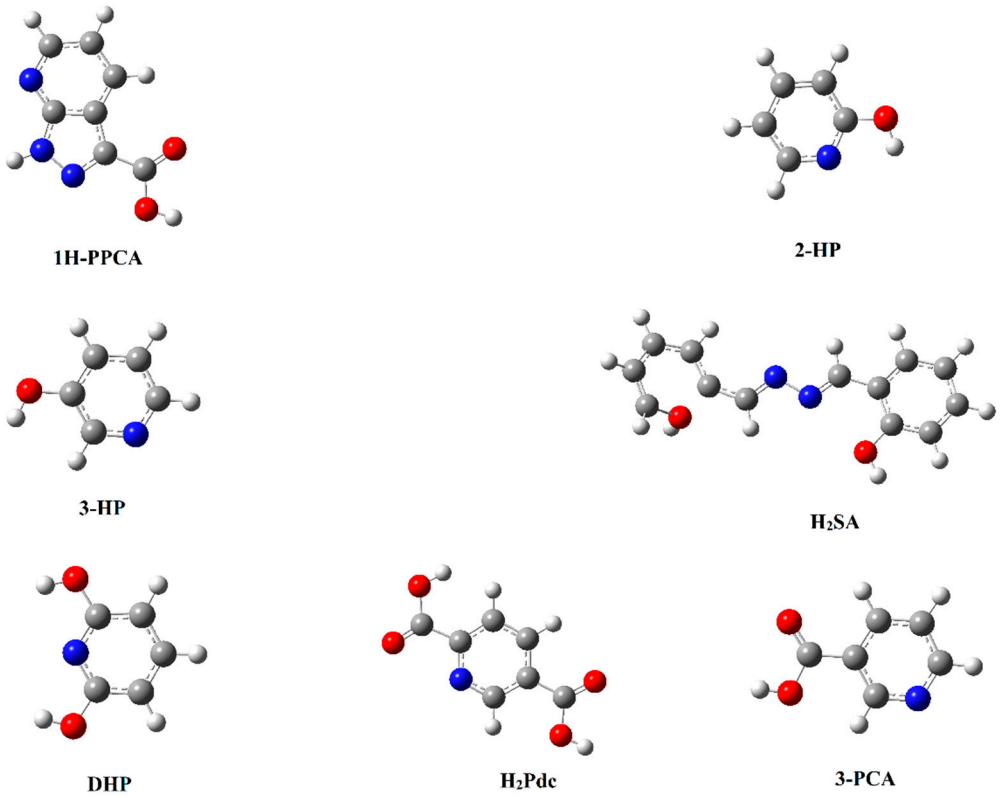
Figure S3 The EIS of (a) MIIP/MCPE, (b) MIIP/Fe_3O_4@SiO_2/MCPE (after removal of the template), (c) MIIP/Fe_3O_4@SiO_2/MCPE (after enrichment in 1.5×10^{-7} mol $L^{-1}UO_2^{2+}$ solution), (d) MIIP/ Fe_3O_4@SiO_2/MCPE (before elution of the template), (e)MCPE; (f)N-MIIP/Fe_3O_4@SiO_2/MCPE (impedance spectrum at 2 mmol L^{-1} $K_3Fe(CN)_6$/$K_4Fe(CN)_6$).

Figure S4 The current response of the sensor was prepared with different crosslinking agents.

Figure S5 The amount of crosslinking agent EGDMA (A), the amount of AIBN (B) and the reaction time of forming imprinted membrane (C) .

Figure S6 The effect of inorganic acid eluent on MIIP/Fe_3O_4@SiO_2/MCPE determination of uranyl ions

Figure S7 (A) The effect of repeatability(a: 0.20 mol L^{-1}, b: 0.15 mol L^{-1}, c: 0.10 mol L^{-1} UO_2^{2+} solution) on MIIP/Fe_3O_4@SiO_2/MCPE; (B) Stability analysis of the sensing platform under 30 days with 0.15 μM target UO_2^{2+} (orange), without target (green). The illustrated error bars represent the standard error of at least three independent measurements (n=3).



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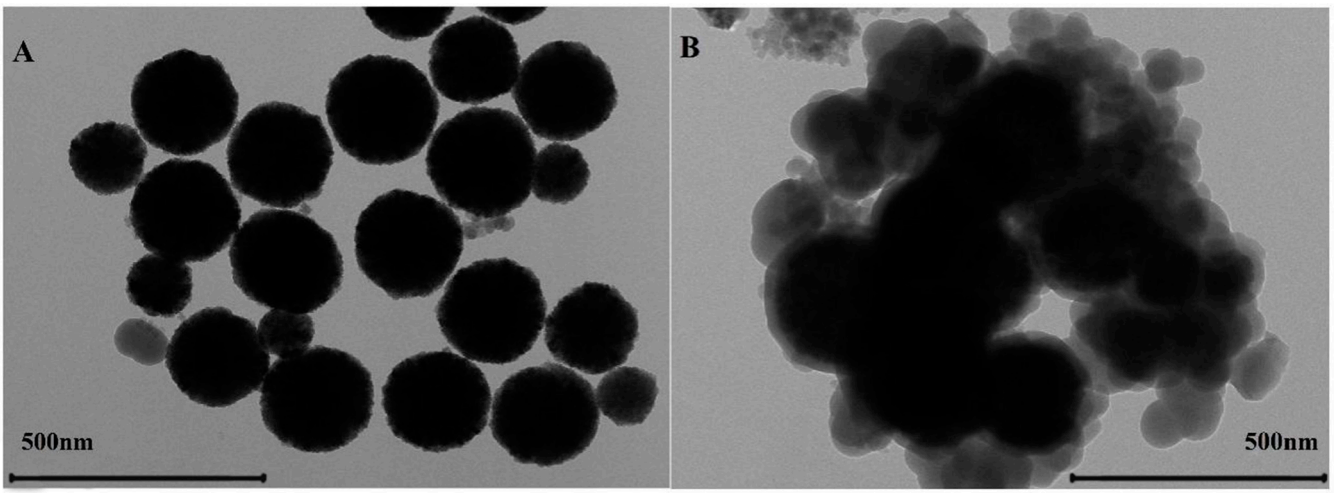

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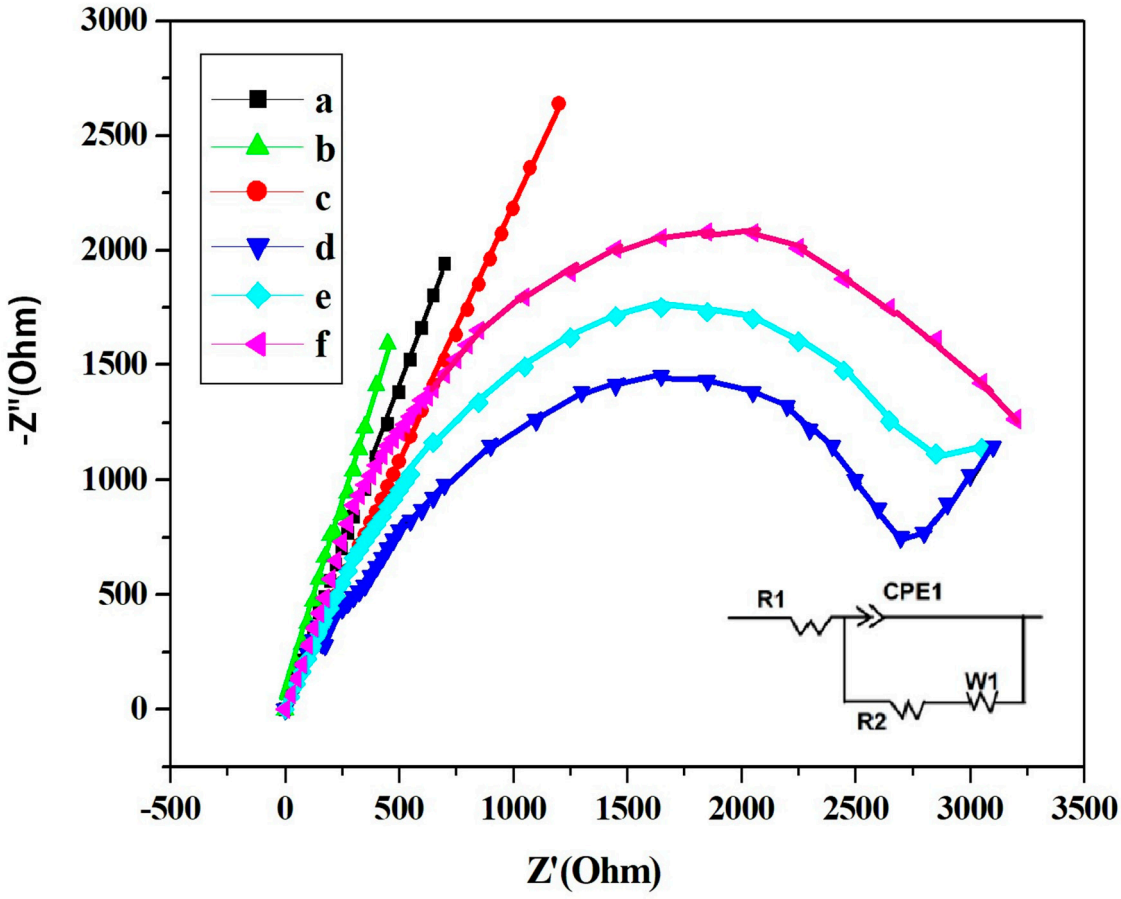

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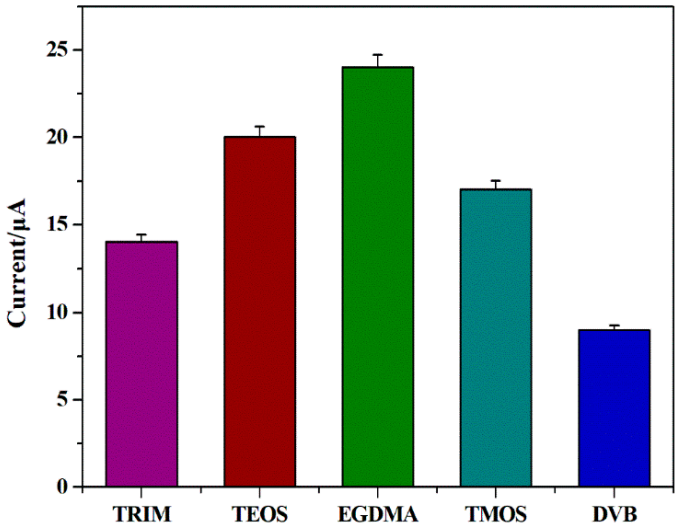

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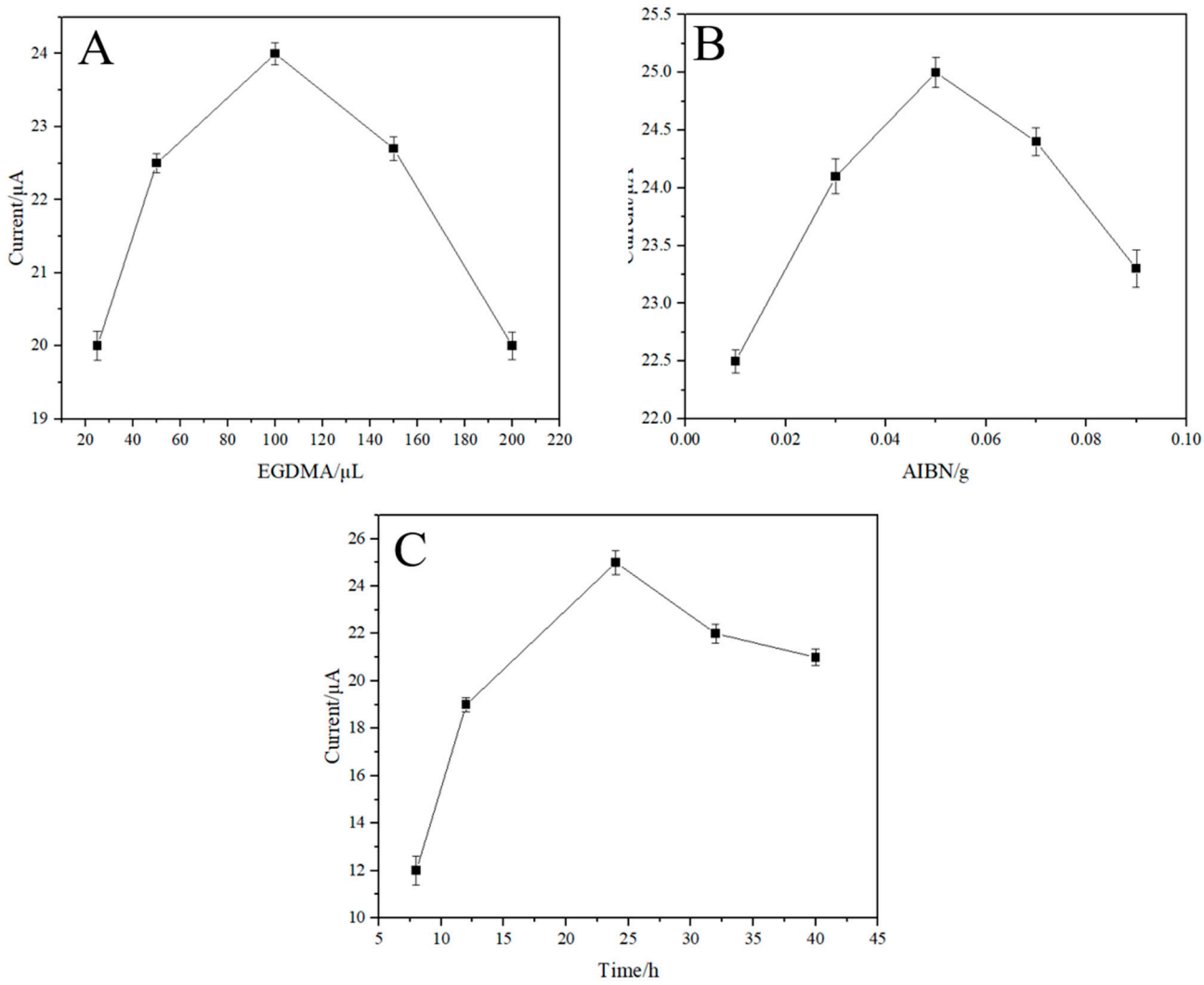

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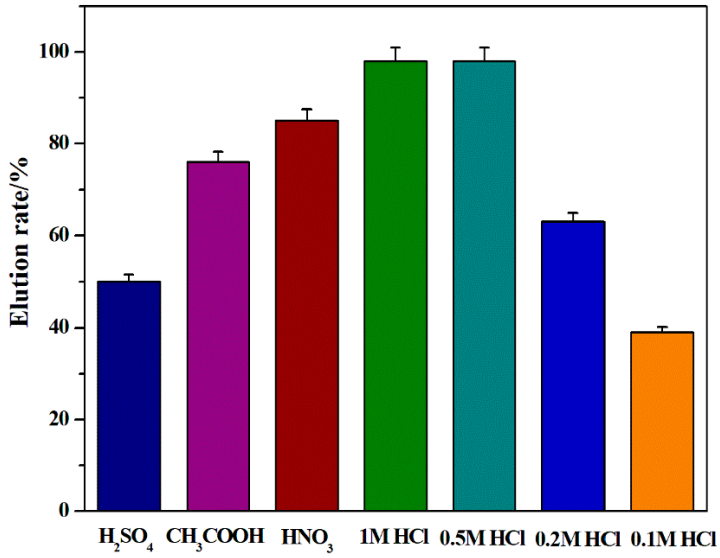

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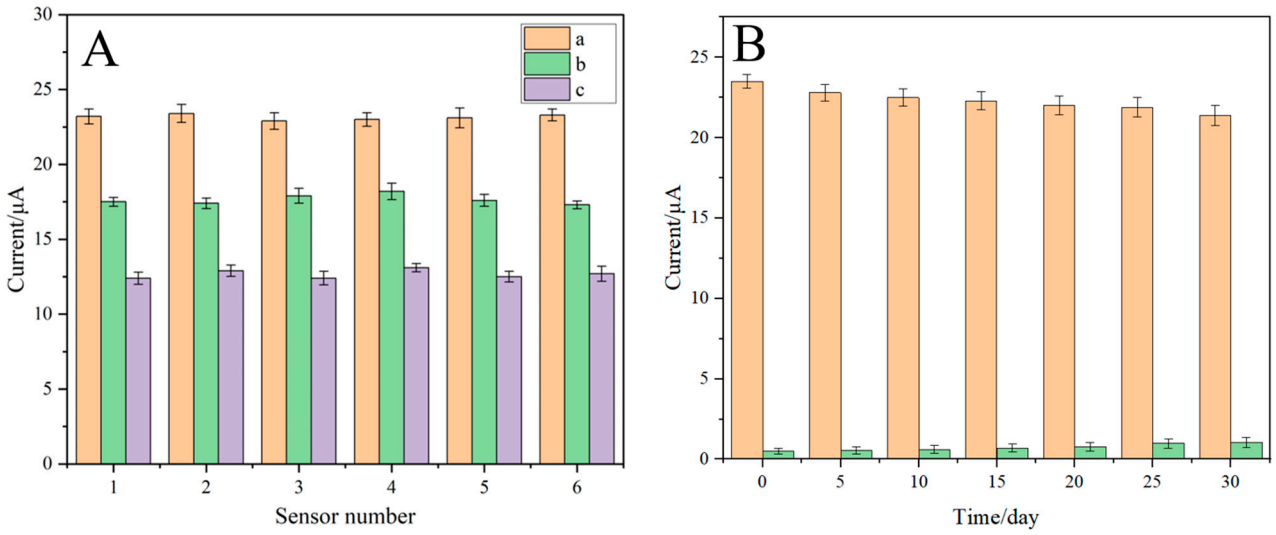

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