

Supplementary Information

A Novel Nanofibrous Film Chemosensor for Highly Selective and Sensitive Optical Signaling of Zn²⁺

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Characterization of 2-hydroxy-4-acryloyloxy-benzaldehyde (HAB)

¹H NMR (300 MHz, CDCl₃) δ 6.26 (s, 1H, vinyl-H), 7.00 (m, 1H, vinyl-H), 7.01 (m, 1H, vinyl-H), 7.45 (t, 1H, *J* 3.3 Hz, Ph-H), 7.62 (d, 1H, *J* 3.3 Hz, Ph-H), 8.09 (s, 1H, Ph-H), 9.05 (s, 1H, carbonyl-H), 11.15 (s, 1H, OH).

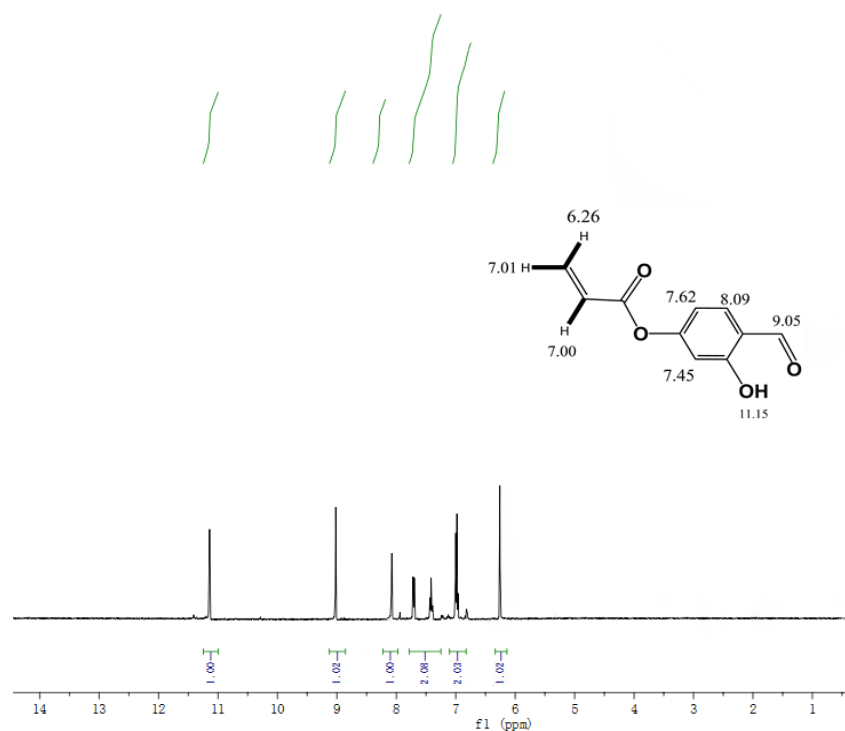


Figure S1. ¹H NMR (300 MHz, CDCl₃) spectrum of HAB.

Characterization of salicylaldehyde-hydrazine

IR (KBr) ν / cm^{-1} 2849, 1740, 1500, 1370, 1266, 1196, 1152, 1005, 996, 981, 764; $^1\text{H NMR}$ (300 MHz, CDCl_3) δ 1.61 (s, 2H, NH_2), 6.89 (m, 1H, Ph-H), 6.96 (t, 1H, J 3.6 Hz, Ph-H), 7.13 (m, 1H, Ph-H), 7.24 (m, 1H, Ph-H), 7.90 (s, 1H, Ar-H), 11.07 (s, 1H, OH).

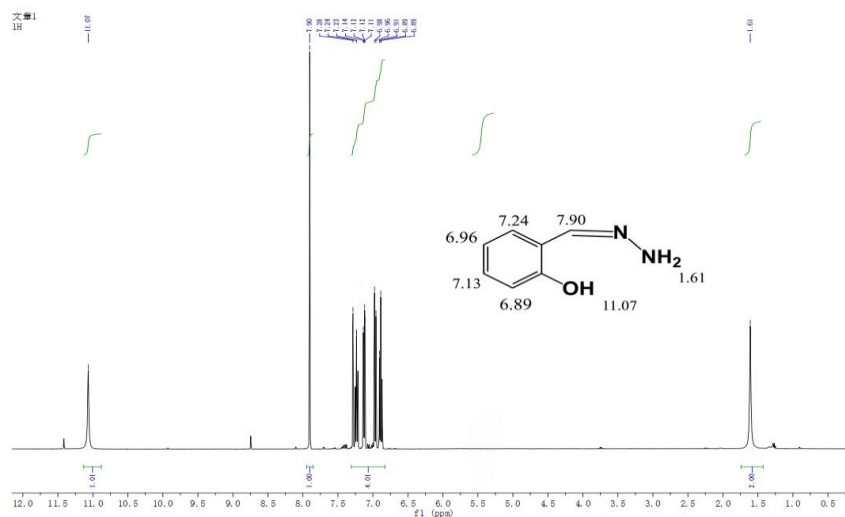


Figure S2. $^1\text{H NMR}$ (300 MHz, CDCl_3) spectrum of salicylaldehyde-hydrazine.

Characterization of poly (MMA-co-Sal)

IR (KBr) ν / cm^{-1} 2910, 1720, 1630, 1492, 1366, 1275, 1232, 1192, 1146, 996, 970, 747; $^1\text{H NMR}$ (300 MHz, CDCl_3) δ 2.51 (s, mH, CH), 3.17 (m, 3nH, methoxy-H), 3.34 (s, 2H, CH_2), 4.12 (s, 3nH, CH_3), 6.82 (d, 1H, J 3.3 Hz, Ph-H), 6.96 (m, 1H, Ph-H), 6.98 (m, 1H, Ph-H), 7.00 (m, 1H, Ph-H), 7.43 (m, 1H, Ph-H), 7.70 (d, 1H, J 2.7 Hz, Ph-H), 7.96 (s, 1H, Ph-H), 9.02 (s, 2H, Ar-H), 11.14 (s, 2H, OH).

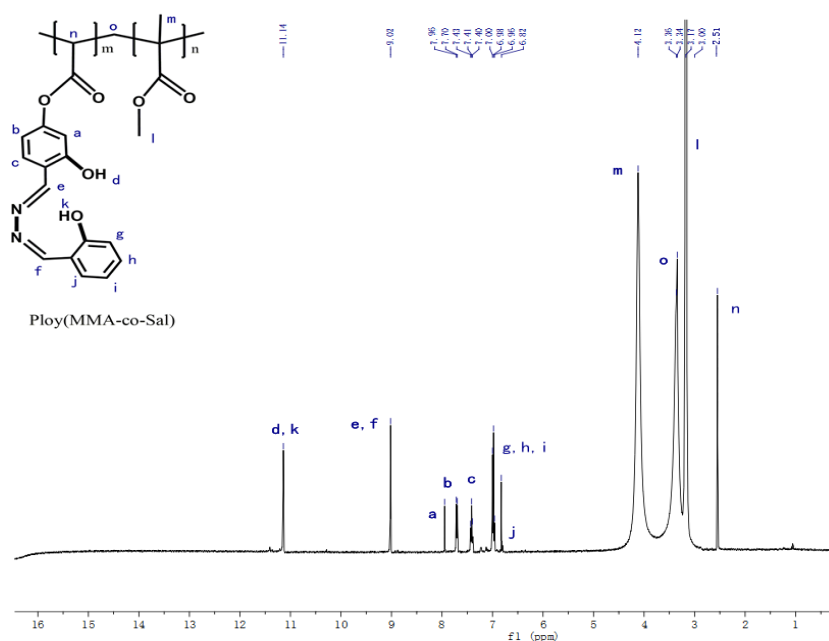


Figure S3. $^1\text{H NMR}$ (300 MHz, CDCl_3) spectrum of poly (MMA-co-Sal).

Fluorescence response of poly (MMA-co-Sal) nanofibrous film

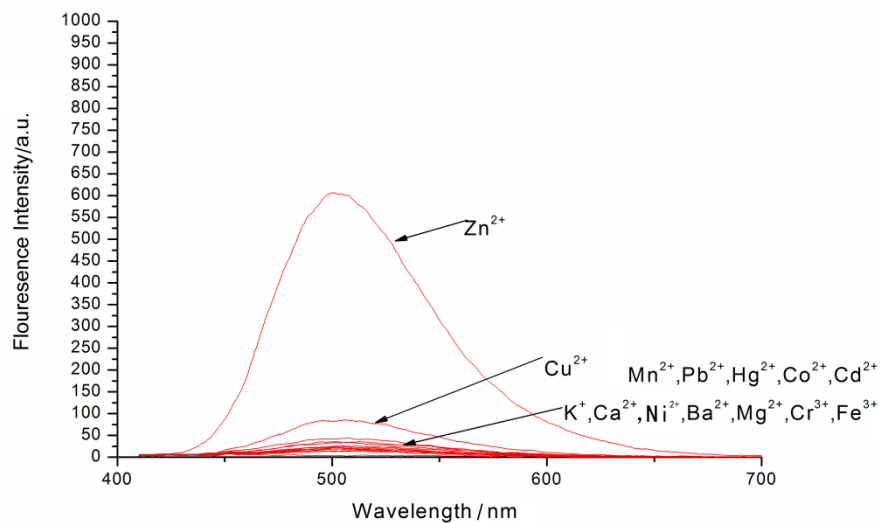


Figure S4. Fluorescence intensities of poly (MMA-co-Sal) nanofibrous film in the presence of various metal ions.

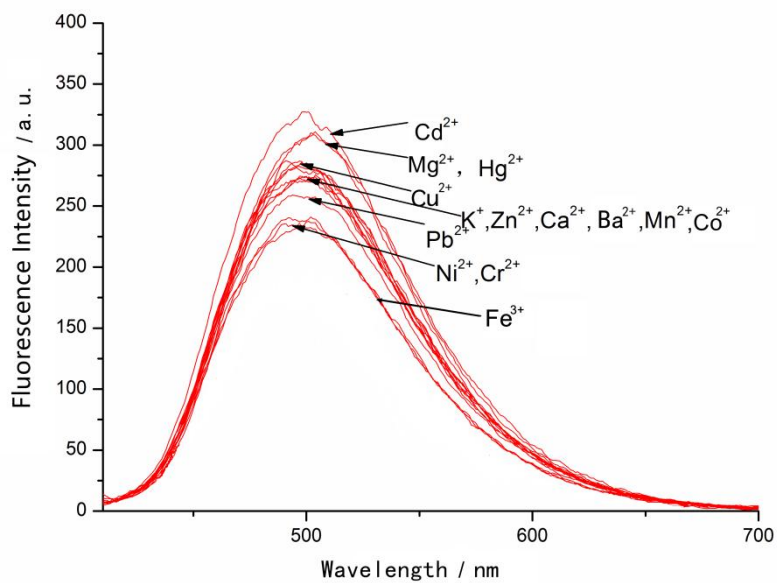


Figure S5. Fluorescence intensities of competition experiment.