

Supporting Information for:

A Free-standing Molecularly Imprinted Photonic Hydrogels Based on β -Cyclodextrin
for Visual Detection of L-Tryptophan

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Fig. S1 exhibited the typical SEM photos of the adopted colloidal-crystal template and the resultant hydrogel inverse opal film, as well as the photograph of MIPHS. Fig. S2 presented FT-IR spectra of β -CD and MAH- β -CD. Fig S3 showed the Bragg diffraction spectra of PAM-MIPHS when soaked into pure buffer solution and 10^{-12} M L-Trp buffer solutions. Fig. S4 showed the imprinting effect of CD-MIPHS with different amounts of MAH- β -CD, AM or BIS. In analogy to the definition of imprinting factor of MIPs, the photonic imprinting factor (PIF) is calculated from the Bragg diffraction wavelength shift of MIPHS and NIPHS ($PIF = \Delta\lambda_{MIPHS} / \Delta\lambda_{NIPHS}$).

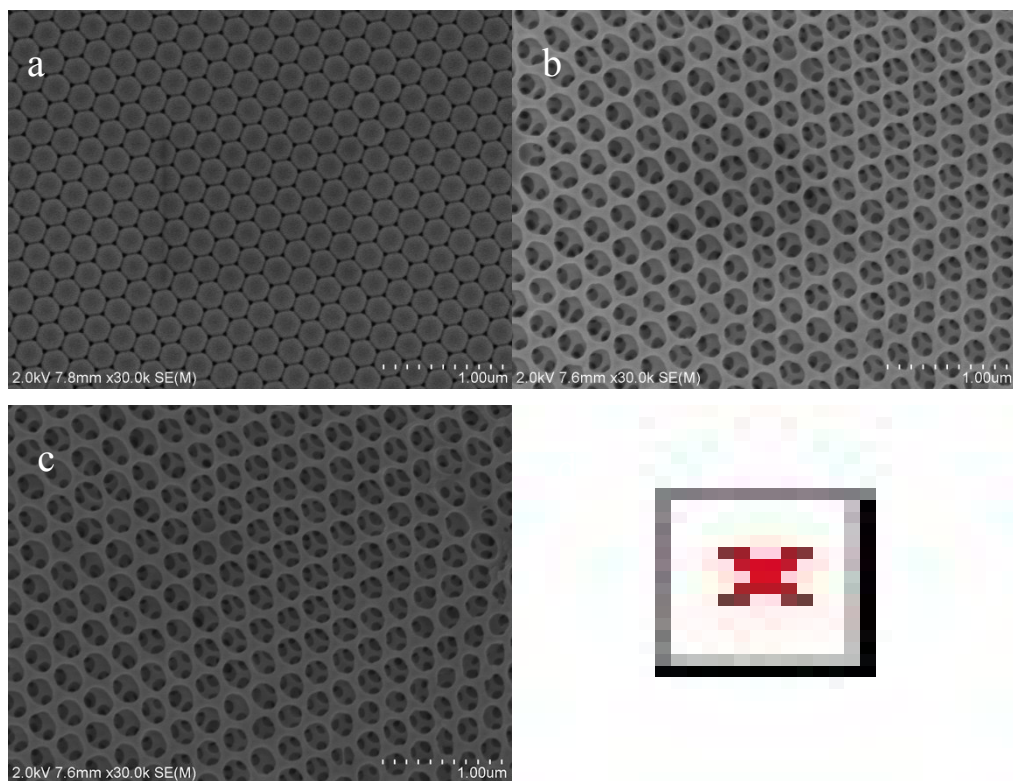


Fig. S1. SEM images of (a) PS colloidal crystals, (b) inverse opals of MIPHs, (c) inverse opals of PAM-NIPHs and (d) photograph of MIPHs.

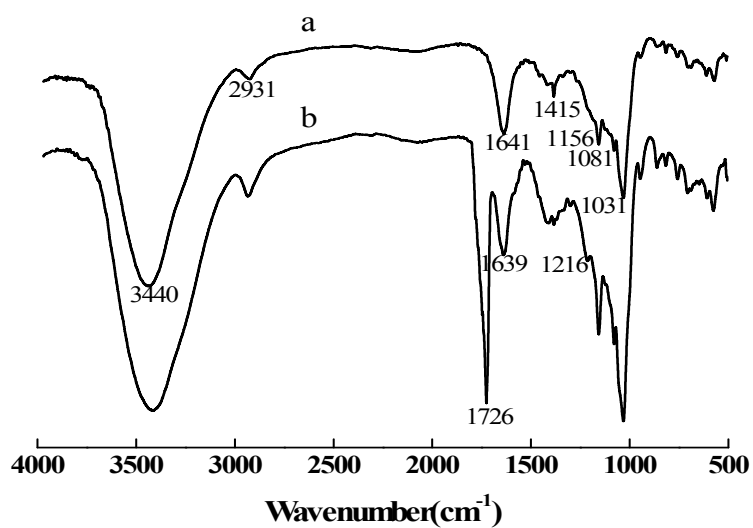


Fig. S2 FT-IR spectra of (a) β -CD and (b) MAH- β -CD.

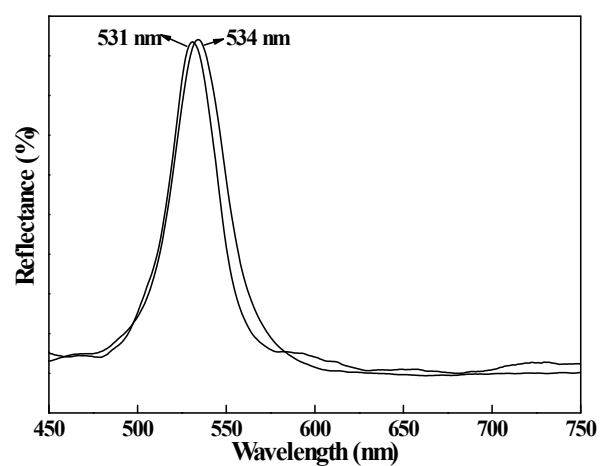


Fig. S3 Bragg diffraction spectra of PAM-MIPHs upon exposure to pure buffer solution and 10^{-12} M L-Trp buffer solutions.

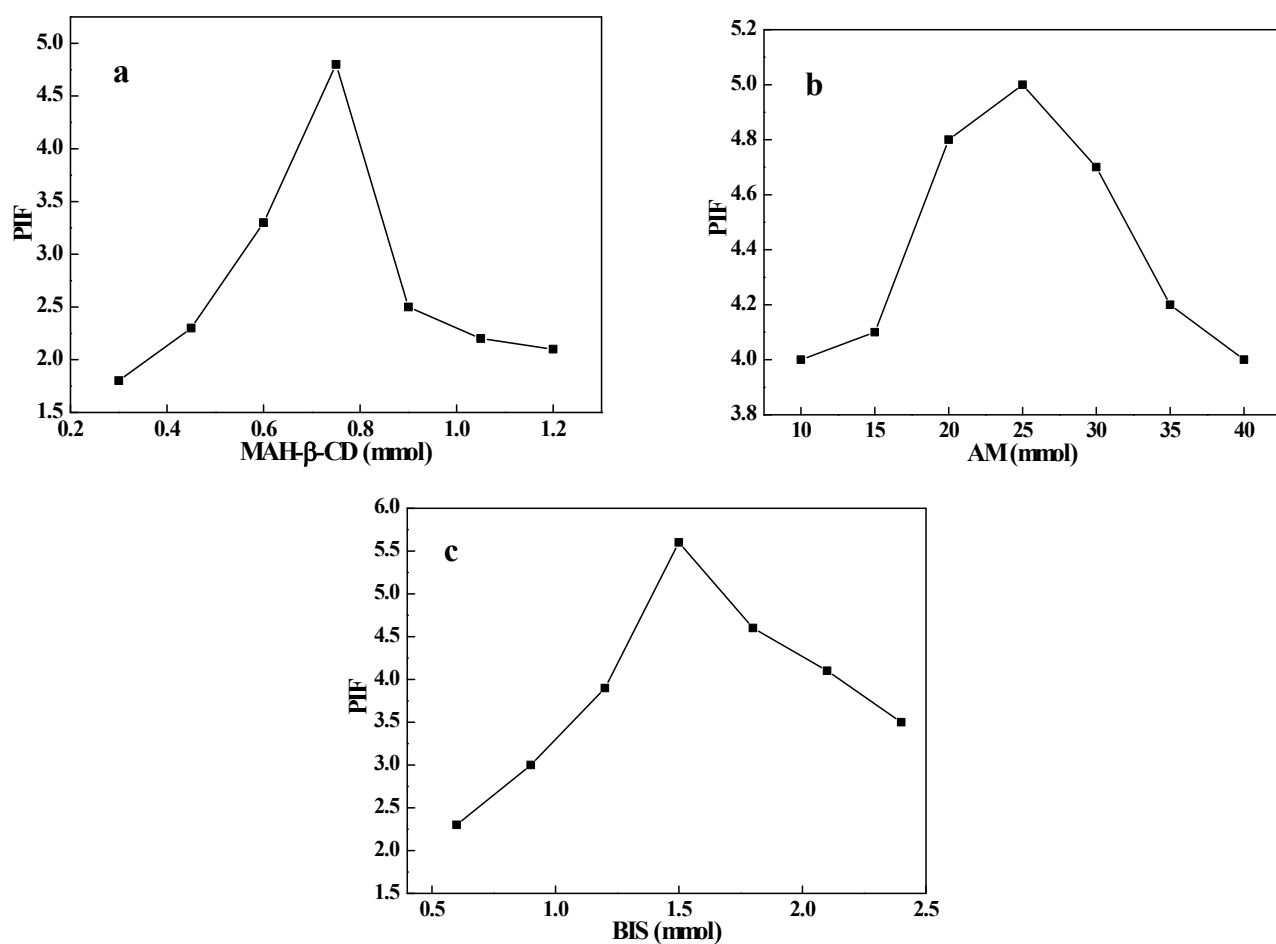


Fig. S4 Imprinting effect of MIPHs with different amounts of (a) MAH-β-CD, (b) AM and (c) BIS in L-Trp (10^{-5} mol.L⁻¹) buffer solution.