

## Inverse opals of photonic crystal hydrogels for selective sensing of lead ions

Shirong Liu\*, Liyan Qin, Zhongbin Ni, Mingqing Chen

The Key Laboratory of Synthetic and Biotechnology, School of Chemical and Material Engineering,  
Jiangnan University, Wuxi 214122, China.

\*Corresponding Author: Shirong Liu,

E-mail: [liushirong1@aliyun.com](mailto:liushirong1@aliyun.com).

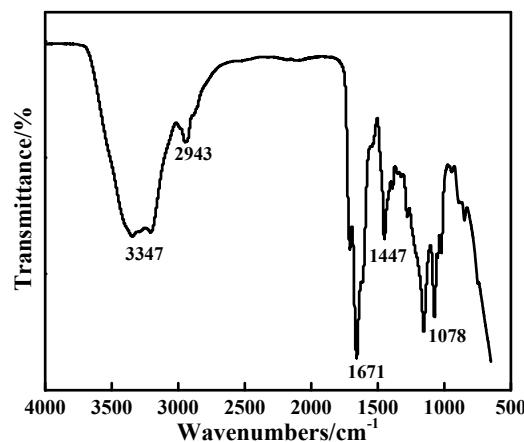


Fig. S1. FT-IR spectrum of P(AM-co-HEMA) PCHs.

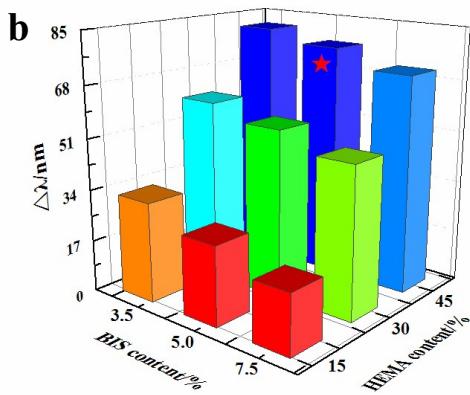
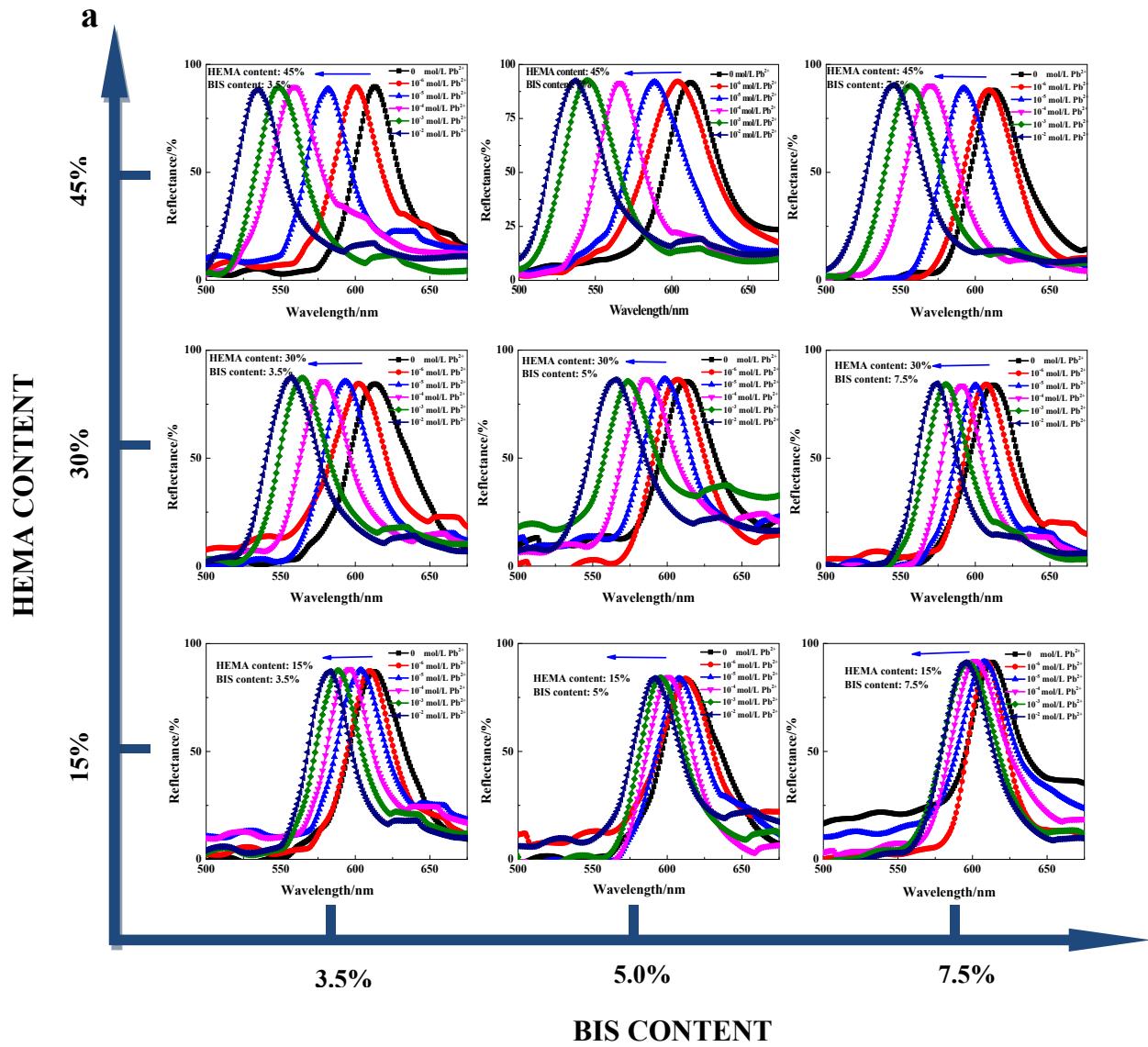


Fig. S2. (a) Reflection spectra of P(AM-co-HEMA) PCHs with different contents of HEMA and BIS in different concentrations of  $\text{Pb}^{2+}$  solutions. (b) The correlation of the Bragg diffraction peak shift ( $\Delta\lambda$ ) and the amount of HEMA and BIS.

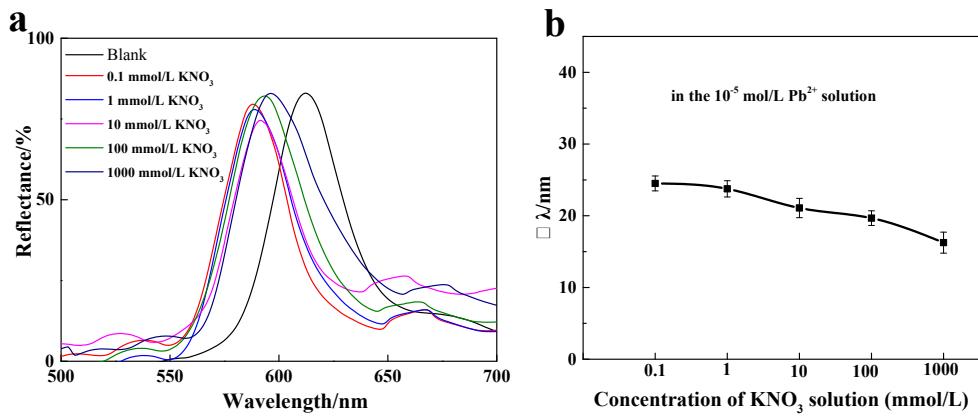


Fig. S3 (a)The reflection spectra and (b) corresponding Bragg diffraction peak shift ( $\Delta\lambda$ ) of the P(AM-co-HEMA) PCHs upon soaking in  $10^{-5}$  mol/L  $\text{Pb}^{2+}$  solution with different ionic strength.