

## Supporting Information

### Label-Free Photonic Crystal-Based $\beta$ -lactamase Biosensor for $\beta$ -lactam Antibiotic and $\beta$ -lactamase Inhibitor

Fubing Xiao, Guoguo Li, Yan Wu, Qianshan Chen, Zhaoyang Wu<sup>\*</sup>, and Ruqin Yu

*State Key Laboratory of Chemo/Biosensing and Chemometrics, College of Chemistry and Chemical Engineering, Hunan University, Changsha 410082, People's Republic of China.*

*E-mail: zywu@hnu.edu.cn*

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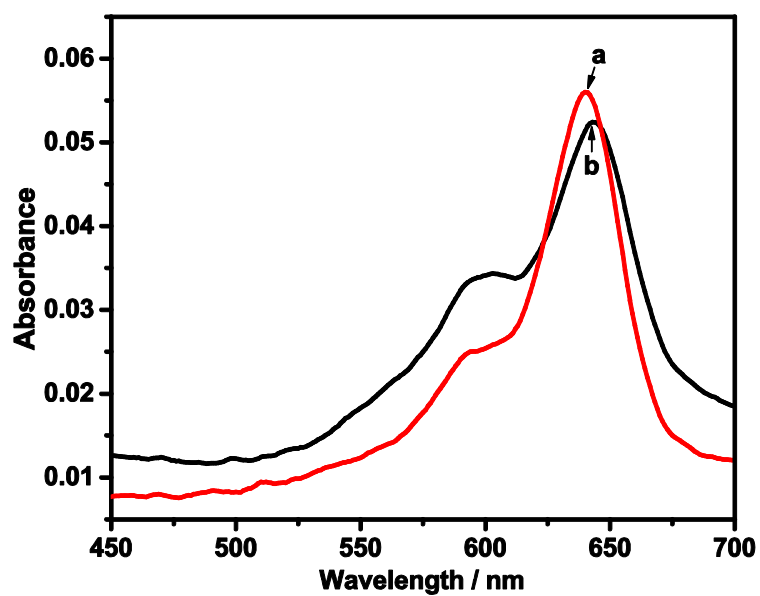


Figure S1. UV-Vis spectra of (a) Cy5-NHS, and (b) Cy5-penicillinase.

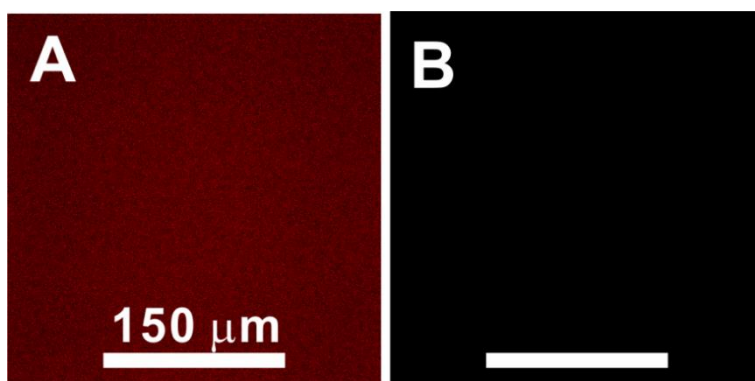


Figure S2. Fluorescent images of (A) CCH film immobilized with Cy5-penicillinase; and (B) hydrolyzed CCH film.

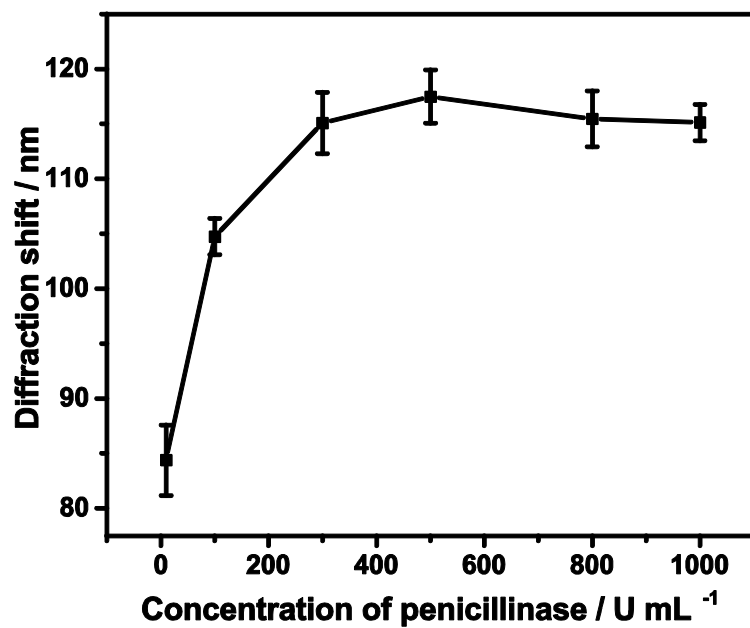


Figure S3. The diffraction shifts of activated CCH films pretreated with different concentrations of penicillinase in the presence of 5 mM penicillin G. The error bars indicate the standard deviation of three assays.

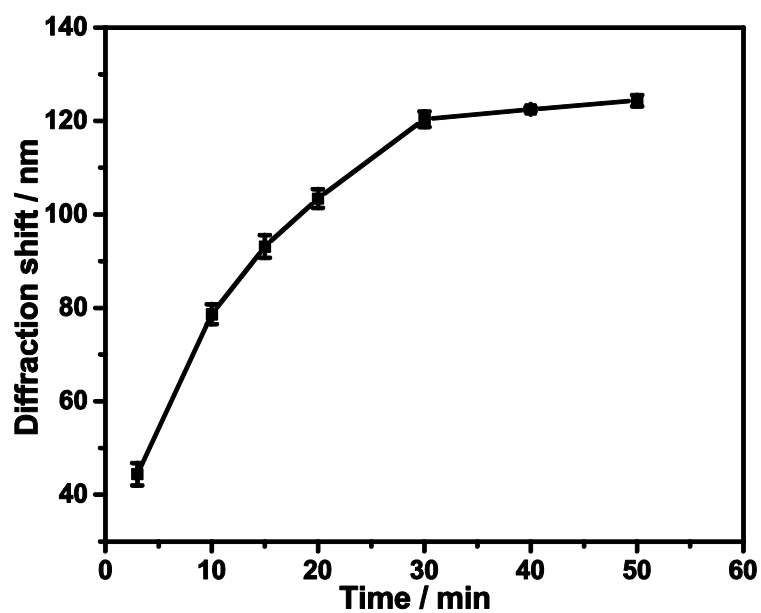


Figure S4. Effect of time on the diffraction shifts of PCCH film in the presence of 5 mM penicillin G. The error bars indicate the standard deviation of three assays.