

Electronic Supplementary Information

One step cathodically electrodeposited $[\text{Tb}_2(\text{BDC})_3(\text{H}_2\text{O})_4]_n$ thin film as a luminescent probe for Cu^{2+} detecting

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3.1 Influence of electrochemical parameters

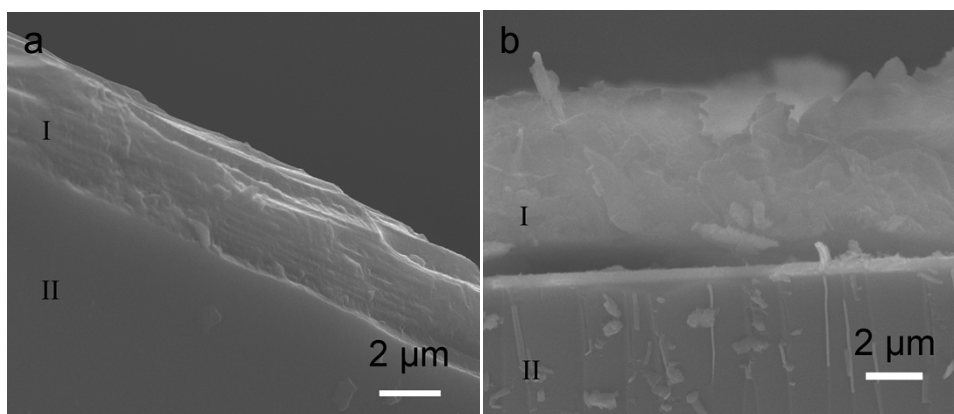


Fig. S1 Thickness of film deposited with different deposition time (a) 20 minutes (b) 30 minutes in the solution (0.05M NH_4NO_3) with $0.3 \text{ mA} \cdot \text{cm}^{-2}$. (I: film II: substrate)

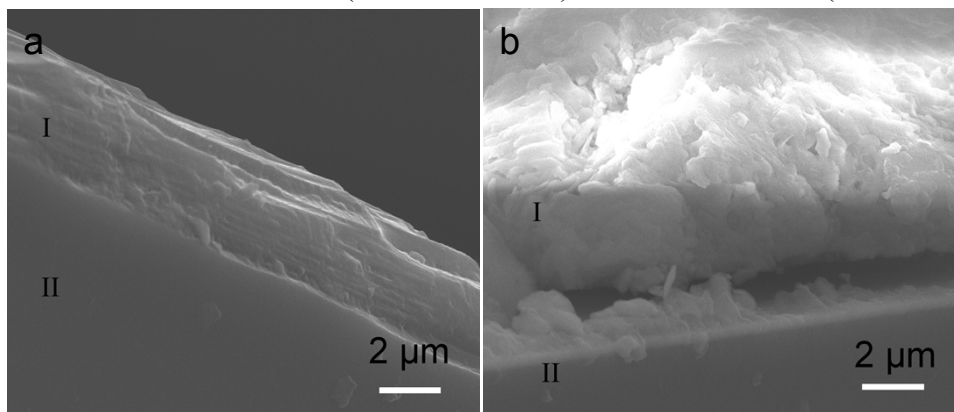


Fig. S2 Thickness of film deposited with different NH_4NO_3 concentration (a) 0.05M (b) 0.1M with $0.3 \text{ mA} \cdot \text{cm}^{-2}$ in 20 minutes. (I: film II: substrate)

3.3 Selective detection of Cu^{2+}

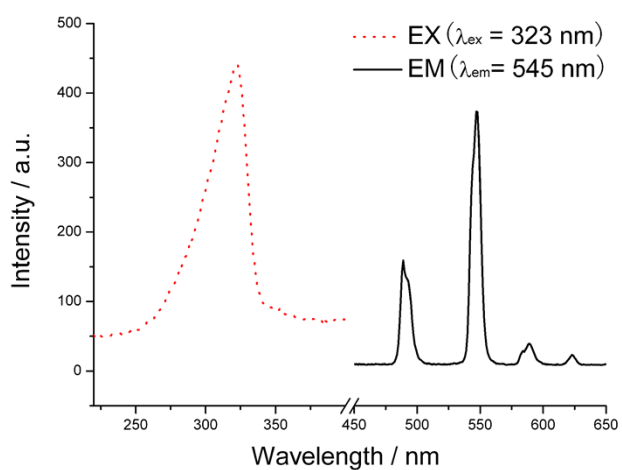


Fig. S3 The excitation (dotted) and PL spectra (line) of thin film 1.