

Supporting Materials

Photocurrent responsive films prepared by nickel-dithiolate compound with directly bonded pyridyl group

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Figure S1. Photo of the flower-like crystals of **2**.

Figure S2. XRD of the crystal sample obtained by exchange method and the powder sample obtained by direct synthetic method.

Figure S3. FTIR spectra of **1** and **2** in 400–1000 cm^{-1} range.

Figure S4. FTIR spectra of the metal ion treated films.

Figure S5. EDS results of the metal ions treated film **1**, (a) Mn(II), (b) Co(II), (c) Zn(II), and (d) Fe(III).

Figure S6. I-V curves of film **1** with and without irradiation.

Figure S7. The photocurrent responses of **1** to the morphologies obtained in different solvents (a) acetone, (b) methanol, (c) acetonitrile and (d) THF.

Figure S8. Photocurrent response of Fe(II) treated **1**.

Figure S9. FTIR spectra of the metal ion treated films of non coordination [*n*-Bu₄N][Ni(Phdt)₂].

Figure S10. EDS results of the metal ions treated film of [*n*-Bu₄N][Ni(Phdt)₂], (a) Mn(II), (b) Co(II), and (c) Zn(II).

Figure S11. Photocurrent responses of **3** and the metal ions treated **3**.

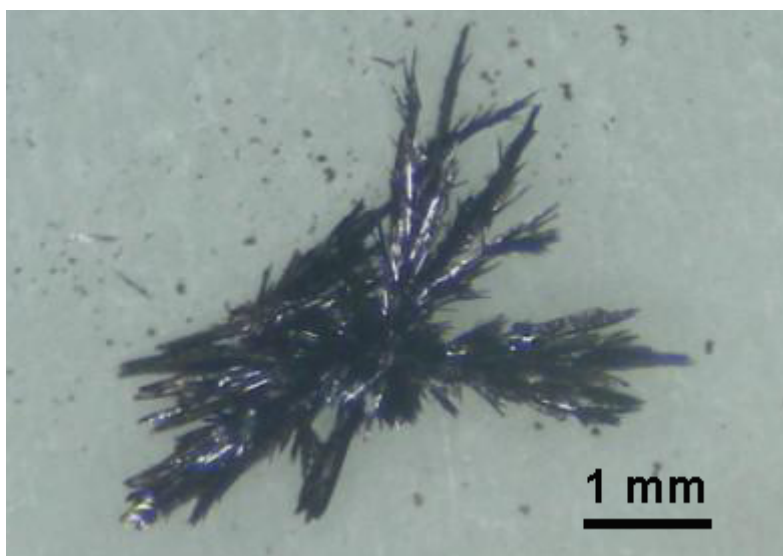


Figure S1. Photo of the flower-like crystals of **2**.

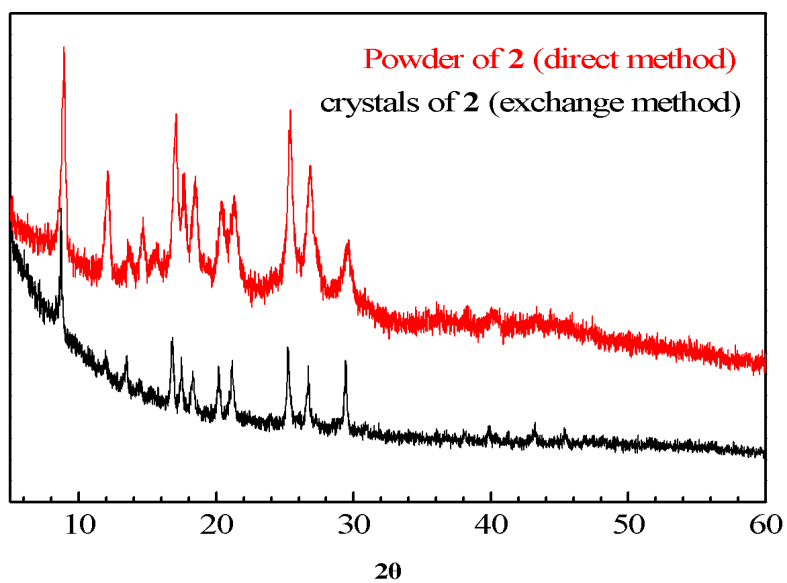


Figure S2. XRD of the crystal sample obtained by exchange method and the powder sample obtained by direct synthetic method.

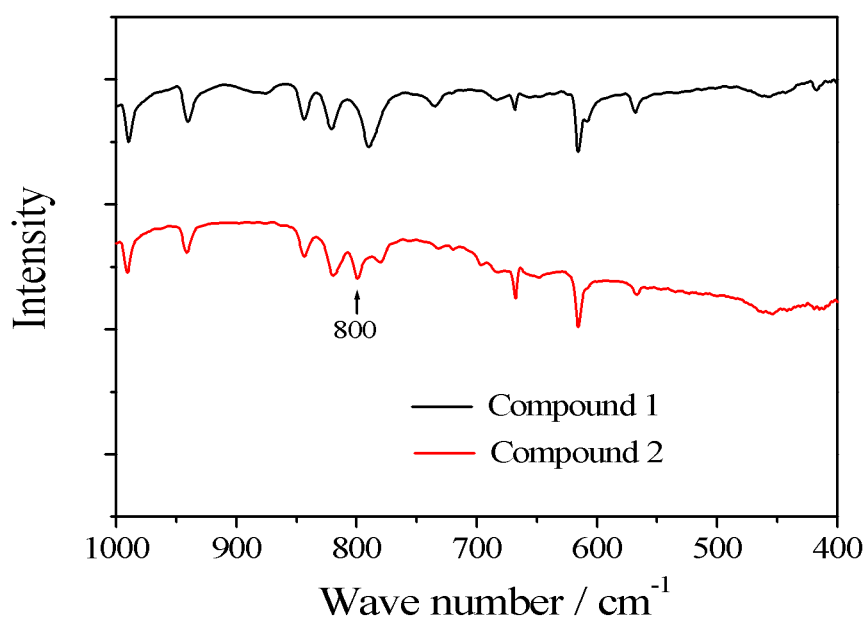
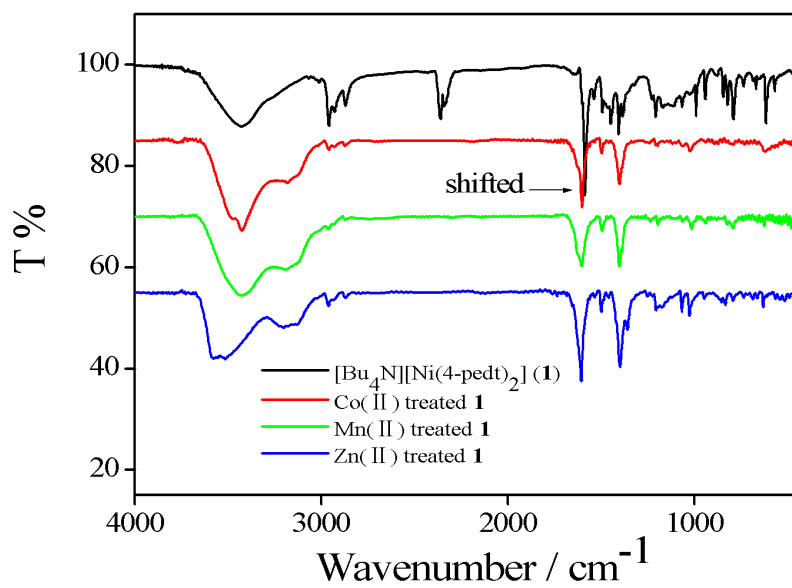
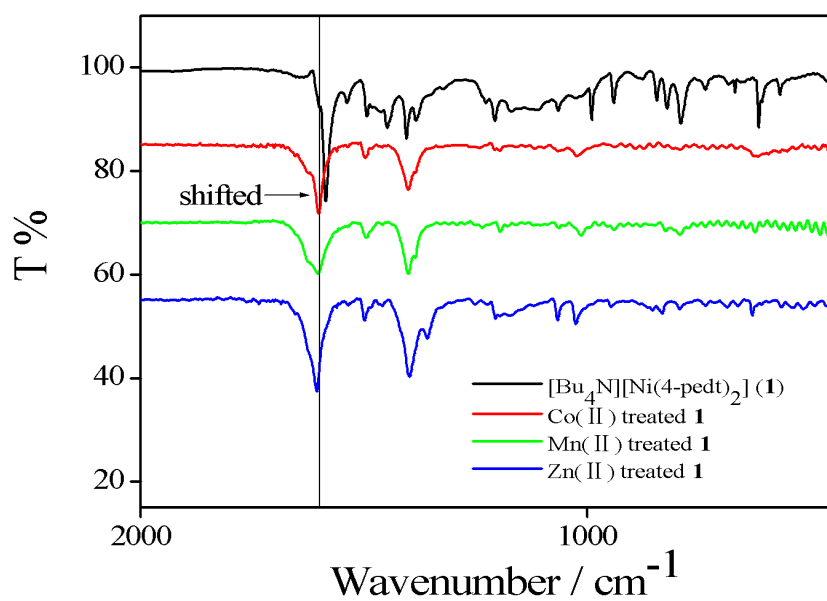


Figure S3. FTIR spectra of **1** and **2** in 400–1000 cm⁻¹ range.



(a)



(b)

Figure S4. FTIR spectra of the metal ion treated films.

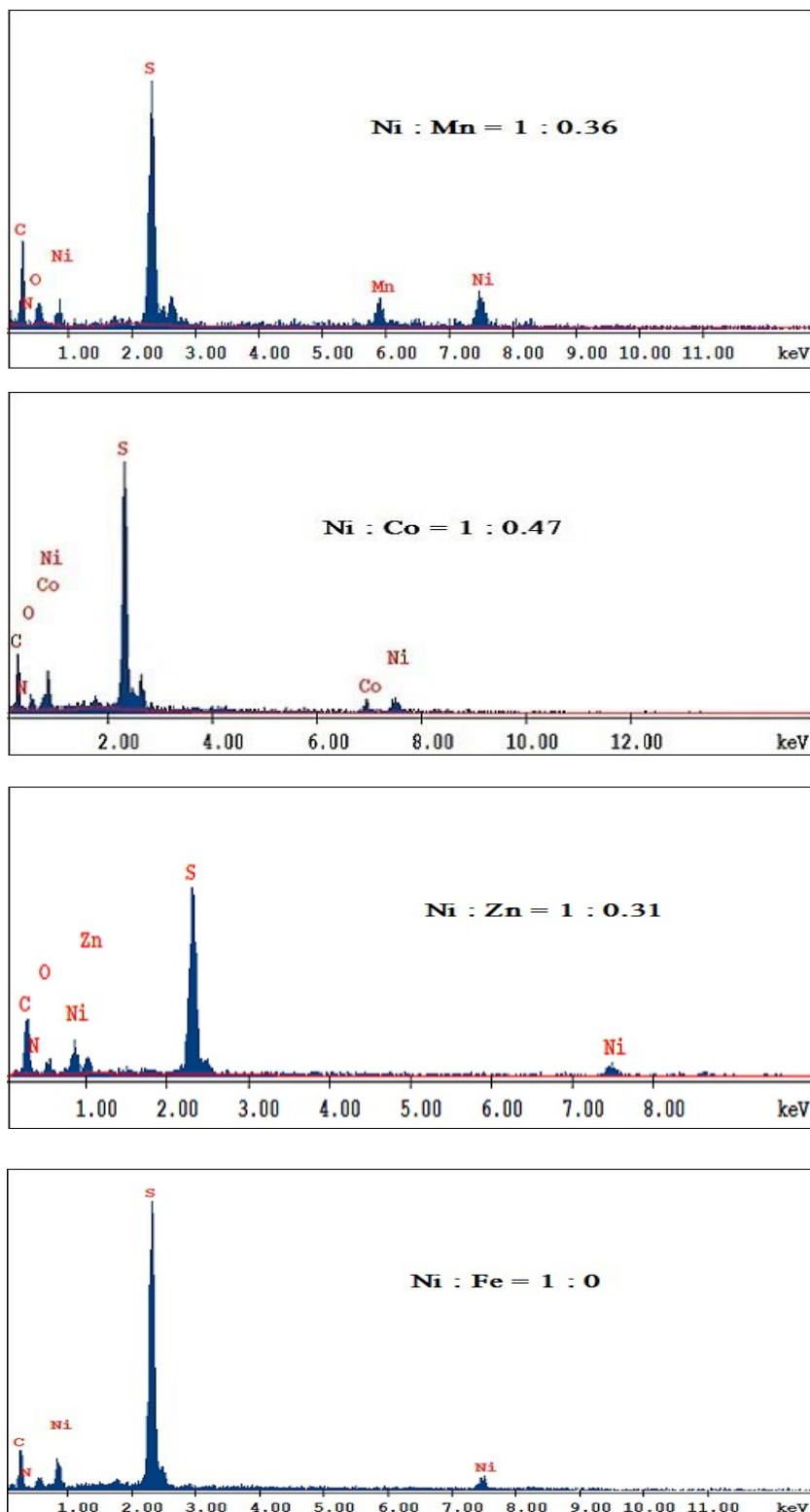


Figure S5. EDS results of the metal ions treated film **1**, (a) Mn(II), (b) Co(II), (c) Zn(II), and (d) Fe(III).

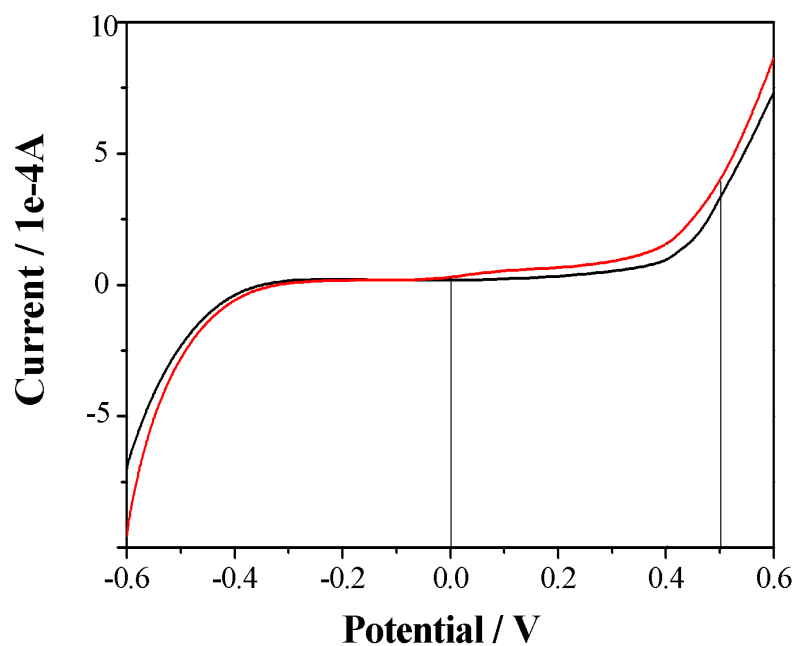


Figure S6. I-V curves of film **1** with and without irradiation.

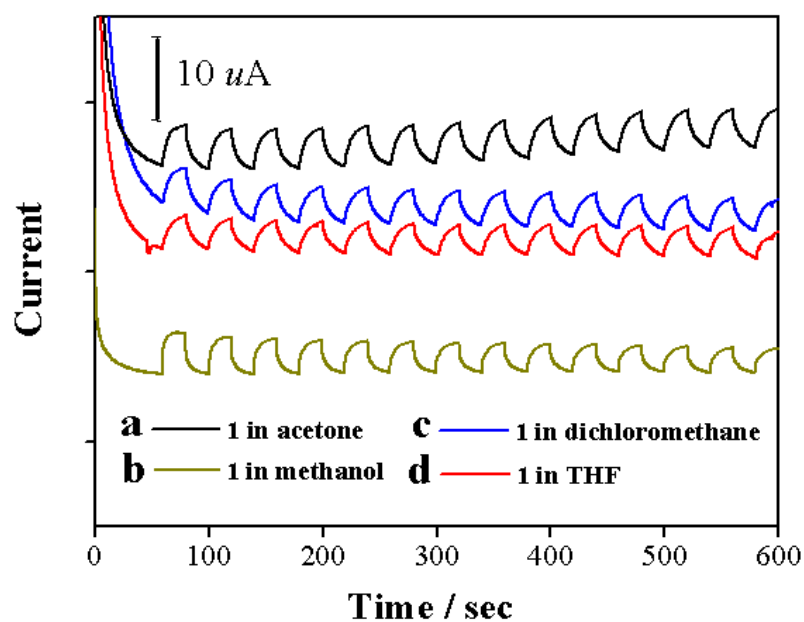


Figure S7. The photocurrent responses of **1** to the morphologies obtained in different solvents (a) acetone, (b) methanol, (c) dichloromethane and (d) THF.

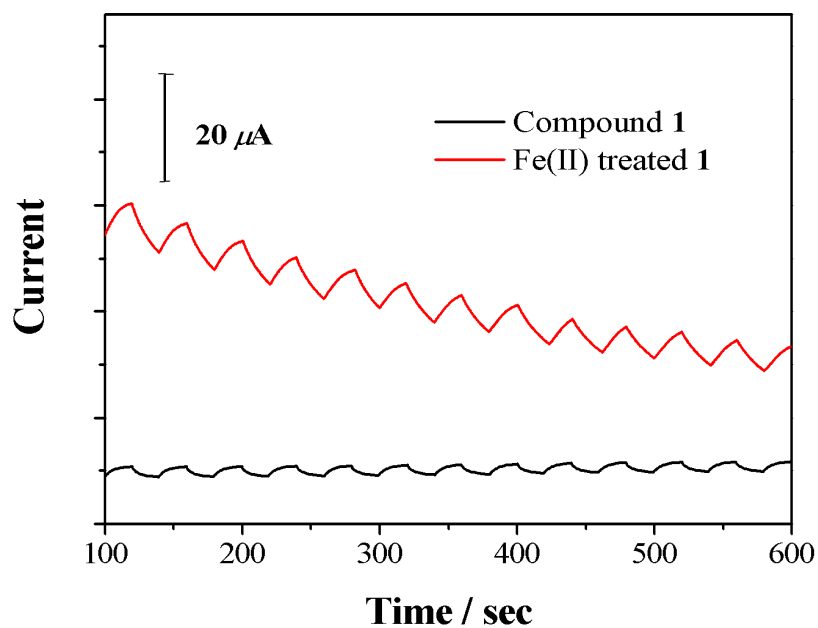


Figure S8. Photocurrent response of Fe(II) treated 1.

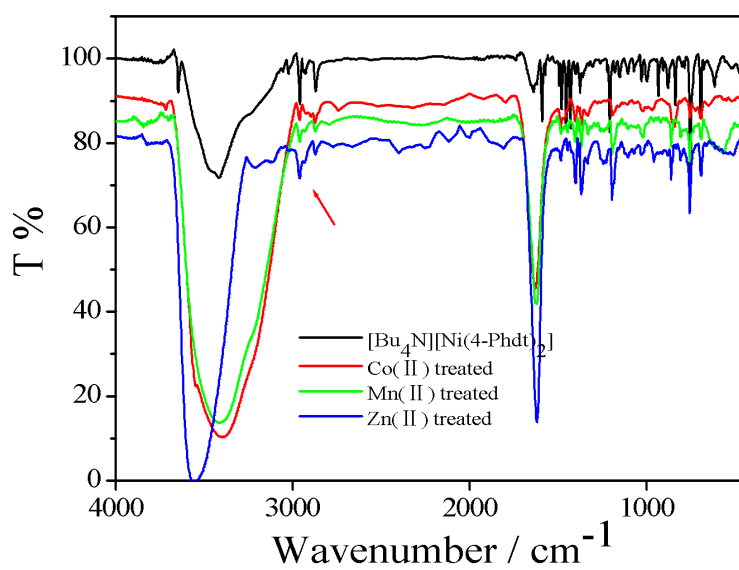


Figure S9. FTIR spectra of the metal ion treated films of non coordination $[\text{n-Bu}_4\text{N}][\text{Ni}(\text{Phdt})_2]$.

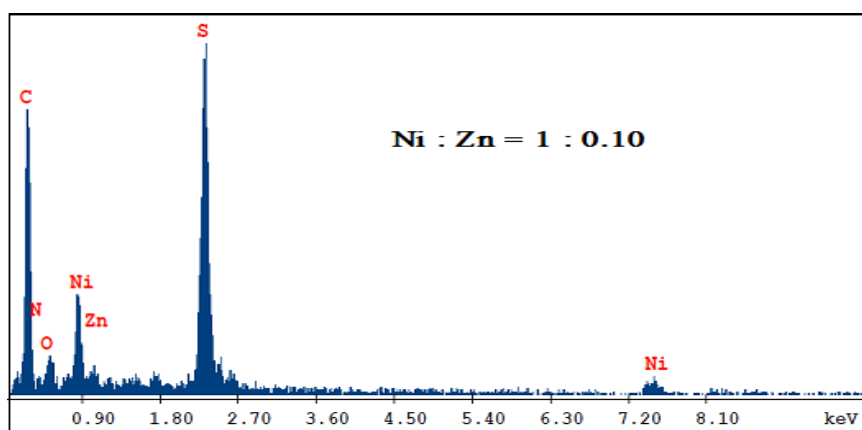
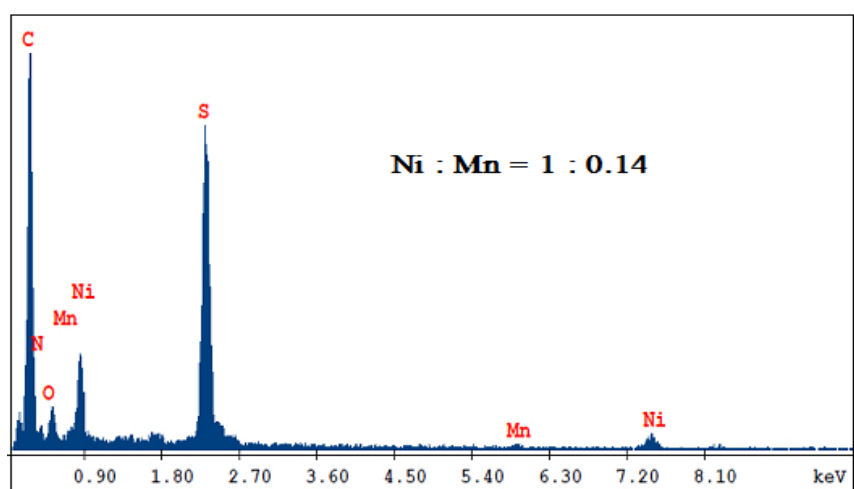
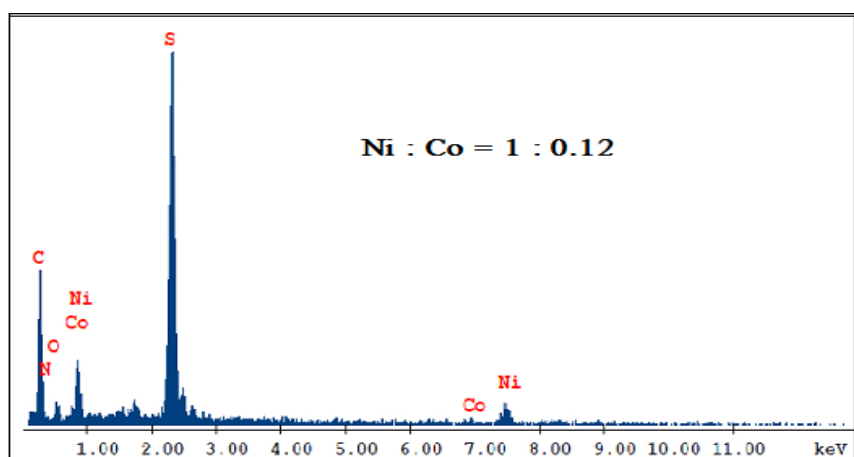


Figure S10. EDS results of the metal ions treated film of $[n\text{-Bu}_4\text{N}][\text{Ni}(\text{Phdt})_2]$, (a) Mn(II), (b) Co(II), and (c) Zn(II).

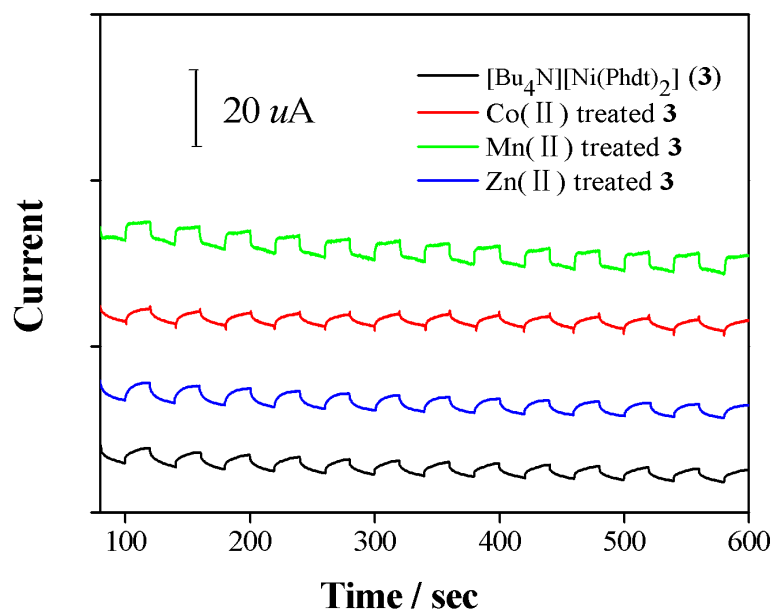


Figure S11. Photocurrent responses of **3** and the metal ions treated **3**.