

Supplementary Information

Dye-sensitized solar cell based on inclusion complex of cyclic porphyrin dimer bearing four 4-pyridyl groups and fullerene C₆₀

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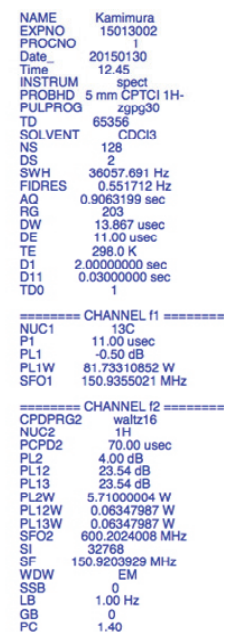
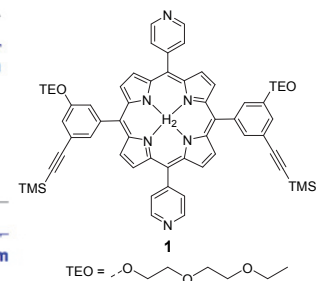


Fig. S1 (a) ^1H NMR and (b) ^{13}C NMR of **1** in CDCl_3 .

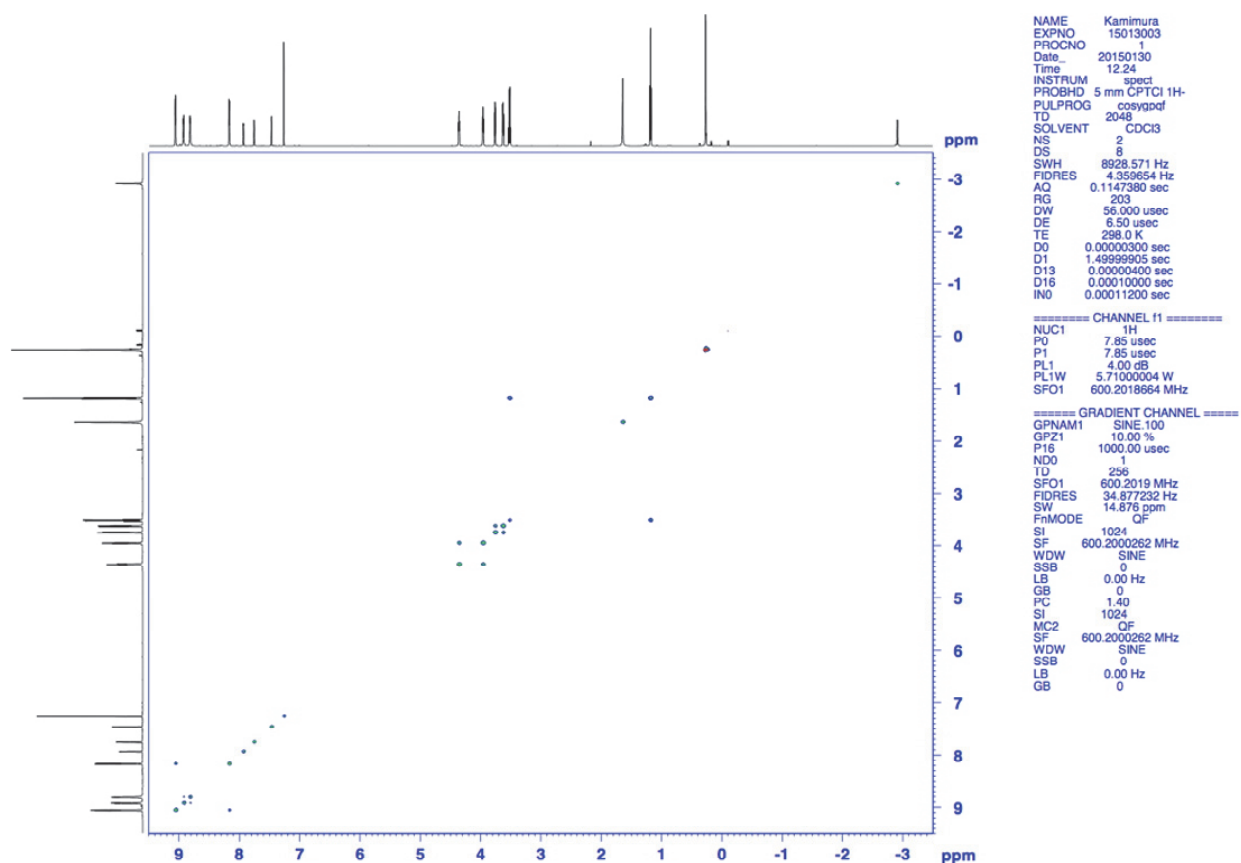


Fig. S2 H-H COSY of **1** in CDCl₃.

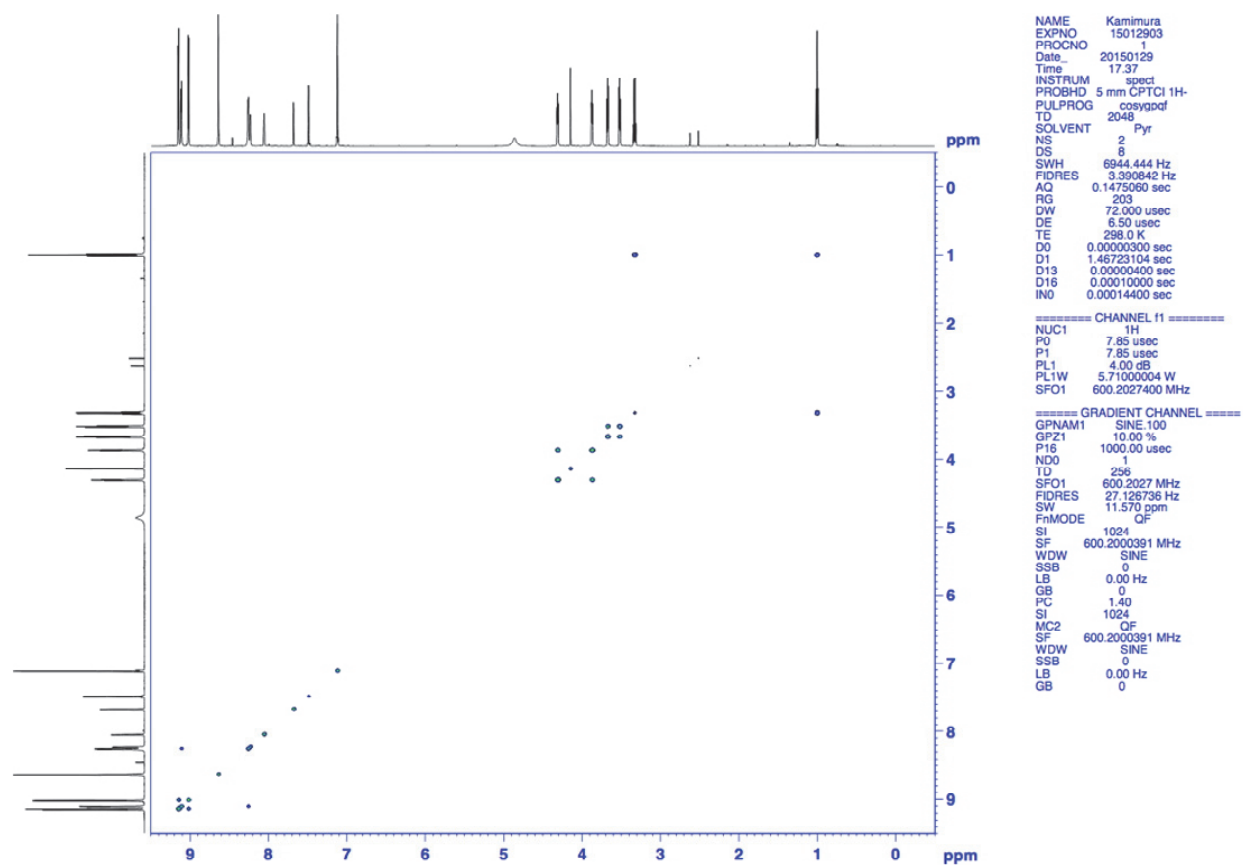


Fig. S4 H-H COSY of **2** in pyridine-*d*₅.

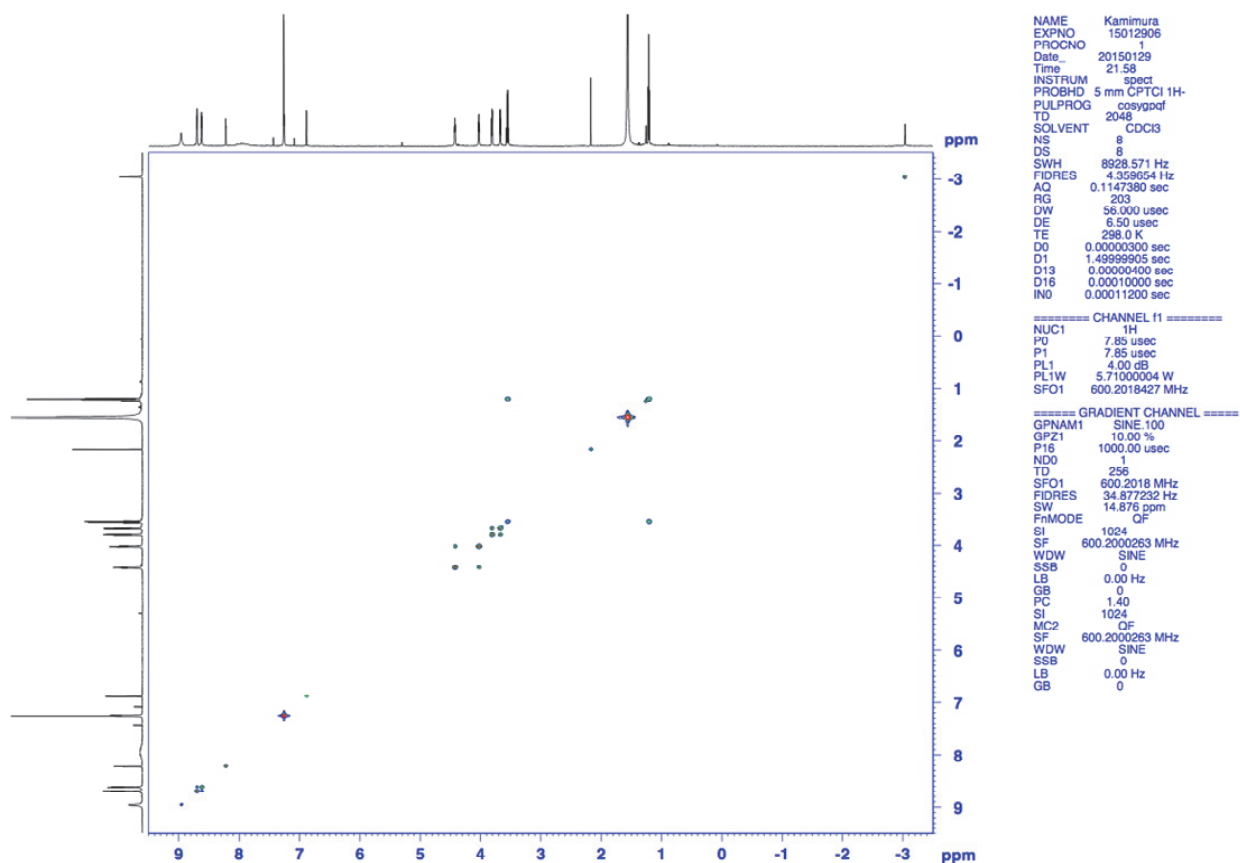


Fig. S6 H-H COSY of **H₄-C₄-CPD_{py}(TEO)** in CDCl₃.

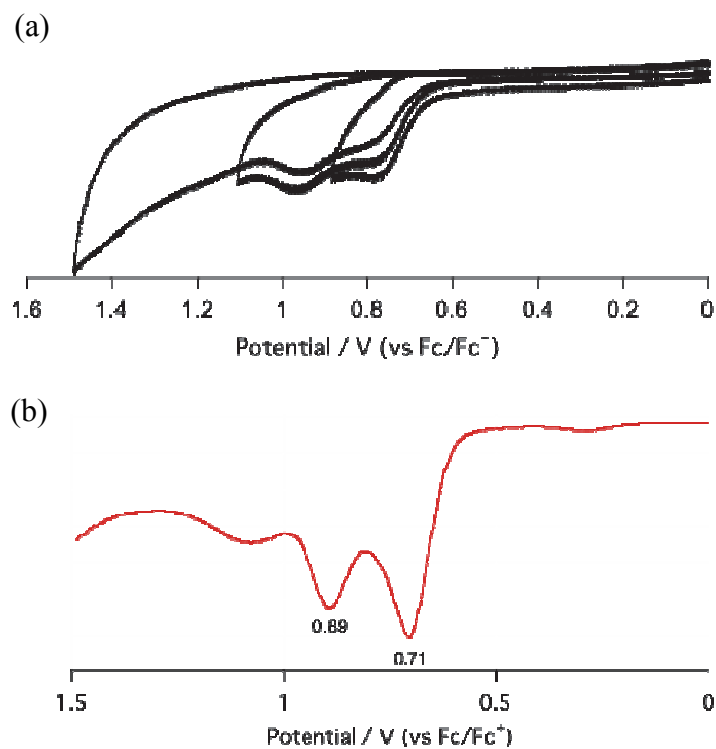


Fig. S7 (a) Cyclic voltammograms (CV) and (b) differential pulse voltammograms (DPV) of $\text{H}_4\text{-C}_4\text{-CPDPy(TEO)}$ in deaerated PhCN with 0.1 M Bu_4NPF_6 at room temperature. $[\text{H}_4\text{-C}_4\text{-CPDPy(TEO)}] = 0.4 \text{ mM}$.

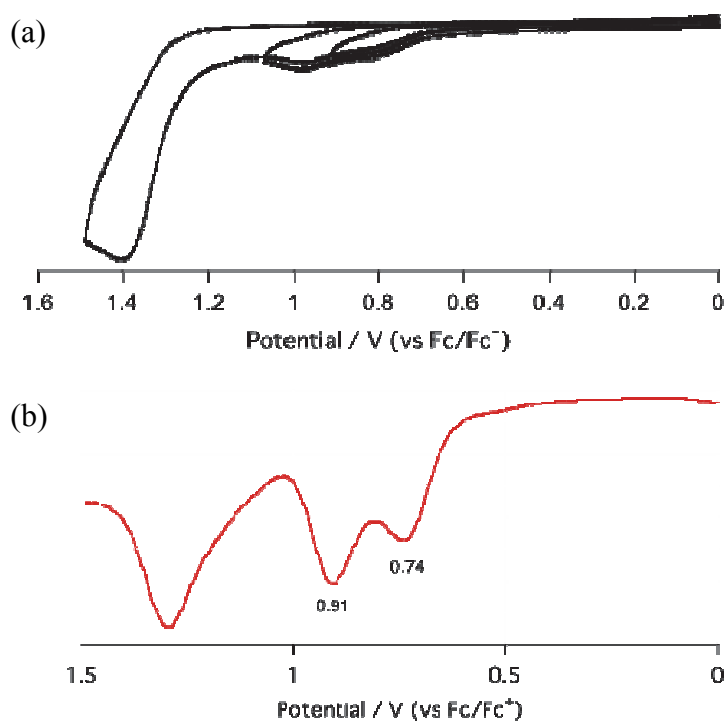


Fig. S8 (a) Cyclic voltammograms (CV) and (b) differential pulse voltammograms (DPV) of $\text{C}_{60}\equiv\text{H}_4\text{-C}_4\text{-CPDPy(TEO)}$ in deaerated PhCN with 0.1 M Bu_4NPF_6 at room temperature. $[\text{C}_{60}\equiv\text{H}_4\text{-C}_4\text{-CPDPy(TEO)}] = 0.4 \text{ mM}$.

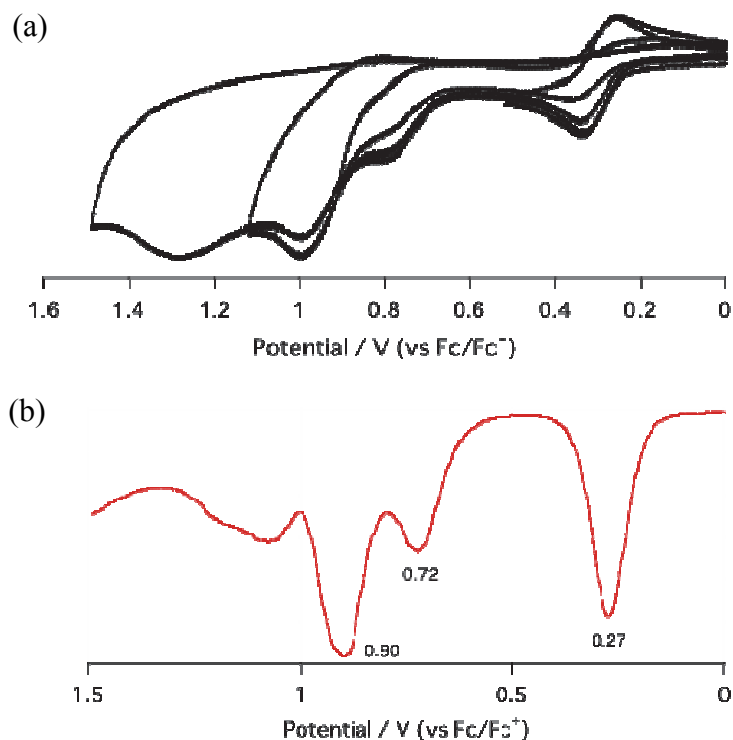


Fig. S9 (a) Cyclic voltammograms (CV) and (b) differential pulse voltammograms (DPV) of $\text{H}_4\text{-Ptz-CPD}_{\text{Py}}(\text{TEO})$ in deaerated PhCN with 0.1 M Bu_4NPF_6 at room temperature. $[\text{H}_4\text{-Ptz-CPD}_{\text{Py}}(\text{TEO})] = 0.4$ mM. The oxidation wave at 0.27 V corresponds to phenothiazine unit.

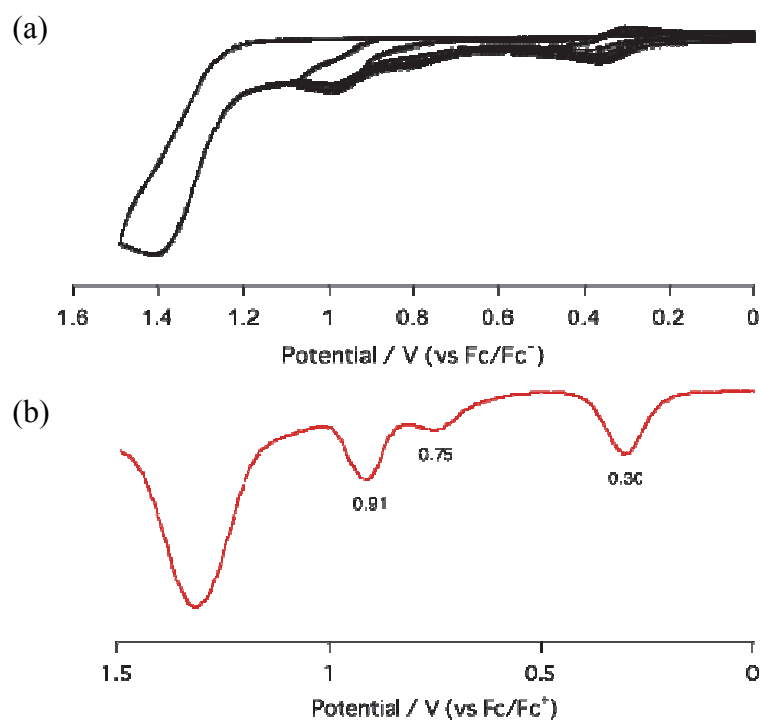


Fig. S10 (a) Cyclic voltammograms (CV) and (b) differential pulse voltammograms (DPV) of $\text{C}_{60}\text{C-H}_4\text{-Ptz-CPD}_{\text{Py}}(\text{TEO})$ in deaerated PhCN with 0.1 M Bu_4NPF_6 at room temperature. $[\text{C}_{60}\text{C-H}_4\text{-Ptz-CPD}_{\text{Py}}(\text{TEO})] = 0.4$ mM. The oxidation wave at 0.3 V corresponds to phenothiazine unit.