Supporting Information

Stable organic dyes based on the benzo[1,2-b:4,5-b′] dithiophene donor for efficient dye-sensitized solar cells

Yi-Fan Chen, [a] *Jun-Min Liu,* [a,*]*Jian-Feng Huang,* [a] *Li-Lin Tan,* [a] *Yong Shen,*[a] *Li-Min Xiao,* [b] *Dai-Bin Kuang* [a] *and Cheng-Yong Su* [a, *]

[a] MOE Laboratory of Bioinorganic and Synthetic Chemistry/KLGHEI of Environment and Energy Chemistry, State Key Laboratory of Optoelectronic Materials and Technologies, Lehn Institute of Functional Materials, School of Chemistry and Chemical Engineering, Sun Yat-Sen University, Guangzhou, 510275, China.

[b] School of Computer Science and Engineering, Beihang University, Beijing, 100191, China.

To whom correspondence should be addressed. Tel: +86-20-84115178. Fax: +86-20-84115178. E-mail: liujunm@mail.sysu.edu.cn (J.-M. Liu); cesscy@mail.sysu.edu.cn (C.-Y. Su)

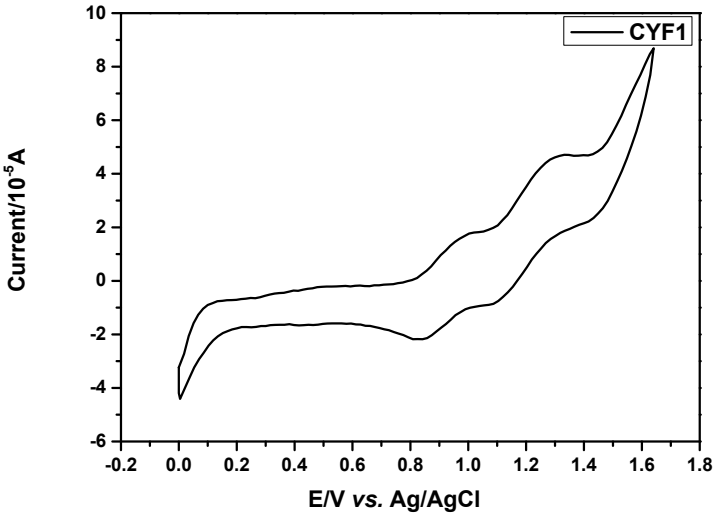


Figure S1. Cyclic voltammograms of **CYF1** on TiO_2 in 0.1 M $TBAPF_6$ of CH_2Cl_2 solution measured with a scan rate of 50 mV s^{-1}.

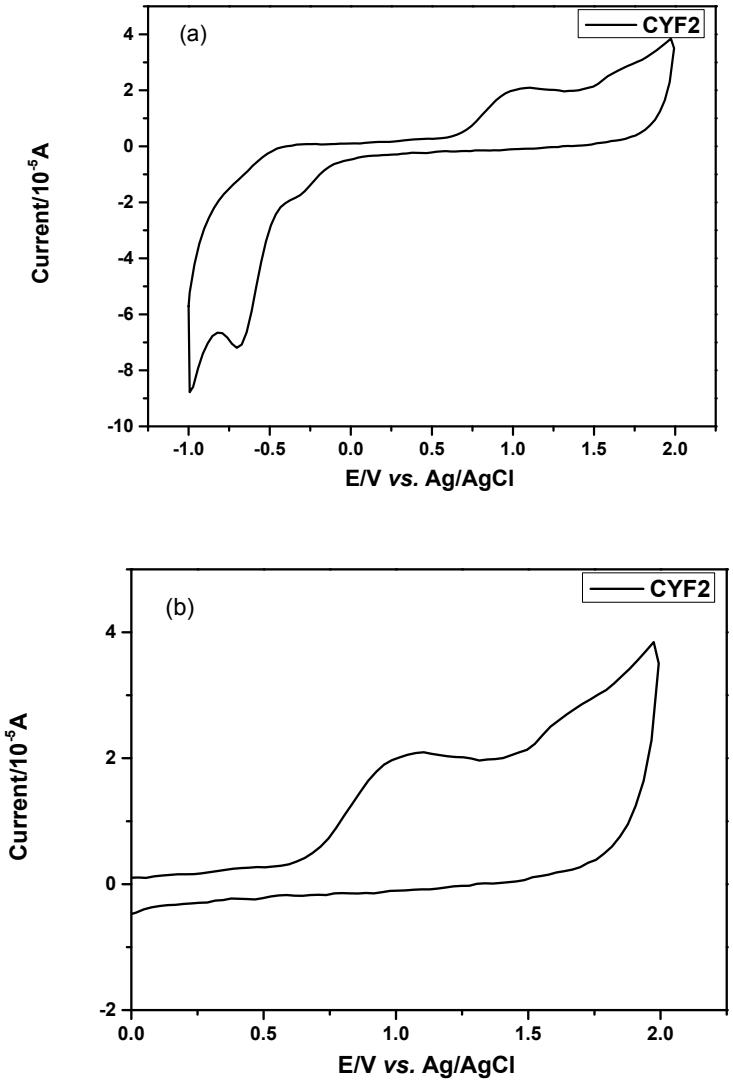


Figure S2. (a) Cyclic voltammograms and (b) partial cyclic voltammograms of **CYF2** on TiO_2 in 0.1 M $TBAPF_6$ of CH_2Cl_2 solution measured with a scan rate of 50 mV s^{-1}.

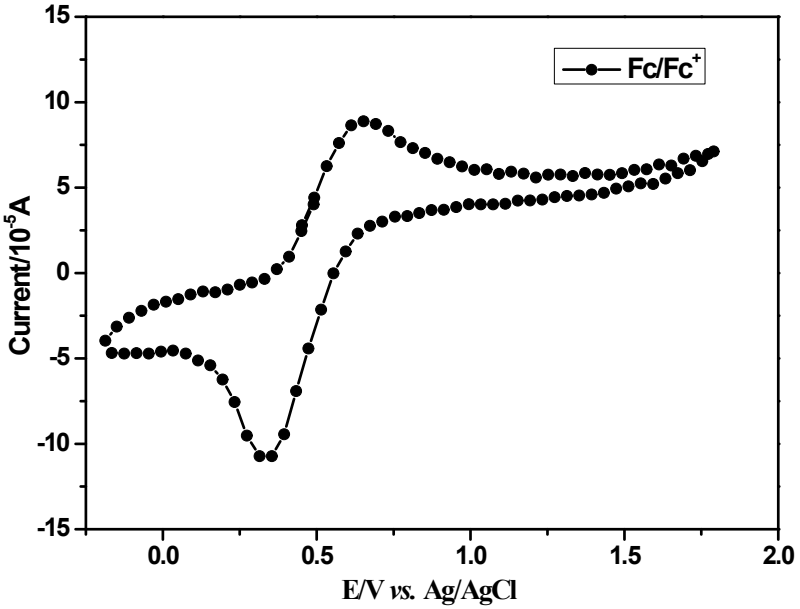
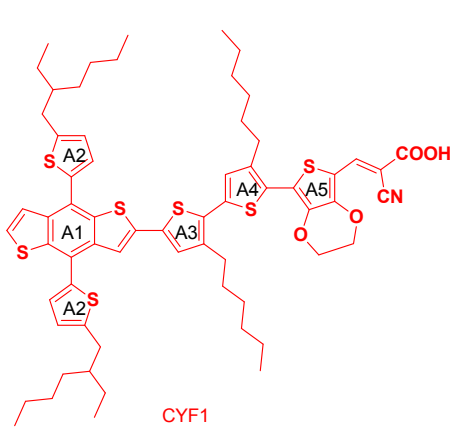
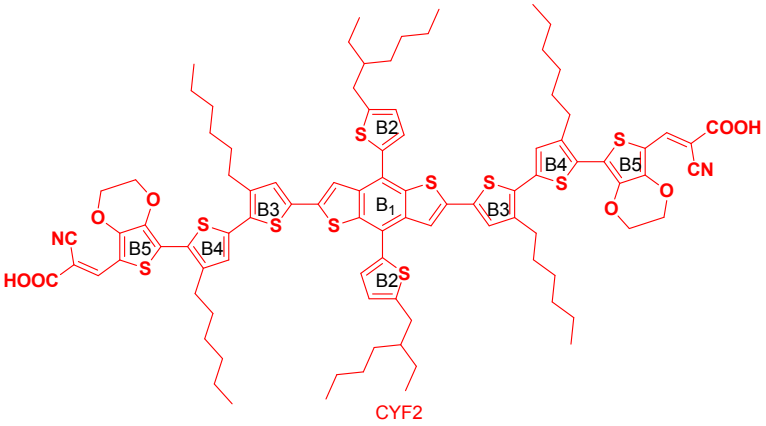


Figure S3. Cyclic voltammograms of Fc/Fc^+ in 0.1 M $TBAPF_6$ of CH_2Cl_2 solution measured with a scan rate of 50 mV s^{-1}.

Table S1 The dihedral angles between the phenyl planes and thiophene units in **CYF1** and **CYF2** sensitizers.





CYF1	Angle(°)	**CYF2**	Angle(°)
A1-A2	53.2°	B1-B2	53.5°
A1-A3	9.2°	B1-B3	9.7°
A3-A4	44.5°	B3-B4	24.6°
A4-A5	43.2°	B4-B5	44.5°