Electronic Supplementary Material (ESI) for Dalton Transactions. This journal is © The Royal Society of Chemistry 2014

## **Supporting information**

Diketopyrrolopyrrole based acceptors with multi-arms for organic solar cells

Po Sun, Xiangzhi Li, Yulong Wang, Haiquan Shan, Jiaju Xu, Changmei Liu, Cong

Zhang, Fei Chen, Zongxiang Xu,\* Zhi-kuan Chen\* and Wei Huang\*

1. Figure S1. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of SBF-4B.

2. Figure S2. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of SBF-2B.

3. Figure S3. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of DPP-C12.

4. Figure S4. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of DPPCHO.

5. Figure S5. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of DPPCHO-Br.

6. Figure S6. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of DPPDCV-Br.

7. Figure S7. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of SBF-4DPPDCV.

8. Figure S8. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of SBF-2DPPDCV.

9. Figure S9. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectra of SBF-1DPPDCV.

10. Figure S10. <sup>13</sup>C NMR(CDCl<sub>3</sub>) spectra of SBF-4DPPDCV.

11. Figure S11. <sup>13</sup>C NMR(CDCl<sub>3</sub>) spectra of SBF-2DPPDCV.

12. Figure S12. <sup>13</sup>C NMR(CDCl<sub>3</sub>) spectra of SBF-1DPPDCV.



Figure S2. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectrum of SBF-2B.







Figure S4. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectrum of DPPCHO.



Figure S5. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectrum of DPPCHO-Br.



Figure S6. <sup>1</sup>H NMR(CDCl<sub>3</sub>) spectrum of DPPDCV-Br.

















Figure S12. <sup>13</sup>C NMR(CDCl<sub>3</sub>) spectrum of SBF-1DPPDCV.