

## Supporting Information

### A New Solution-Processed Diketopyrrolopyrrole Donor for Perylene-Diimide Based Non-Fullerene Small-Molecular Solar Cell †

Yuxia Chen,<sup>ab</sup> Ailing Tang,<sup>a</sup> Xin Zhang,<sup>a</sup> Zhenhuan Lu,<sup>a</sup> Jianhua Huang,<sup>a</sup> Chuanlang Zhan,<sup>\*a</sup> and  
Jiannian Yao<sup>\*a</sup>

<sup>a</sup> Beijing National Laboratory of Molecular Science, CAS Key Laboratory of Photochemistry,  
Institute of Chemistry, Chinese Academy of Sciences, Beijing, P. R. China. E-mail:  
clzhan@iccas.ac.cn; jnyao@iccas.ac.cn; Fax: +86-10-82616517

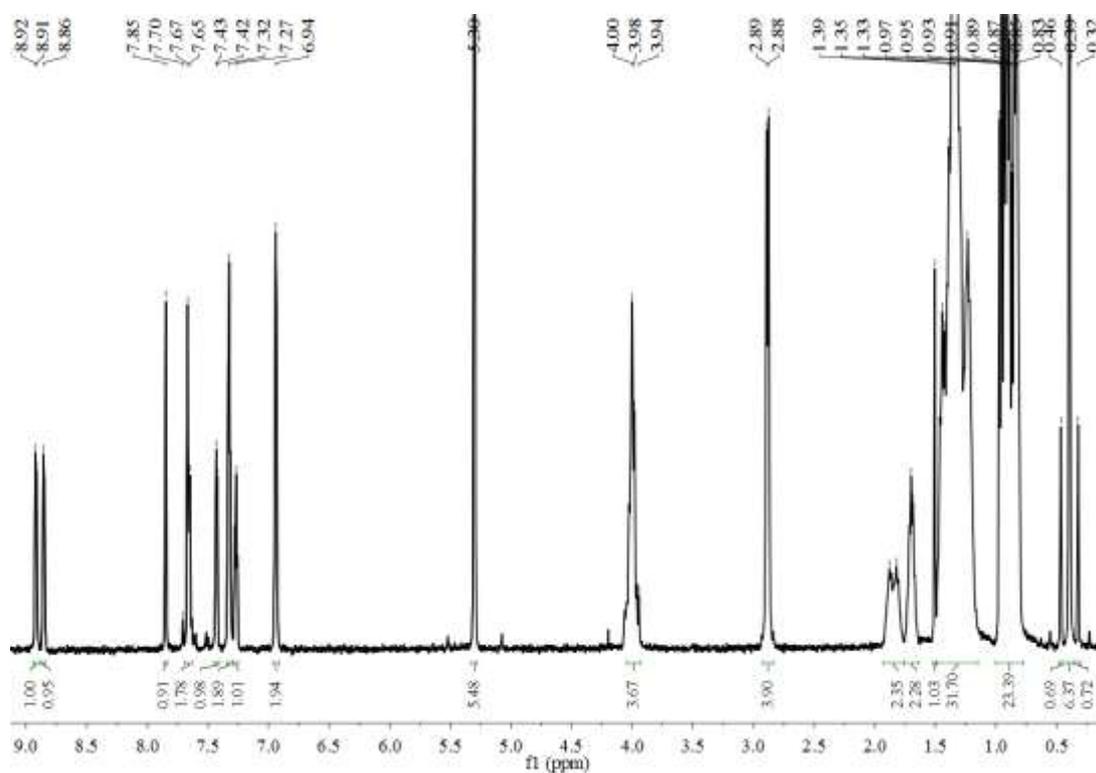
<sup>b</sup> University of Chinese Academy of Sciences, Beijing 100039, P. R. China

#### Content:

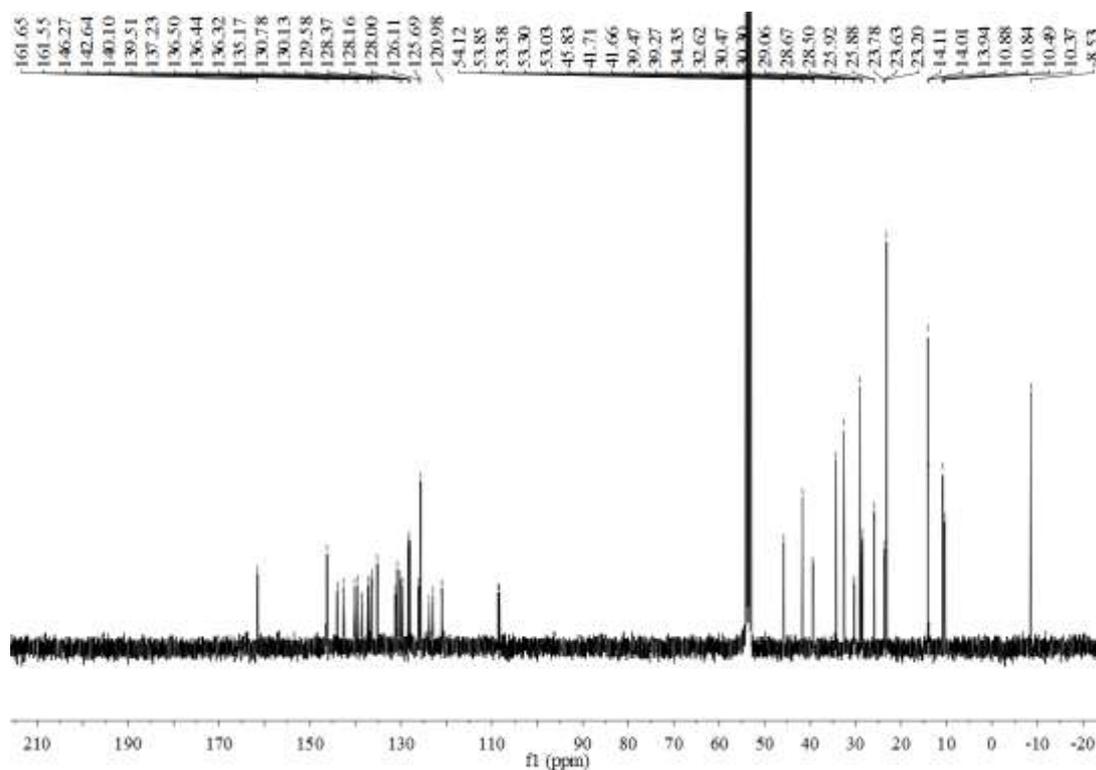
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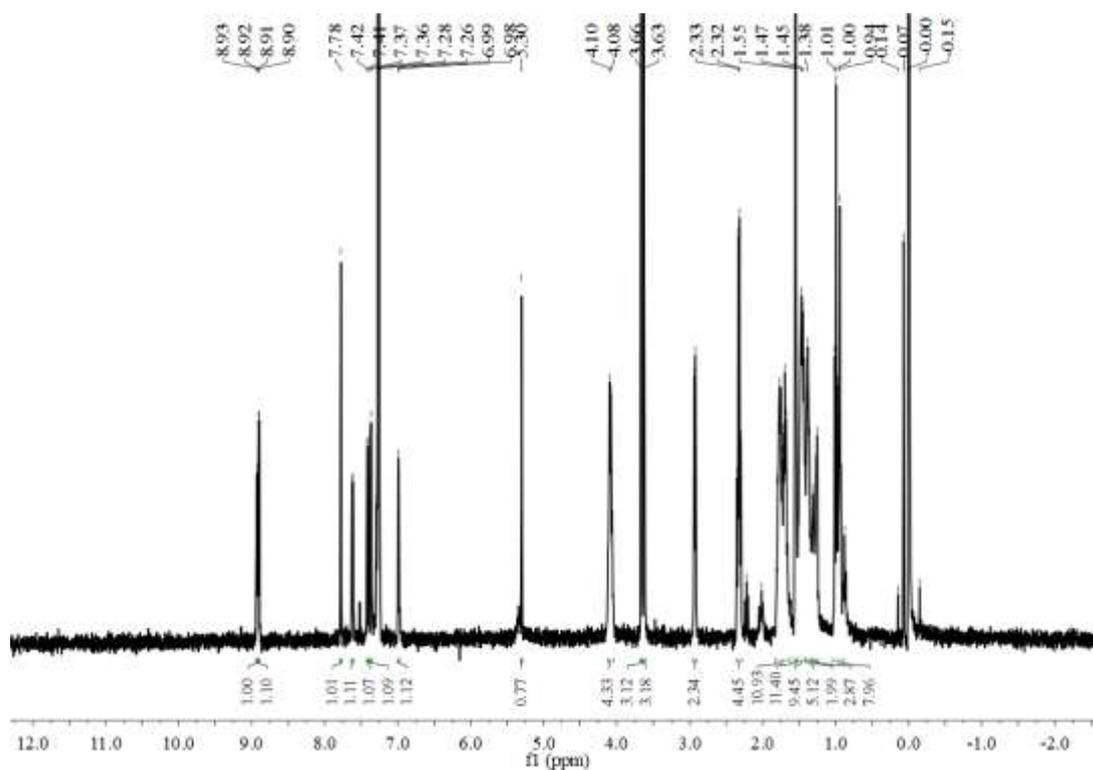
**Figure S1.** The  $^1\text{H-NMR}$  spectra of DPP-BDT-SnMe<sub>3</sub>.



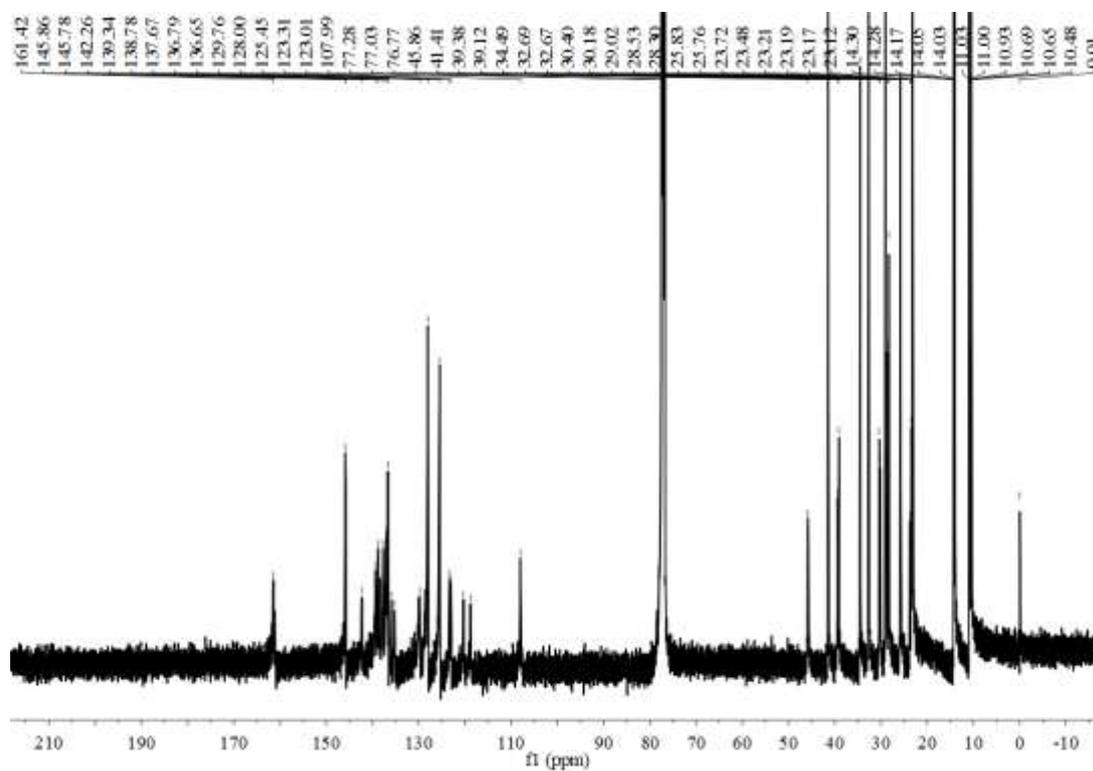
**Figure S2.** The  $^{13}\text{C-NMR}$  spectra of DPP-BDT-SnMe<sub>3</sub>.



**Figure S3.** The  $^1\text{H-NMR}$  spectra of DPP-BDT-T.



**Figure S4.** The  $^{13}\text{C-NMR}$  spectra of DPP-BDT-T.



## Supporting Tables

**Table S1.** The device performances of NF-SMSCs based on DPP-BDT-T: Bis-PDI-T-EG.

D:A	DIO [%]	PCE[%]	$J_{sc}$ [mA·cm <sup>-2</sup> ]	$V_{oc}$ [V]	FF
1:1	0	0.12	0.70	0.78	0.23
1:1	1	0.64	2.09	0.81	0.38
1:1	1.5	1.50	3.52	0.83	0.51
1:1	2	1.62	3.79	0.83	0.51
1:1	2.5	1.52	3.69	0.83	0.50
1:1	3	1.01	2.58	0.82	0.47
1:2	2	0.64	2.23	0.80	0.36
2:1	2	1.09	3.35	0.80	0.41

**Table S2.** The device performances of NF-SMSCs based on DPP-BDT-T: PC61BM.

D:A	DIO [%]	PCE[%]	$J_{sc}$ [mA·cm <sup>-2</sup> ]	$V_{oc}$ [V]	FF
4:3		1.74	6.42	0.71	0.38
1:1		2.08	6.15	0.70	0.48
3:4	0.5	1.80	5.46	0.70	0.47
1:2		0.96	4.24	0.71	0.32
1:3		0.40	2.16	0.62	0.29