## **Supplementary Information for**

## Tailoring $\pi$ -Conjugated Dithienosilole–Benzothiadiazole Oligomers for Organic Solar Cells

Xuelong Huang, Guichuan Zhang, Cheng Zhou, Shengjian Liu, Jie Zhang, Lei Ying,\* Fei Huang,\* Yong Cao

State Key Laboratory of Luminescent Materials and Devices, and Institute of Polymer Optoelectronic Materials and Devices, South China University of Technology, Guangzhou 510640, China.

## **Content:**

- Figure S1.<sup>1</sup>H NMR spectrum of **DA** in CDCl<sub>3</sub>.
- Figure S2. <sup>13</sup>C NMR spectrum of DA in CDCl<sub>3</sub>.
- Figure S3. <sup>1</sup>H NMR spectrum of ADA in CDCl<sub>3</sub>.
- Figure S4. <sup>13</sup>C NMR spectrum of ADA in CDCl<sub>3</sub>.
- Figure S5. <sup>1</sup>H NMR spectrum of DAD in CDCl<sub>3</sub>.
- Figure S6. <sup>13</sup>C NMR spectrum of DAD in CDCl<sub>3</sub>.
- Figure S7. <sup>1</sup>H NMR spectrum of **DADAD** in CDCl<sub>3</sub>.
- Figure S8. <sup>13</sup>C NMR spectrum of DADAD in CDCl<sub>3</sub>.
- Figure S8. <sup>13</sup>C NMR spectrum of DADAD in CDCl<sub>3</sub>.
- Figure S9. <sup>1</sup>H NMR spectrum of dBr-ADA in CDCl<sub>3</sub>.

Figure S10. <sup>13</sup>C - NMR spectrum of dBr-ADA in CDCl<sub>3</sub>.



Figure S1.<sup>1</sup>H - NMR spectrum of DA in CDCl<sub>3</sub>.



Figure S2. <sup>13</sup>C - NMR spectrum of DA in CDCl<sub>3</sub>.



Figure S3. <sup>1</sup>H - NMR spectrum of ADA in CDCl<sub>3</sub>.



Figure S4. <sup>13</sup>C - NMR spectrum of ADA in CDCl<sub>3</sub>.



Figure S5. <sup>1</sup>H - NMR spectrum of DAD in CDCl<sub>3</sub>.



Figure S6. <sup>13</sup>C - NMR spectrum of DAD in CDCl<sub>3</sub>.



Figure S7. <sup>1</sup>H - NMR spectrum of DADAD in CDCl<sub>3</sub>.



Figure S8. <sup>13</sup>C - NMR spectrum of DADAD in CDCl<sub>3</sub>.



Figure S9. <sup>1</sup>H - NMR spectrum of dBr-ADA in CDCl<sub>3</sub>.



Figure S10. <sup>13</sup>C - NMR spectrum of dBr-ADA in CDCl<sub>3</sub>.