Electronic Supplementary Information

Enhanced device performance of polymer solar cells by planarization of quinoxaline derivative in a low bandgap polymer

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Figure S1. $^1$H NMR spectrum of compound 3 in CDCl$_3$. 
Figure S2. $^1$H NMR spectrum of TPQx in CDCl$_3$.

Figure S3. $^1$H NMR spectrum of compound 5 in CDCl$_3$. 
**Figure S4.** $^1$H NMR spectrum of TBPz in CDCl$_3$.

**Figure S5.** $^1$H NMR spectrum of PFTPQx in CDCl$_3$. 
**Figure S6.** $^1$H NMR spectrum of PFTBPz in CDCl$_3$.

**Figure S7.** $^1$H NMR spectrum of PCTPQx in CDCl$_3$. 
Figure S8. $^1$H NMR spectrum of PCTBPz in CDCl$_3$.

Figure S9. TEM images of polymer:PC$_{71}$BM (1:3 w/w) films.