Electronic Supplementary Information

Precise control over reduction potential of fulleropyrrolidines for organic photovoltaic materials

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Fig. S1 illustrates the advantages of the Prato reaction including the ease of synthesis and scale up, without the need for a metal catalyst.

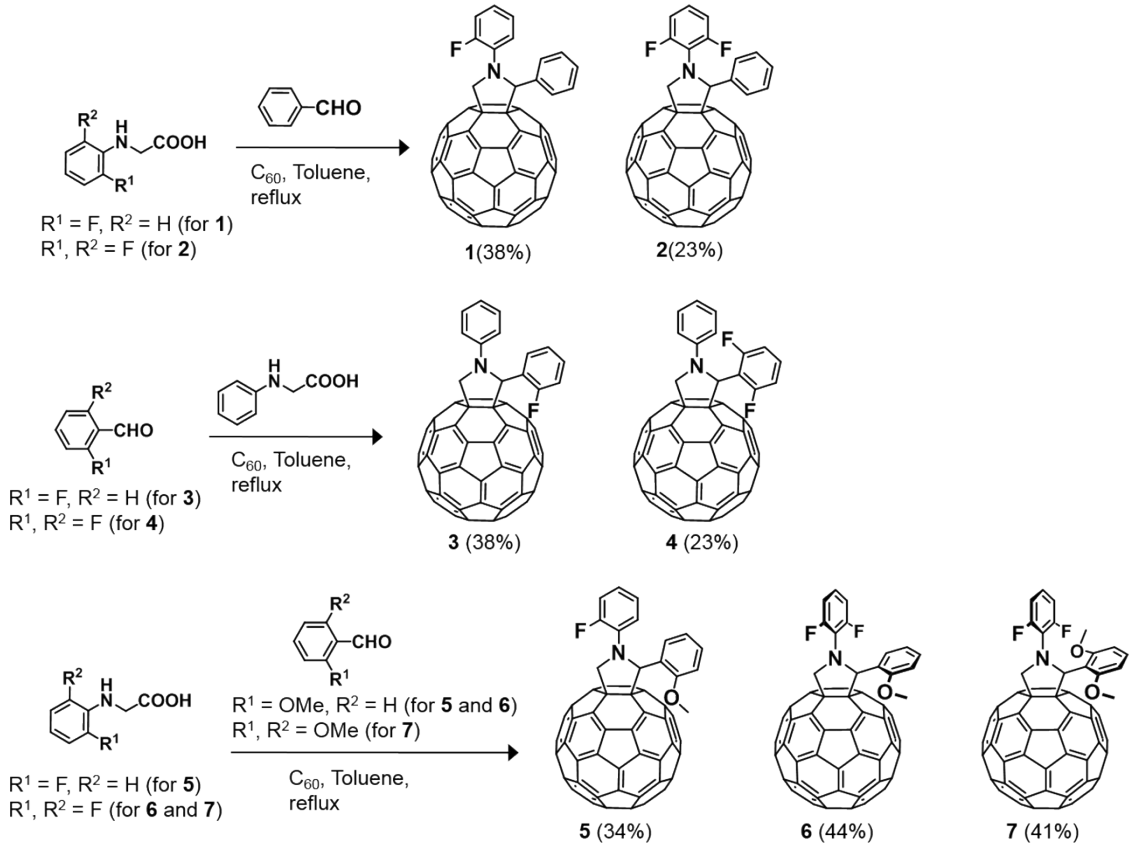


Fig. S1. Synthetic procedure for fulleropyrrolidine derivatives.

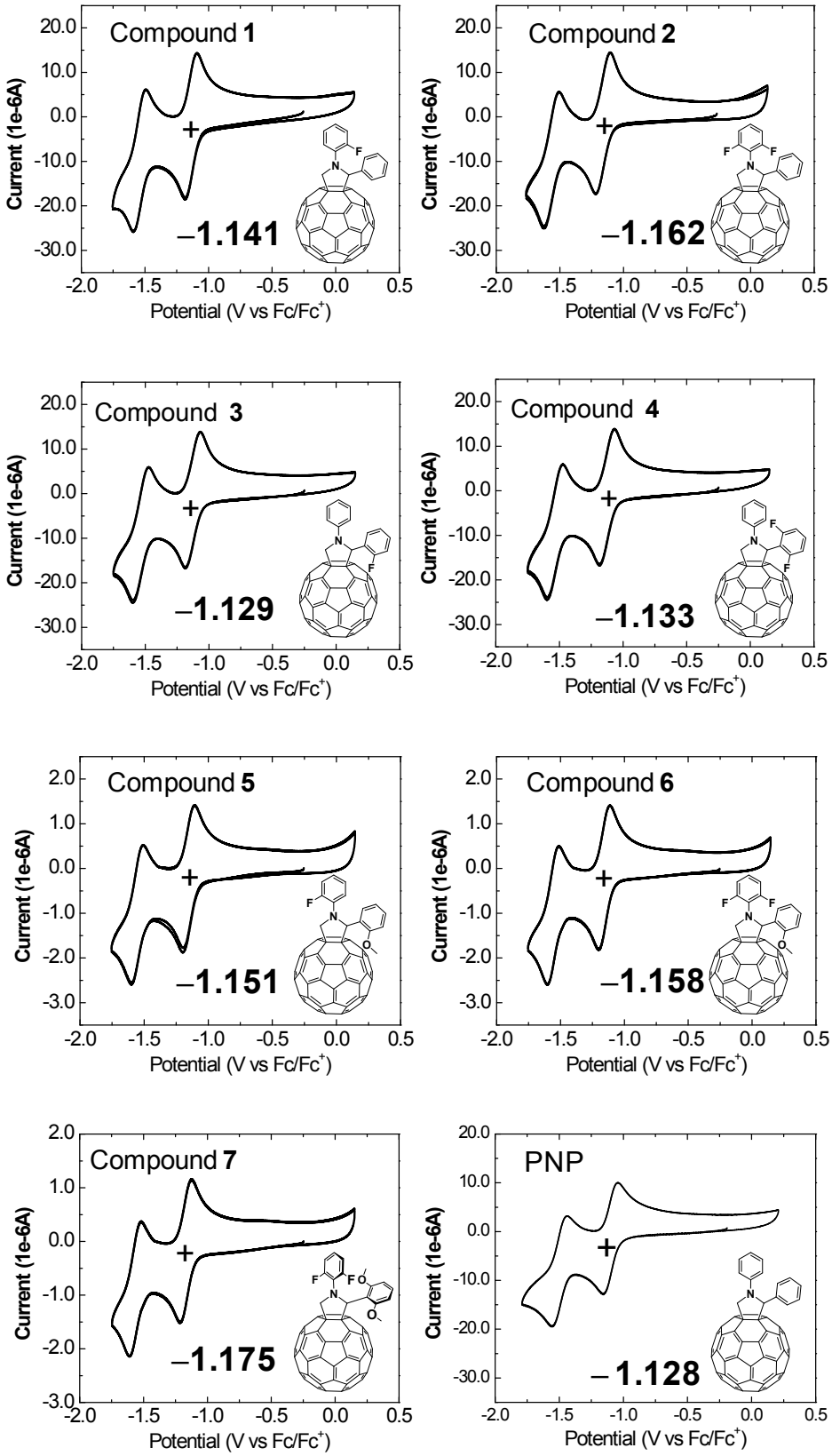


Fig. S2. Cyclic voltammograms of fulleropyrrolidine derivatives, **1**–**7** and PNP.

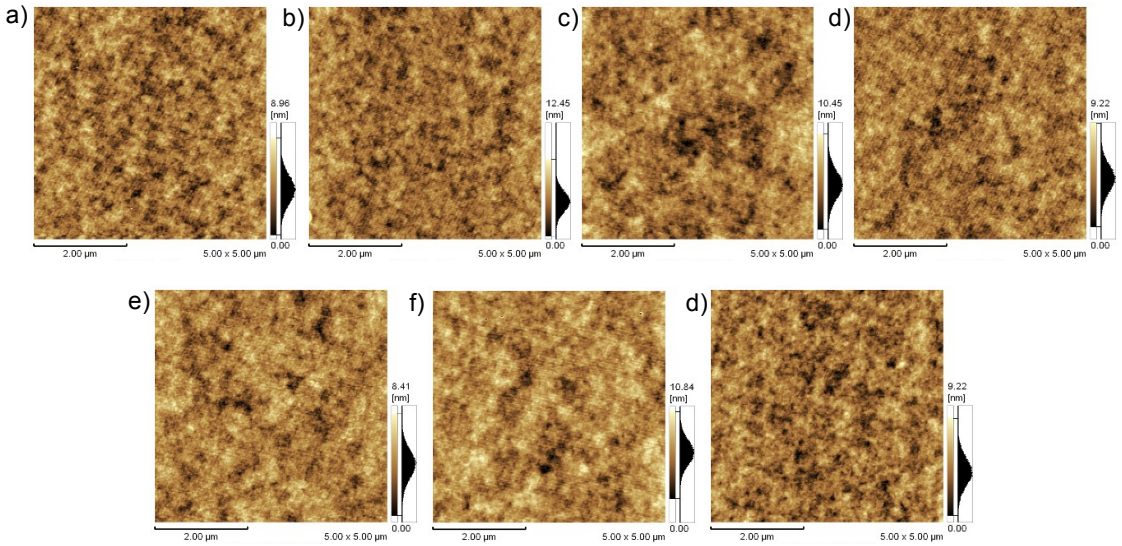
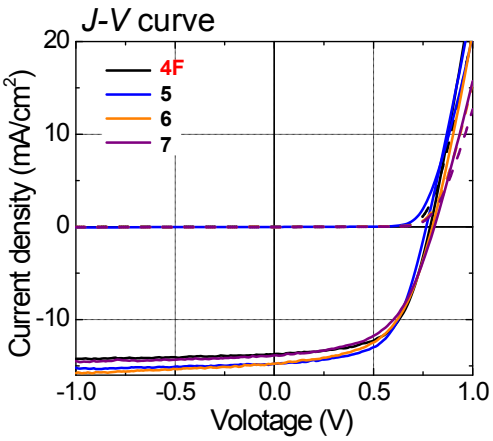
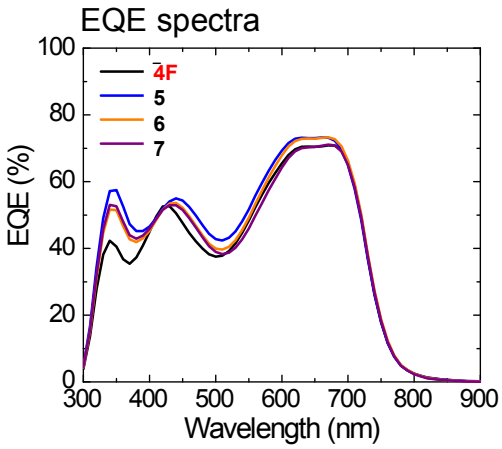
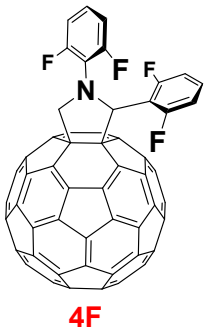


Fig. S3. Film surface morphology for OPV cells (PTB7:fulleropyrrolidine), a) **1**, b) **2**, c) **3**, d) **4**, e) **5**, f) **6** and d) **7**







	PTB7:**4F**	PTB7:**5**	PTB7:**6**	PTB7:**7**
J_{sc} (mA/cm²)	13.717 (13.985)	14.758 (14.493)	14.104 (14.105)	13.875 (13.552)
V_{oc} (V)	**0.786** (0.780)	**0.766** (0.768)	**0.792** **(0.795)**	**0.807** (0.809)
FF	0.600 (0.582)	0.598 (0.593)	0.654 (0.629)	0.545 (0.538)
PCE (%)	6.53 (6.33)	6.76 (6.59)	7.30 (7.05)	6.10 (5.90)

Average values are in parentheses.

Figure 4. *J-V* curves and EQE spectra of compound 4F with 5, 6 and 7.