Exfoliation and supramolecular functionalization of graphene with an electron donor perylenediimide derivative

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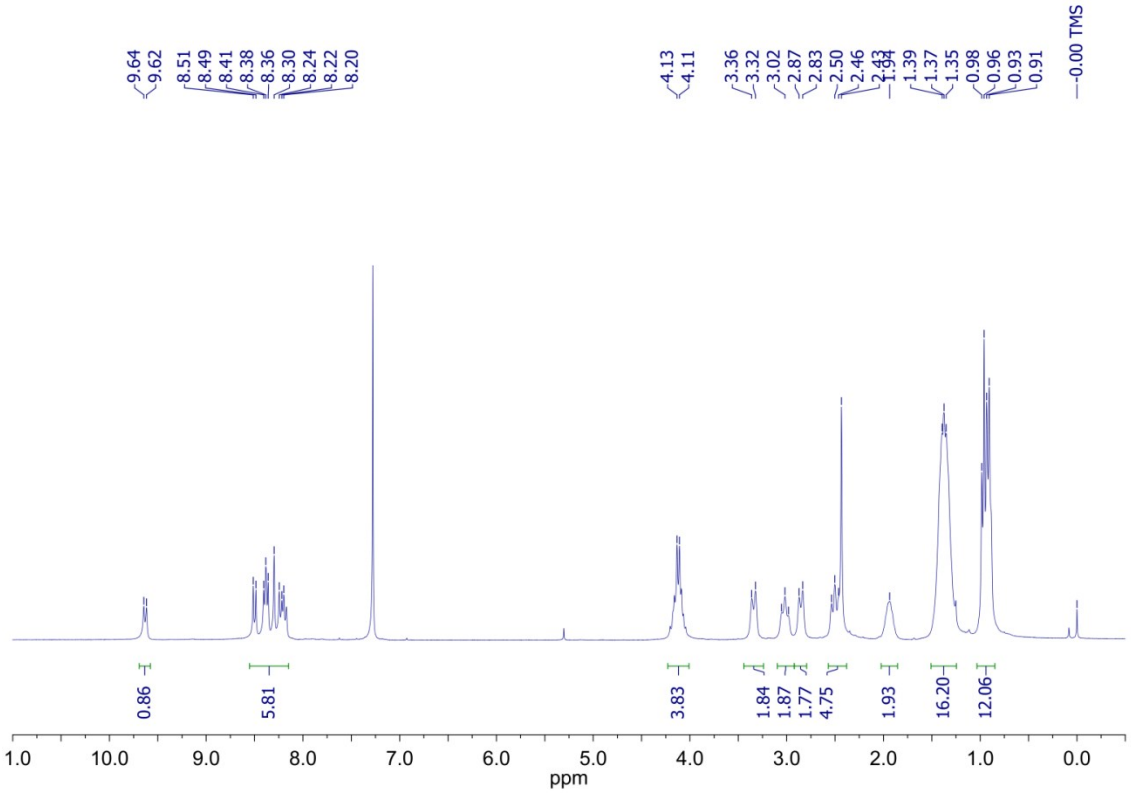

Figure S1: ^{1}H NMR spectrum of **Pip-PDI** in $CDCl_3$.

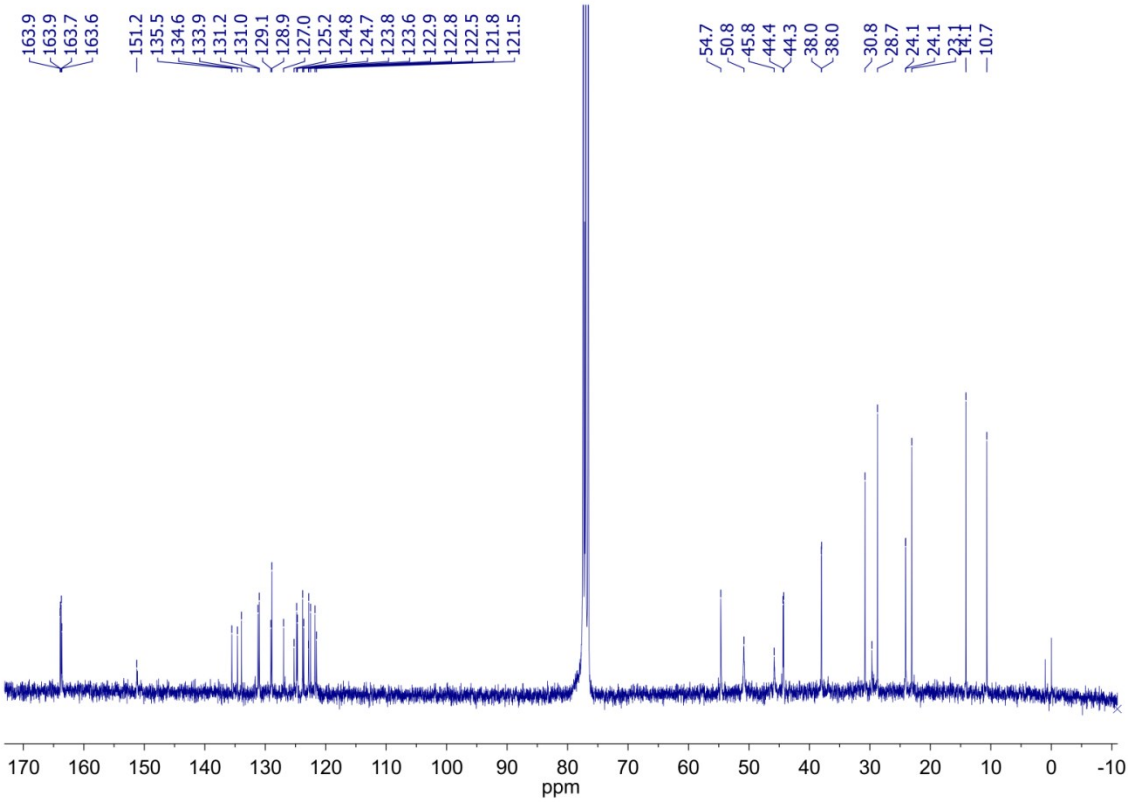

Figure S2: ^{13}C NMR spectrum of **Pip-PDI** in $CDCl_3$.

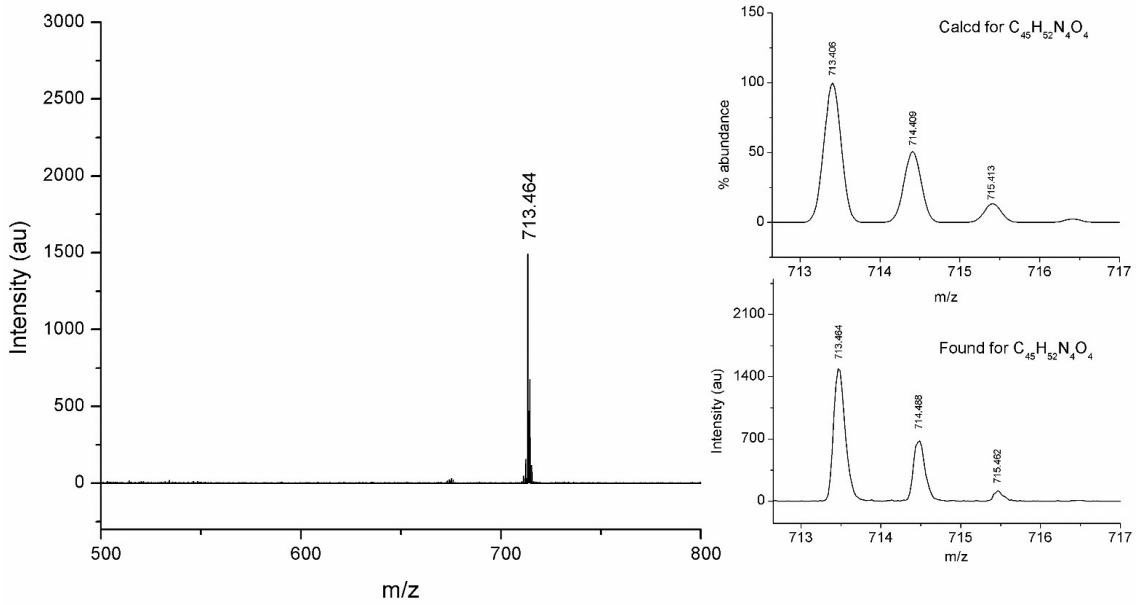

Figure S3: HR-MALDI-TOF of **Pip-PDI**.

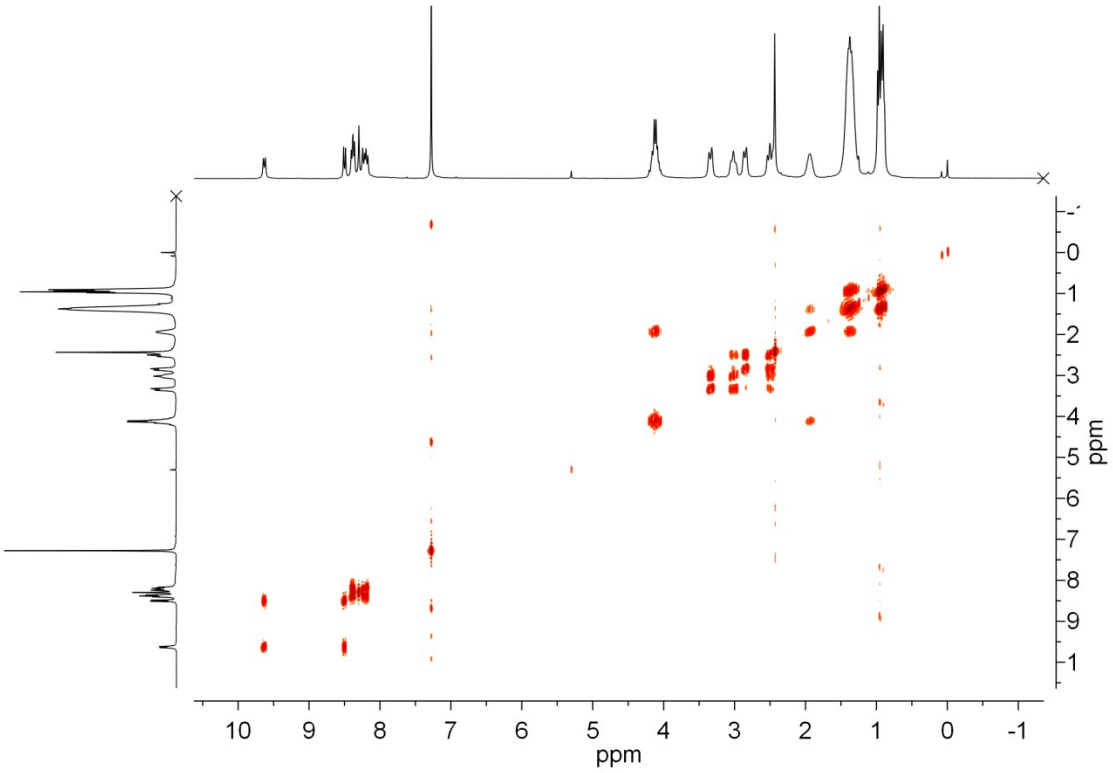

Figure S4: COSY spectrum of **Pip-PDI**.

NMR titration assays

The NMR titration of Pip-PDI with CF_3CO_2H was performed as follows. An initial volume of 500 µL of a 1.03 mM $CDCl_3$ solution of Pip-PDI was placed in a ^{1}H-NMR tube. Aliquots of a $CDCl_3$ solution containing CF_3CO_2H (15.68 mM) and Pip-PDI (1.03 mM) were subsequently added and a spectrum was recorded after each addition. Pip-PDI was added in order to obviate the need to account for dilution effects during the titrations. Once the titration was finished, enough 1,4-diazabicyclo[2.2.2]octane (DABCO) was added to the NMR tube to neutralize CF_3CO_2H, taking care to use a 1.03 mM $CDCl_3$ Pip-PDI solution as carrier, in order to obviate the need to account for dilution effects

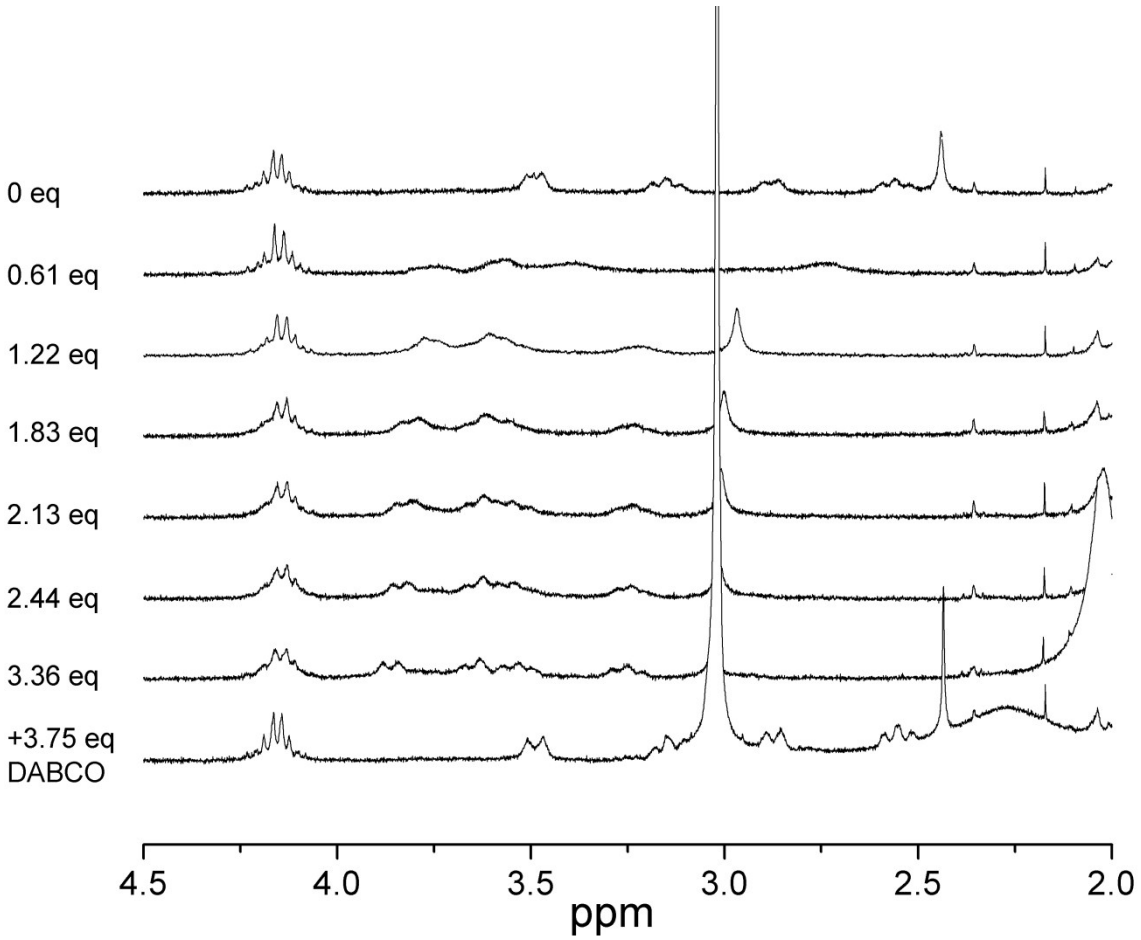

Figure S5: ^{1}H-NMR titration assays of **Pip-PDI** with TFA and DABCO.

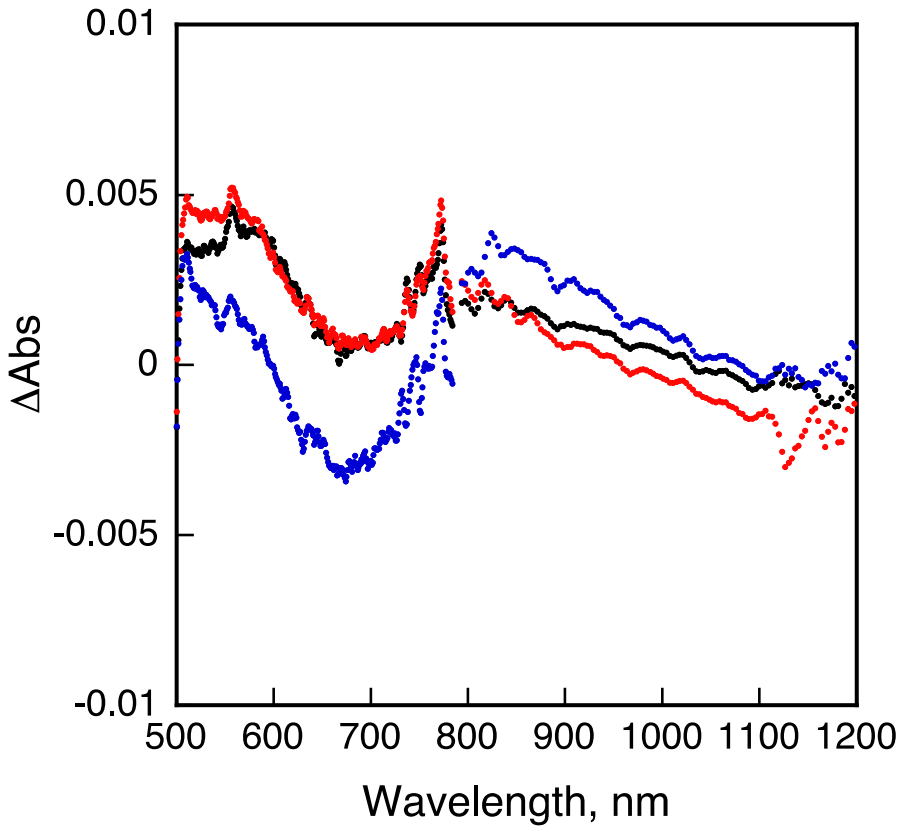

Figure S6: Femtosecond flash photolysis of the Pip-PDI/ graphene hybrid.