ELECTRONIC SUPPLEMENTARY INFORMATION

Supramolecular Complexation of C_{60} with Branched Polyethylene

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General Considerations. All reagents were used as received unless otherwise specified. C_{60} was purchased from Sigma-Aldrich. BPE was purchased from PolyAnalytik Inc (London, Ontario). All other solvents were purchased from Caledon. Optical absorbance spectra were collected using a VWR UV-1600PC spectrophotometer, and processed using M.Wave software version 1.0.20. Molecular weights were determined by GPC using a Viscotek GPCmax, TDA302, and UV Detector 2600 with a TSKgel GMHHR-M column that was calibrated with narrow dispersity polystyrene standards (THF, 30°C), and processed using OmniSEC software version 4.6.2. DOSY was performed on a Bruker 300 MHz spectrometer at 298 K, and processed using MestReNova software version 14.3.1-31739. FTIR spectroscopy was performed on a Bruker ALPHA FTIR spectrometer using a Platinum ATR sampling module. Confocal Raman spectroscopy was carried out using a WiTec Raman system equipped with a 532 nm laser source processed using Project FOUR 4.0 software. Laser power was set to 1 mW at an integration time of 10 seconds per scan for a total of 10 scans per sample. TGA was performed on a TA Instruments TGA5500. Nitrogen (99.999%) was used to purge the systems at a flow rate of 60 mL/min. All samples were run in aluminum crucibles. TGA samples were held at 25°C for 30 min before heating to 600°C at a rate of 10°C/min.

Preparation of C_{60}+BPE complex. To a 20 mL glass vial, 11.0 mg of C_{60}, 110.0 mg of BPE, and 11.0 mL of chloroform were added. The mixture was sonicated for 30 minutes in a sonication bath, then left undisturbed under ambient conditions.

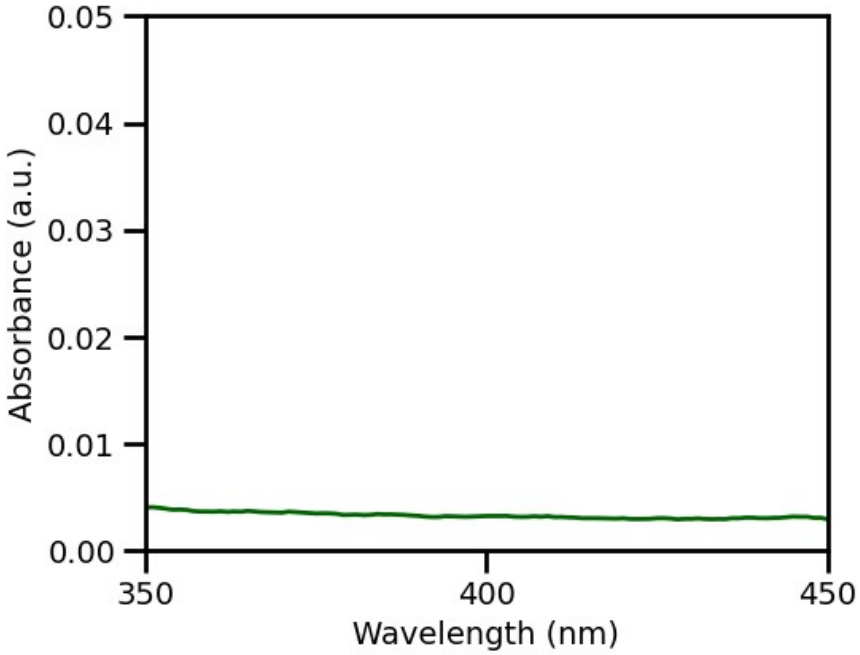

Figure S1. Optical absorbance spectrum of BPE acquired in chloroform.

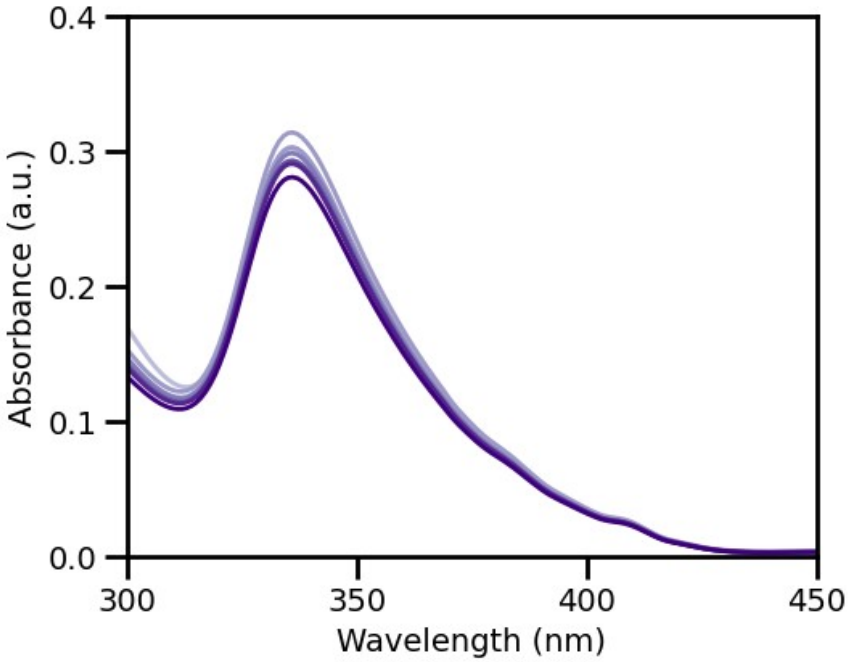

Figure S2. Optical absorbance spectra of C_{60} acquired in *o*-xylene, collected in 1-week intervals over a 10-week period.

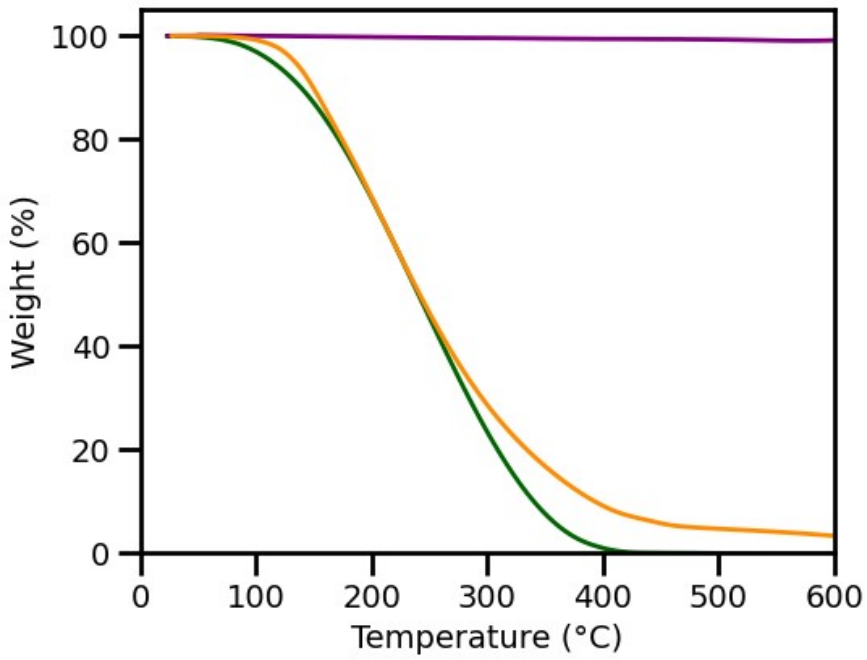

Figure S3. TGA profiles of BPE (green), C_{60} (purple), and C_{60}+BPE (orange).