

Sensitization of Fullerenes by Covalent Attachment of a Diketopyrrolopyrrole Chromophore

*Natalie Banerji,*¹ Mingfeng Wang,² Jian Fan,² Eneida S. Chesnut,² Fred Wudl,² Jacques-E. Moser¹*

¹Institute of Chemical Sciences & Engineering, Ecole Polytechnique Fédérale de Lausanne (EPFL), SB
ISIC GR-MO, Station 6, CH-1015 Lausanne, Switzerland. ²Center for Polymers and Organic Solids,
University of California, Santa Barbara, California 93106-5090, USA

Supporting Information

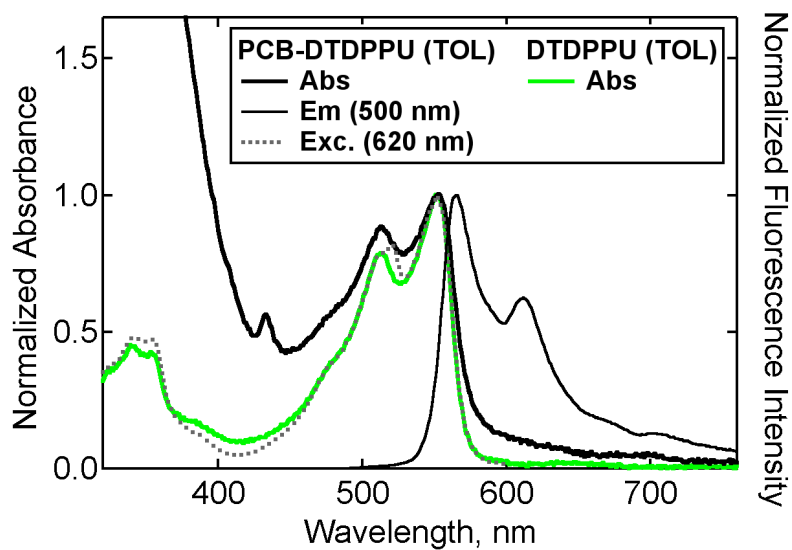


Figure S1. Steady-state absorption spectrum (thick line, left), fluorescence emission spectrum (thin line, right) and fluorescence excitation spectrum (dashed line, left) of PCB-DTDPPU in TOL. The absorption spectrum of the DTDPPU parent compounds is shown for comparison.

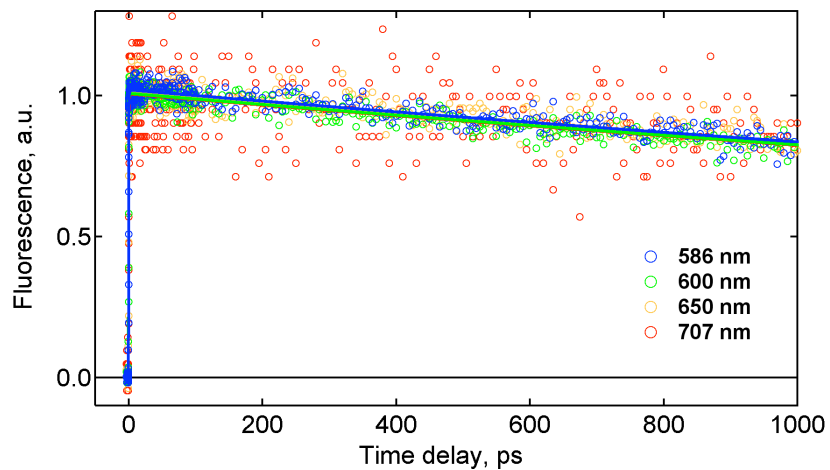


Figure S2. Femtosecond fluorescence time profiles of DTDPPU dissolved in DCB, recorded at various emission wavelengths (see legend) following excitation at 500 nm. The solid lines represent the best biexponential fits (convoluted with a 140 fs IRF).

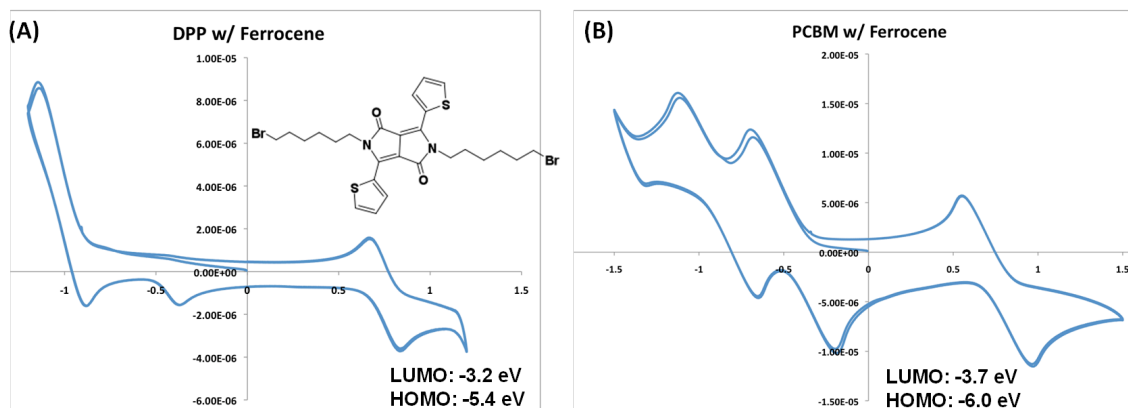


Figure S3. Cyclic voltammograms of DTDPPHB and PCBM in solution. The electrochemical measurements were carried out with a Princeton Applied Research Model 263 A Potentiostat/Galvanostat employing Ag/AgCl as reference electrode, a platinum wire as counter electrode, and an internal ferrocene/ferrocenium standard.

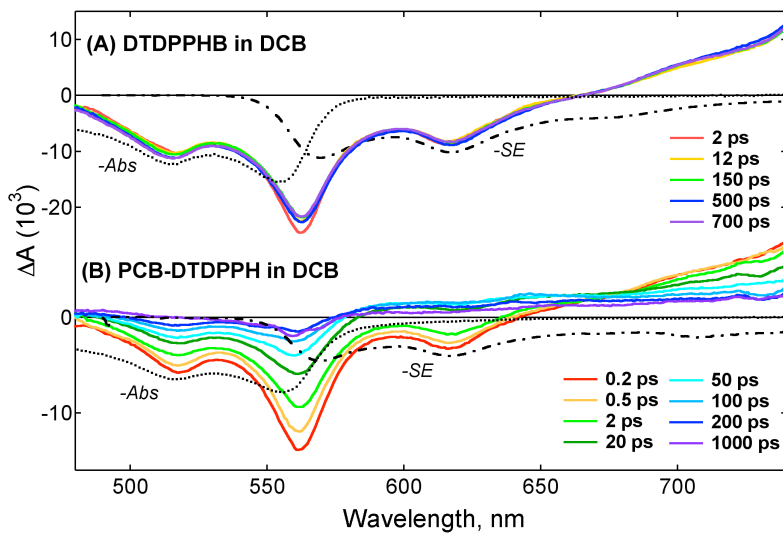


Figure S4. Femtosecond transient absorption spectra at various time delays after 560 nm excitation of (A) DTDPH in DCB and (B) PCB-DTDPH in DCB. The negative steady-state absorption spectra and stimulated emission spectra (steady-state emission multiplied by λ^4) are shown for comparison as dotted/dashed black lines.