**Supporting Information** 

## Unusual photophysical properties of conjugated, alternating indigo-fluorene copolymers

João Pina<sup>a)</sup>, J. Sérgio Seixas de Melo<sup>a)</sup>, Anika Eckert<sup>b)</sup>, Ullrich Scherf<sup>b)</sup>

a) Coimbra Chemistry Centre, Department of Chemistry, University of Coimbra, Rua Larga, 3004-535 Coimbra, Portugal

b) Makromolekulare Chemie, Bergische Universität Wuppertal, Gaußtraße 20, 42097 Wuppertal, Germany

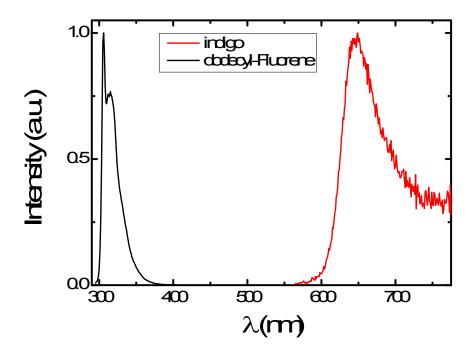


Figure S1: Normalized fluorescence emission spectra of 9,9-bis(dodecyl)fluorene and indigo in dioxane solution at room temperature.

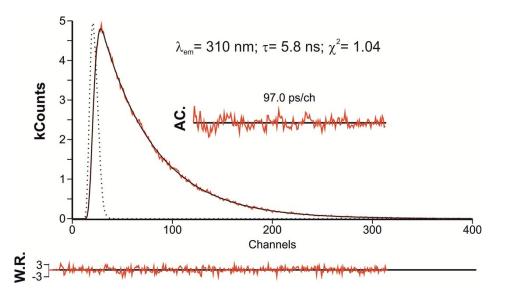


Figure S2: Room temperature fluorescence decay for 9,9-bis(dodecyl)fluorene obtained with  $\lambda_{exc}$ = 282 nm and collected at  $\lambda_{em}$ = 310 nm in dioxane solution. For a better judgment of the quality of the fits, weighted residuals (W.R.), autocorrelation function (A.C.) and  $\chi^2$  value are also presented. The dashed line in the decay is the instrumental response function.

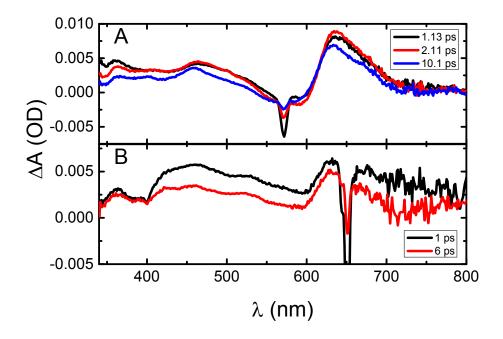


Figure S3: Femtosecond transient absorption difference spectra for indigo in dioxane solution collected at different time delays (excitation at (A) 285 nm and (B) 325nm).

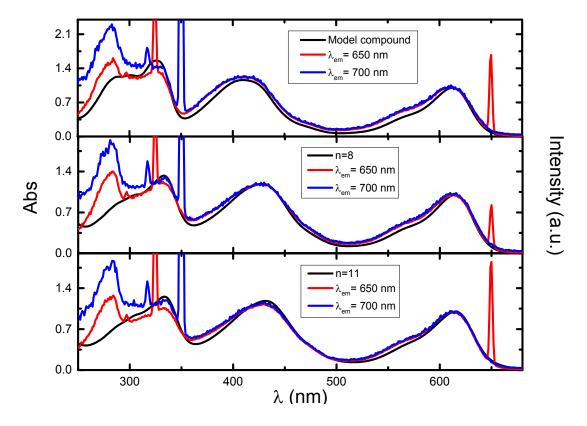


Figure S4: Absorption (black lines) and (normalized) fluorescence excitation (red and blue lines) spectra for the two copolymer fractions with n=8 and n=11, respectively, and the fluorene-indigo-fluorene trimer in dioxane solution at 293 K.