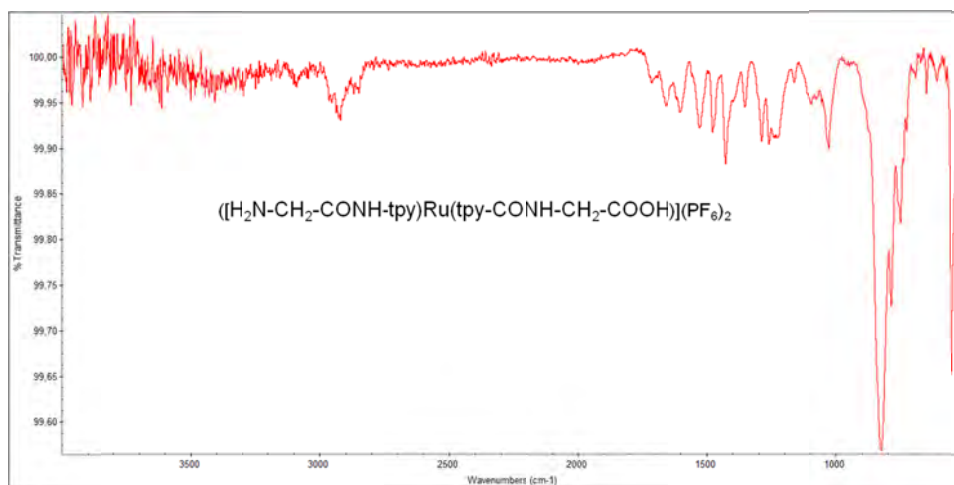


## Supporting Information

### Light-Induced Charge Separation in a Donor-Chromophore-Acceptor Nanocomposite Poly[TPA-Ru(tpy)<sub>2</sub>]@ZnO

- Fig. S1** FT-IR spectrum of [(H<sub>2</sub>N-Gly-CONH-tpy)Ru(tpy-CONH-Gly-COOH)](PF<sub>6</sub>)<sub>2</sub> (**A**)
- Fig. S2** <sup>19</sup>F NMR spectra of **P2** and **P3a**
- Fig. S3** FT-IR spectra of **P2**, **P3a** and **P3b**
- Fig. S4** TEM images
- Fig. S5** Topography image of **P3a**@ZnO
- Fig. S6** KPFM images of **P3b**@ZnO
- Fig. S7** Atom numbering of **A** used for NMR assignments
- Fig. S8** UV-Vis spectrum of **P3b** in THF

**Fig. S1 FT-IR spectrum of  $[(\text{H}_2\text{N-CH}_2\text{-CONH-tpy})\text{Ru}(\text{tpy-CONH-CH}_2\text{-COOH})](\text{PF}_6)_2$  (A).**



**Fig. S2 FT-IR spectra of P2 and P3a and 3b.**

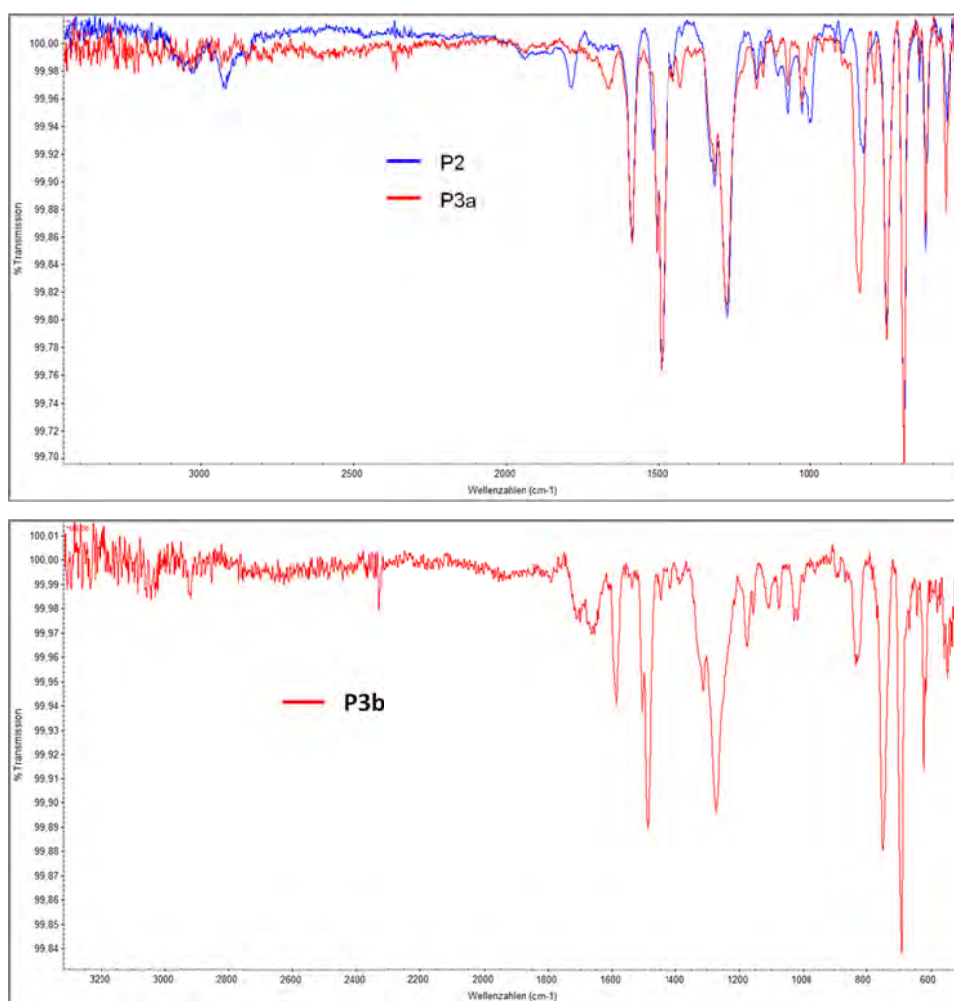


Fig. S3  $^{19}\text{F}$  NMR spectra of P2 and P3a in  $\text{CDCl}_3$ .

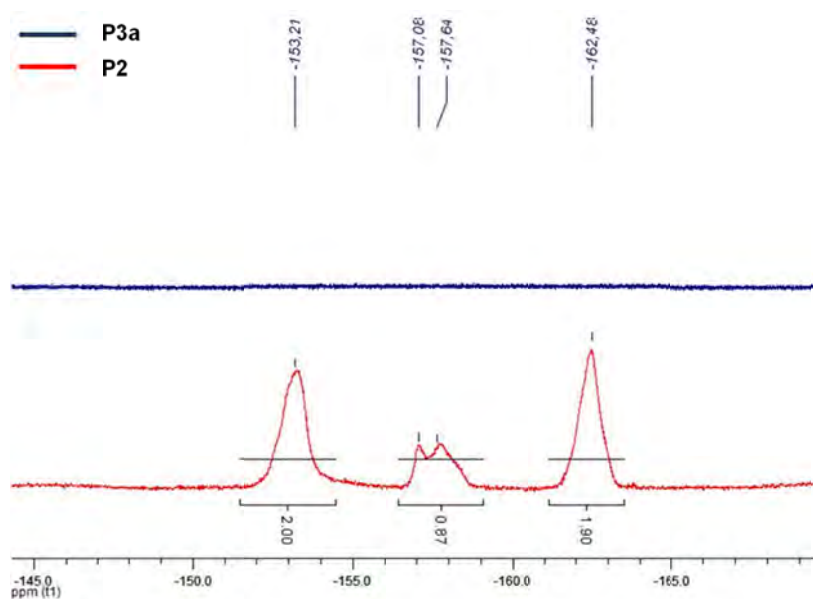


Fig. S4 TEM images of a) pristine ZnO. b) and c) P3a@ZnO, drop cast from THF.

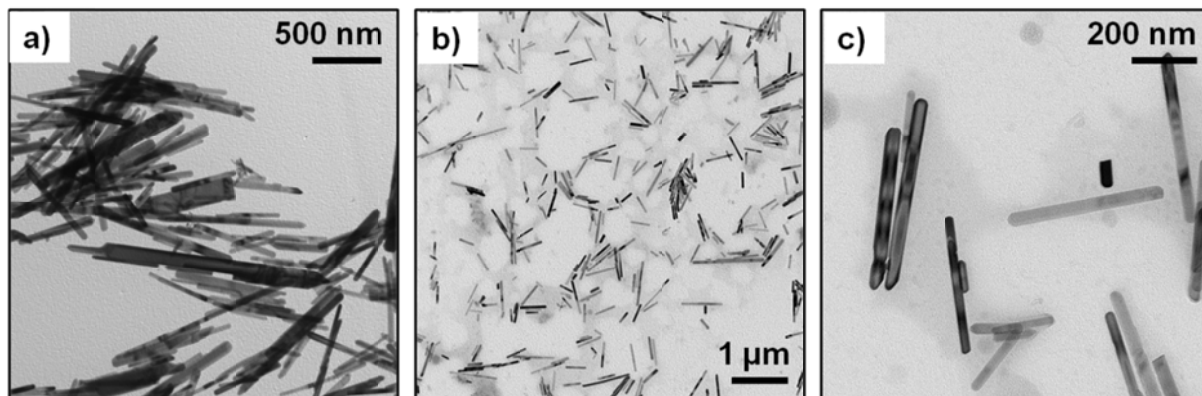
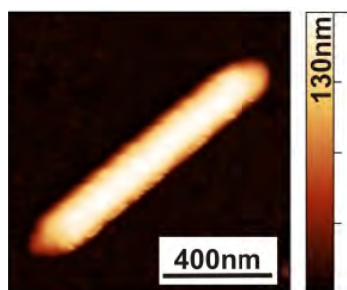
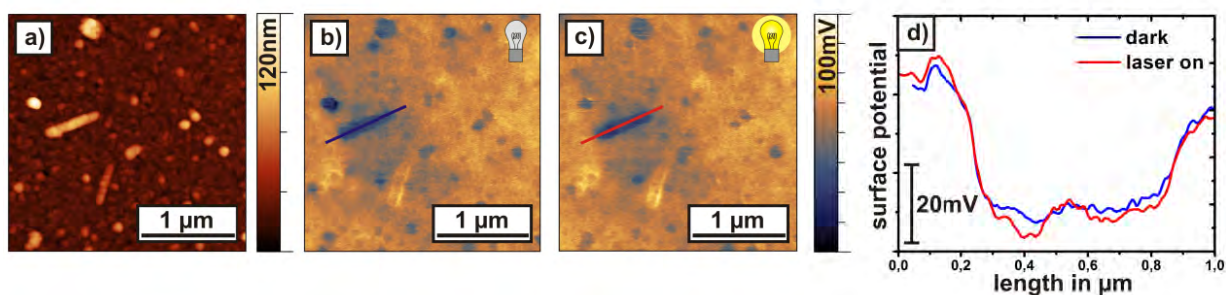


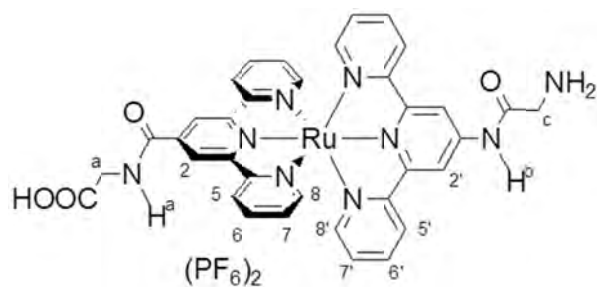
Fig. S5 Topography image of P3a@ZnO.



**Fig. S6** KPFM images of P3b@ZnO. a) Topography b) Surface potential map recorded in darkness. c) Surface potential map recorded under laser illumination of a wavelength of 488 nm. d) Line profile of the surface potential across the particle indicated by the line in the respective surface potential map. No photo-response was observed for this D-A system.



**Fig. S7** Atom numbering of A used for NMR assignments.



**Fig. S8** UV-Vis spectrum of P3b in THF.

