

-- **Electronic Supplementary Information** --

**Tuning the photodriven electron transport within the
columnar perylenediimide stacks by changing the π -
extent of the electron donors**

Mustafa Supur^a and Shunichi Fukuzumi^{*,a,b}

^aDepartment of Material and Life Science, Graduate School of Engineering, Osaka University, ALCA, Japan Science and Technology Agency (JST), Suita, Osaka 565-0871, Japan

^bDepartment of Bioinspired Science, Ewha Womans University, Seoul 120-750, Korea

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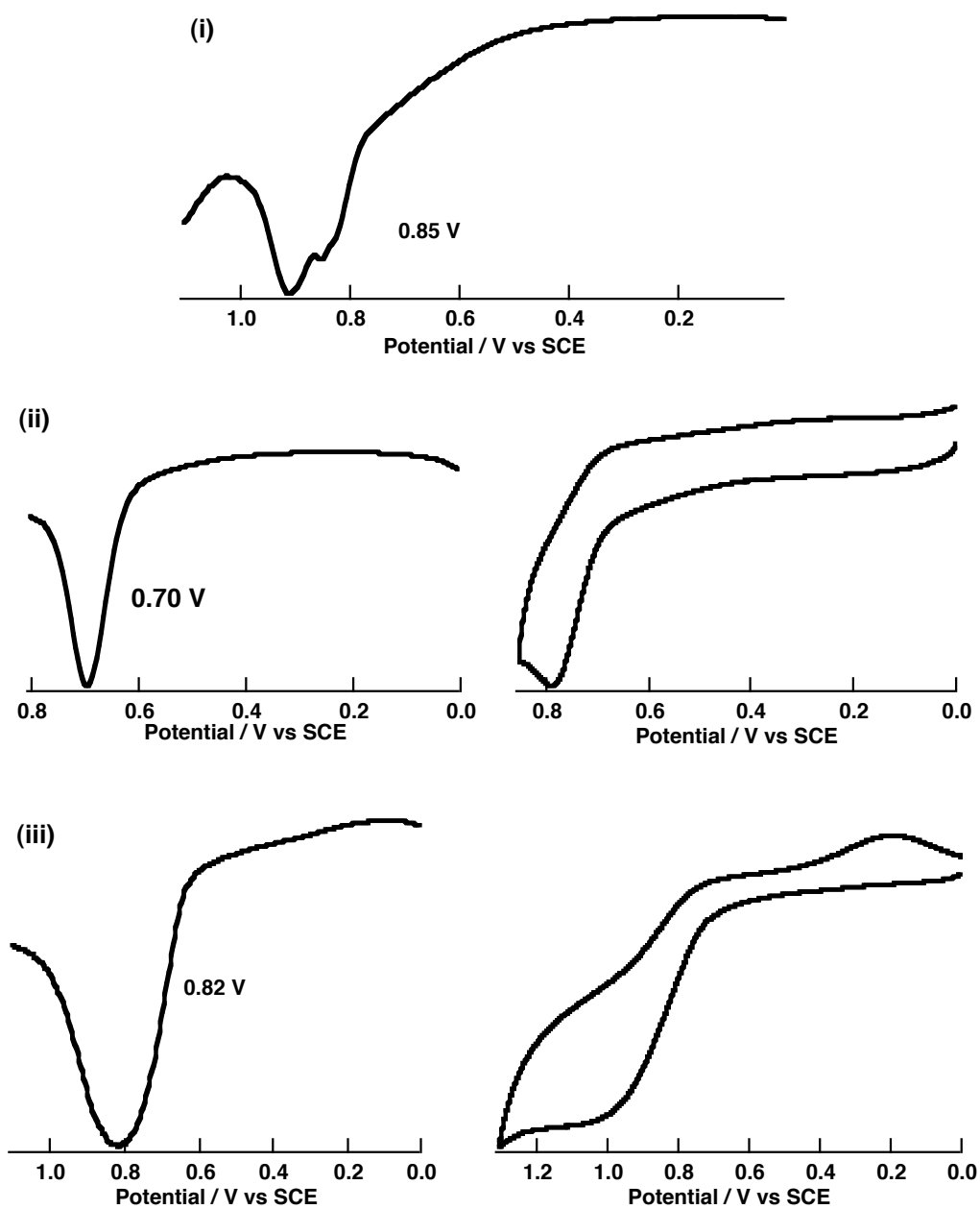


Fig. S1 (i) Differential pulse voltammogram of BSSBP, (ii) differential pulse and cyclic voltammograms of DANS, and (iii) differential pulse and cyclic voltammograms of ANADS in deaerated water containing 0.10 M Na₂SO₄ (sweep rate: 0.1 mV/s).

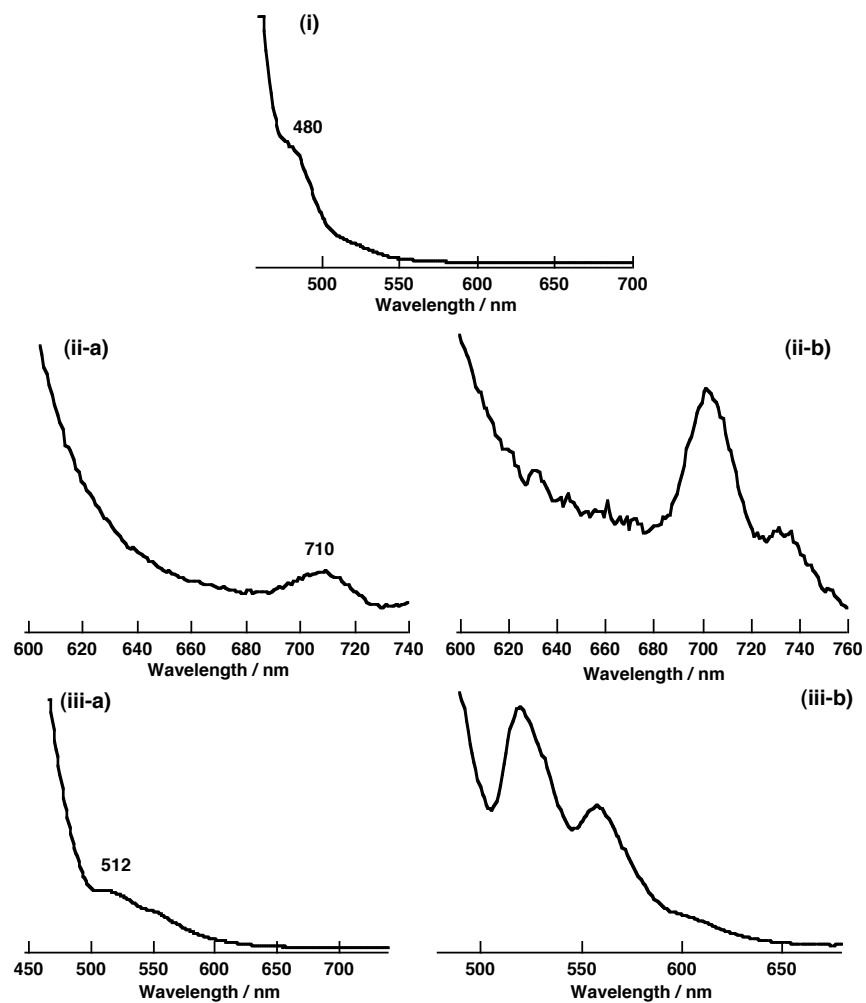


Fig. S2 Phosphorescence spectra of (i) BSSBP in MeTHF/EtOH, (ii-a) DANS in MeTHF/EtOH, (ii-b) 9,10-dimethylantracene in MeTHF, (iii-a) ANADS in MeTHF/EtOH, and (iii-b) naphthalene-2-amine in MeTHF containing MeI at 77 K.

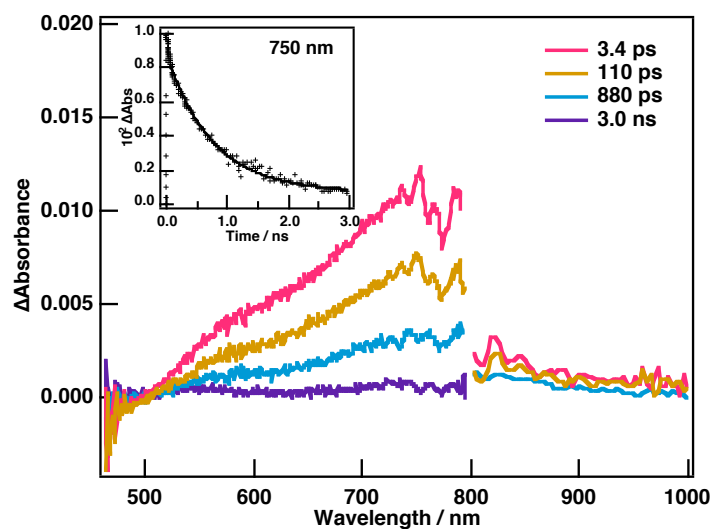


Fig. S3 Femtosecond transient absorption spectra of BSSBP in water at indicated time delays. Inset: Time profile at 750 nm ($\lambda_{\text{exc}} = 390$ nm).

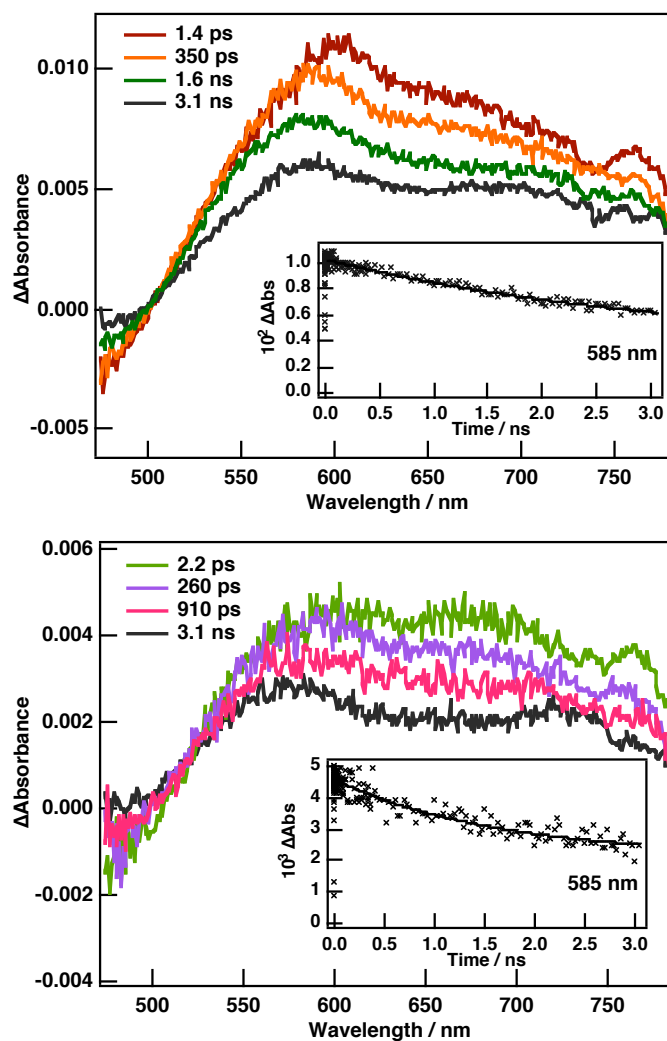


Fig. S4 Femtosecond transient absorption spectra of ANADS (upper panel) and femtosecond transient absorption spectra of ANADS-(TAIPDI)_n in deaerated water at indicated time delays (lower panel). Insets: Time profiles at 585 nm ($\lambda_{\text{exc}} = 390$ nm).

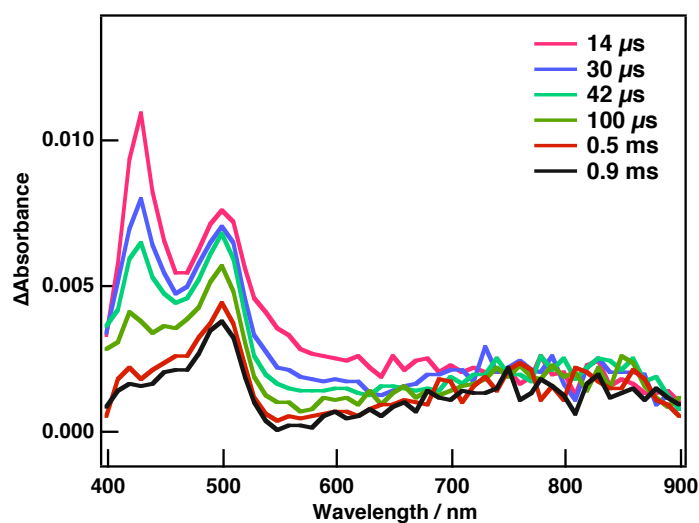


Fig. S5 Nanosecond transient absorption spectra of DANS in water at indicated time delays ($\lambda_{\text{exc}} = 355$ nm).

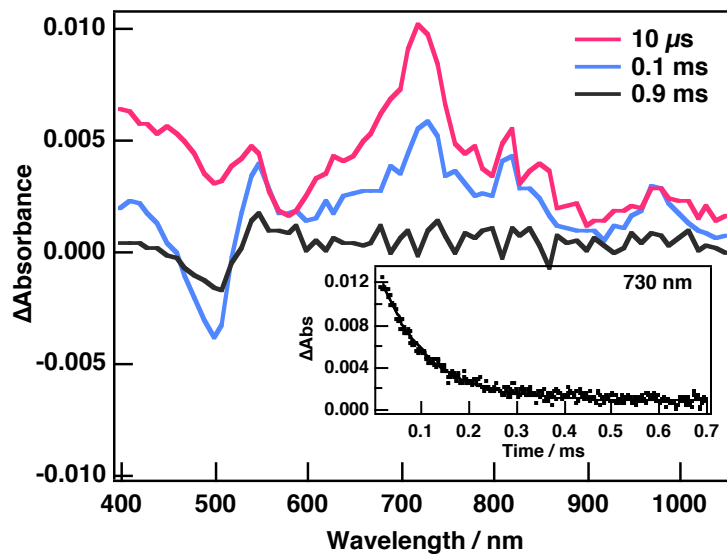


Fig. S6 Nanosecond transient absorption spectra of ANADS-(TAIPDI)_n in deaerated water at indicated time delays. Inset: Time profile at 730 nm ($\lambda_{\text{exc}} = 355$ nm).

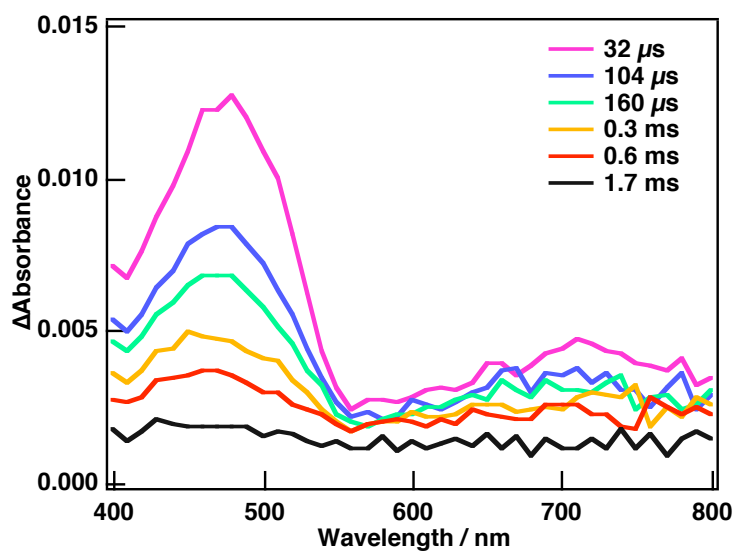


Fig. S7 Nanosecond transient absorption spectra of ANADS in water at indicated time delays ($\lambda_{\text{exc}} = 355$ nm).