Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Azulenocyanine immobilized on graphene; on the way to panchromatic absorption and efficient blocking layers in DSSCs

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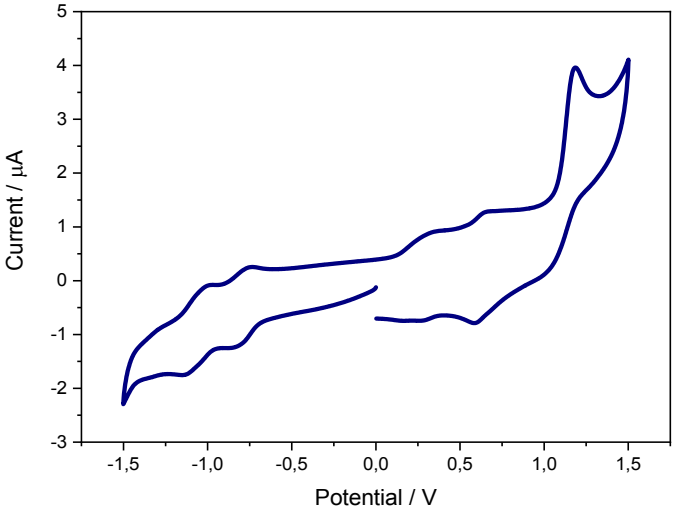

*Figure S1: Cyclic voltagramm of **1** in DCM containing 0.1 M Bu_4NPF_6 as supporting electrolyte vs Fc/Fc^+.*

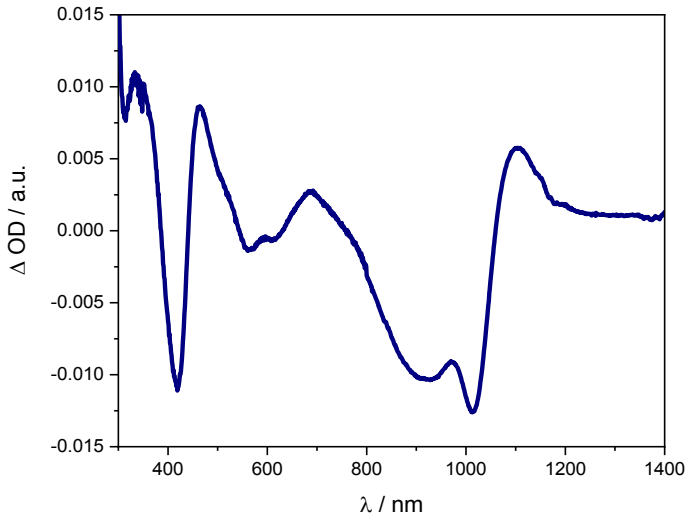

*Figure S2: Differential absorption spectrum (visible and near infrared) obtained upon spectroelectrochemical oxidation of **1** in DMF at a voltage of vs Ag wire at room temperature.*

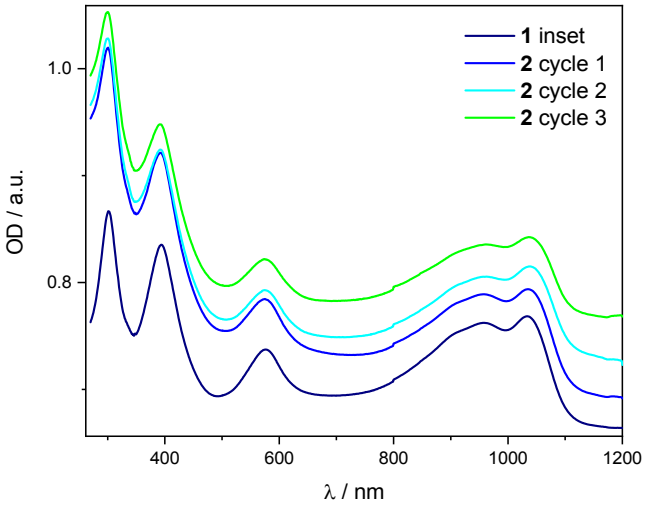

*Figure S3: Absorption spectra of **1** upon several enrichment cycles with graphite in DMF.*

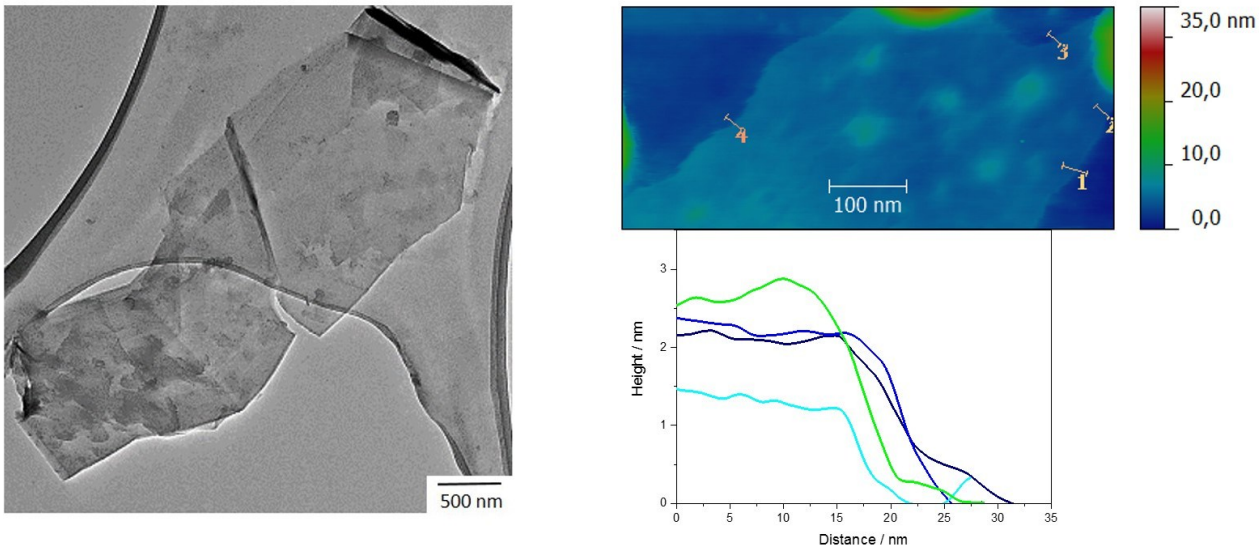

Figure S4: Left - TEM micrographs of 2 drop casted onto lacey carbon grids. Right - AFM topography picture of 2 drop casted onto SiO2 wafer and corresponding height profiles

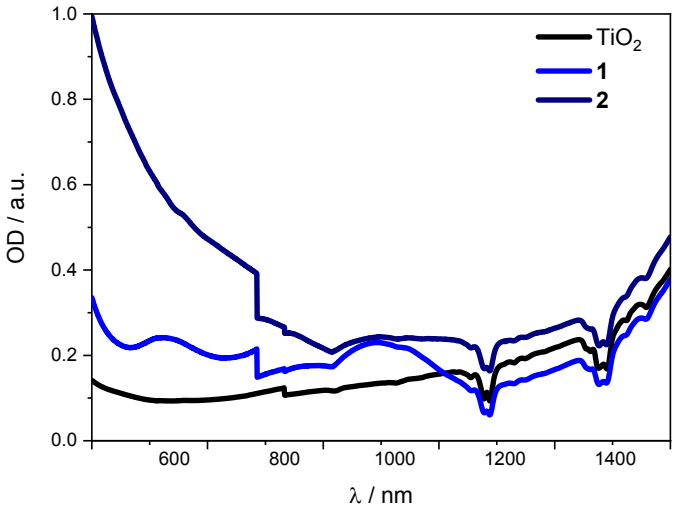

*Figure S5: Absorption features of compounds **1**, **2** and non-sensitized TiO_2 dipped into MeCN.*

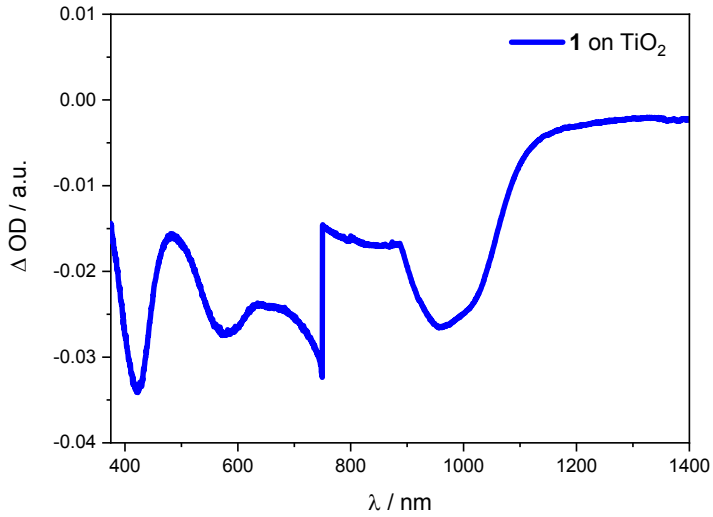

*Figure S6: Differential absorption spectrum (visible and near infrared) obtained upon spectroelectrochemical oxidation of **1** on TiO_2 at a voltage of 0.85 V vs Ag wire at room temperature*

*Table S1: Figures-of-merit of DSSCs using **1** and **2** as sensitizers. Values + cut-off filter show figures-of-merit achieved when only light over 780 nm was absorbed.*

Sensitizer	V_{OC} [V]	J_{SC} [mA/cm²]	FF	η [%]
1	0.31	0.053	0.41	0.007
1 + cut-off filter	0.27	0.015	0.50	0.002
2	0.33	0.11	0.43	0.015
2 + cut-off filter	0.22	0.027	0.31	0.0018

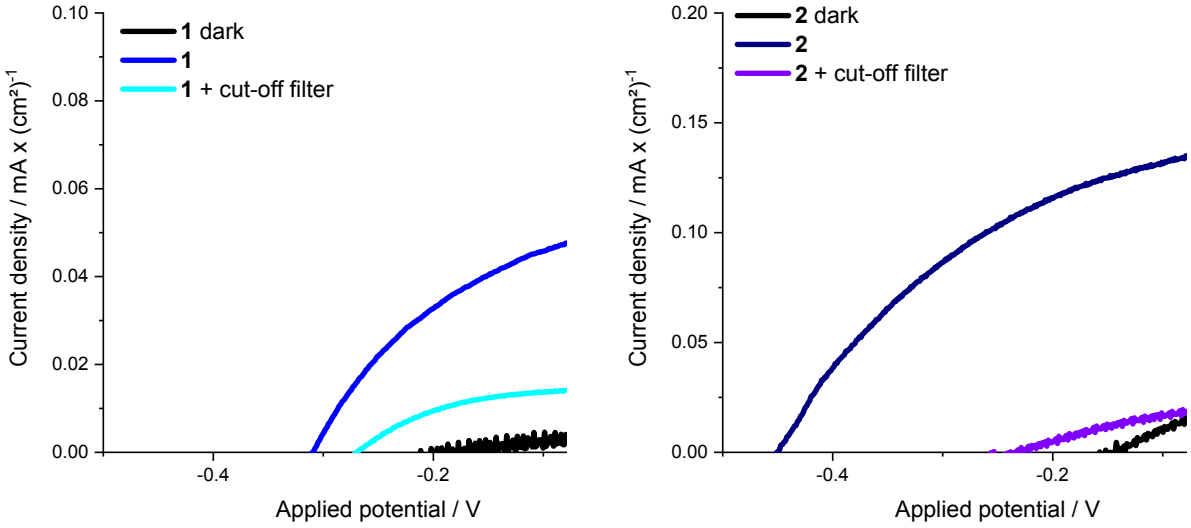

*Figure S7: JV curves of DSSC using **1** and **2** as a sensitizer with and without a cut-off filter for 780 nm under 1sun illumination. Dark current (black) is shown for comparison.*