"Electron Tunneling from Electronically Excited States of Isolated Bisdisulizole-Derived Trianion Chromophores Following UV Absorption", M.-O. Winghart et al., Electronic Supplementary Information (PCCP C3CP0497B)
**Figure S1.** Absorption and fluorescence measurements of Na2H2-BDSZ in water/methanol at room temperature (absorption measurement: 0.4 mM; fluorescence measurement: 2 mM).
Figure S2. Single-photon 355 nm PES spectra of [M-BDSZ]³⁻ (M = Li, Na, K) acquired under two different ESI source temperature conditions. When the dissolution capillary was operated at room temperature, only one conformer was observed. At 57 °C, two conformers were observed (red). All time-resolved data reported in this study were measured under conditions in which only one conformer was present.
Figure S3. Comparison of the single-photon PES measurement (258nm detachment wavelength) obtained for [BDSZ-SO$_3$+H]$^2$ (black curve) with a typical PES recorded for [M-BDSZ]$^2$ (represented here by [K-BDSZ]$^2$, red curve). Note a systematic energy shift of both the tunneling signal and ADE by 0.3 eV.
Figure S4. Comparison of pump + probe PE spectra at maximum temporal overlap (red) with pump only PE spectra (black) - for several [M-BDSZ]^{3-} and [BDSZ-SO_{3}+H]^{3-}. Laser pulse energies were 40/190 µJ at 388/775 nm, respectively. Note the observation upon probe irradiation of a depletion peaking at ca. 2.1 eV - together with a two-photon enhancement at an electron kinetic energy near 3.5 eV. In all cases, integral depletions of the 2.1 eV feature were comparable to integrated two photon transients in the 2.6-4.0 eV range, indicating that ESETD is the dominant decay process.
Figure S5. Single-photon PES measurements of [M-BDSZ]$^{3-}$, M = H and Na, at 266 nm and two different ion trap temperatures: blue - 20 K; red - room temperature. Note that only slight differences in band widths were observed for cold anions.