Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supplementary Information

Comparative Study of Nine Berberine Salts in the Solid State: Optimization of the Photoluminescence and Self-Association Properties through the Choice of the Anion

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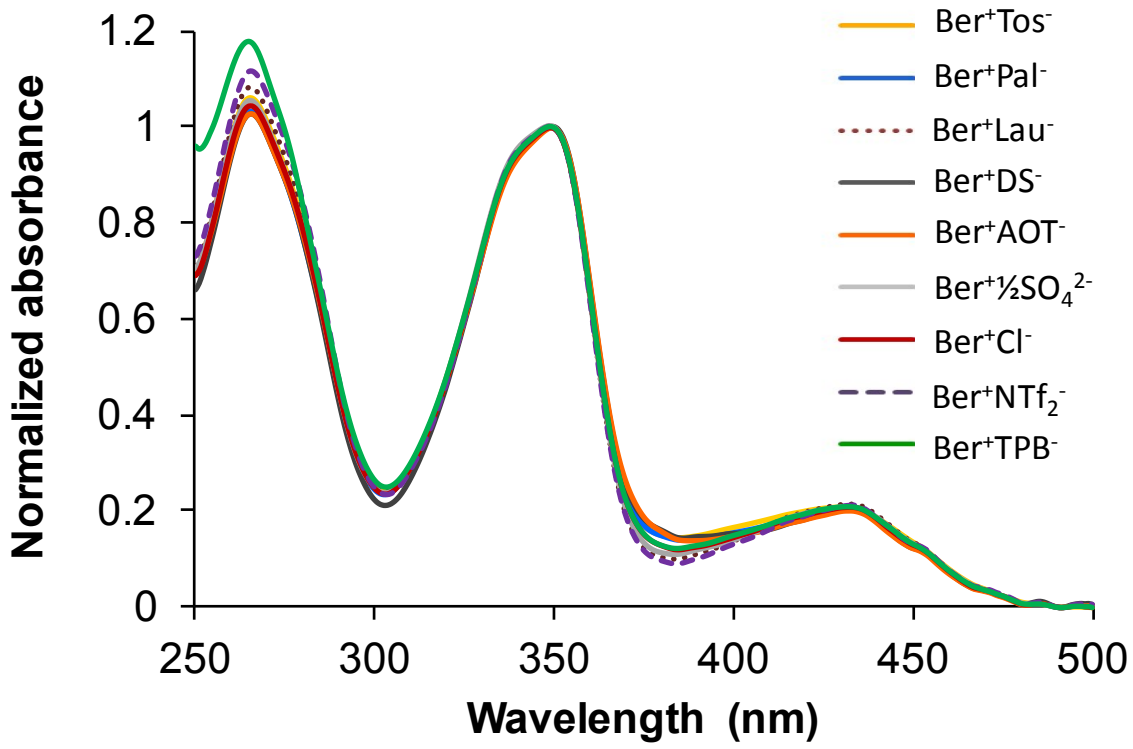

Figure S1. Normalized absorption spectra of the berberine salts in acetonitrile. Concentration between 2×10^{-5} M and 4.4×10^{-5} M. A fourth intense band is between 200 and 250 nm. The small differences observed at high wavelength are due to absorption of the anion (e.g. TPB^-).

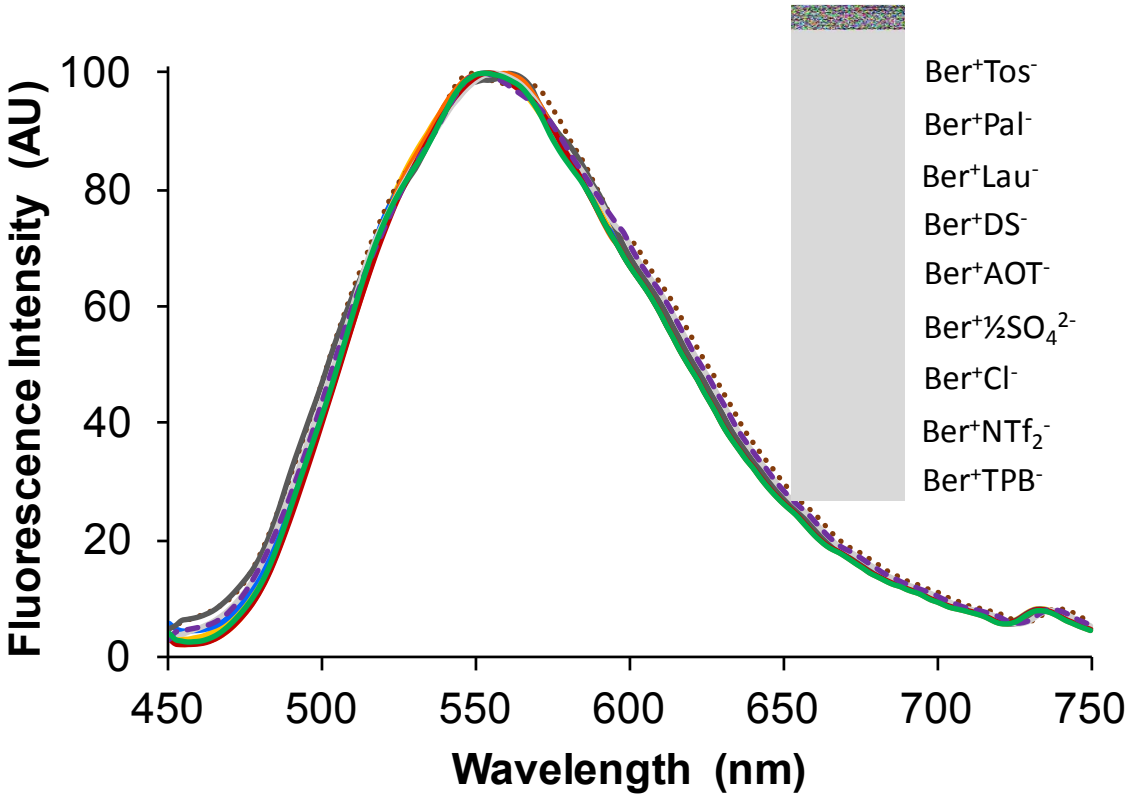

Figure S2. Fluorescence spectra of the berberine salts at 1.1×10^{-5} M in acetonitrile. All spectra were corrected and normalized. $\lambda_{ex} = 420$ nm.

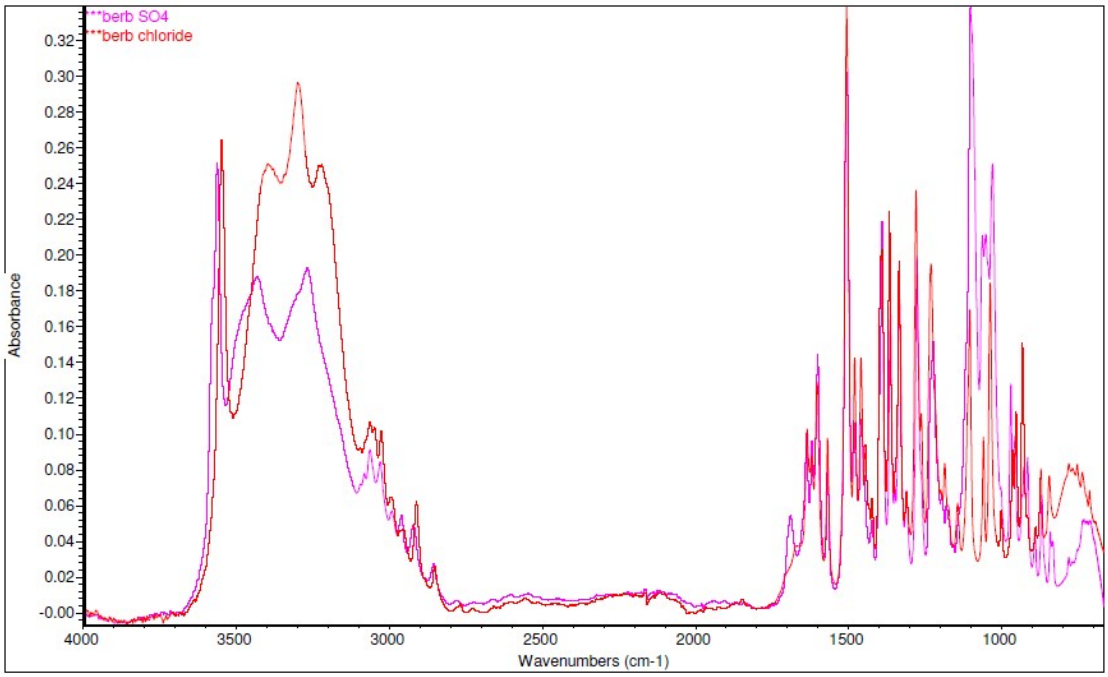

Figure S3. Infrared spectra of berberine chloride and berberine sulfate hydrates.

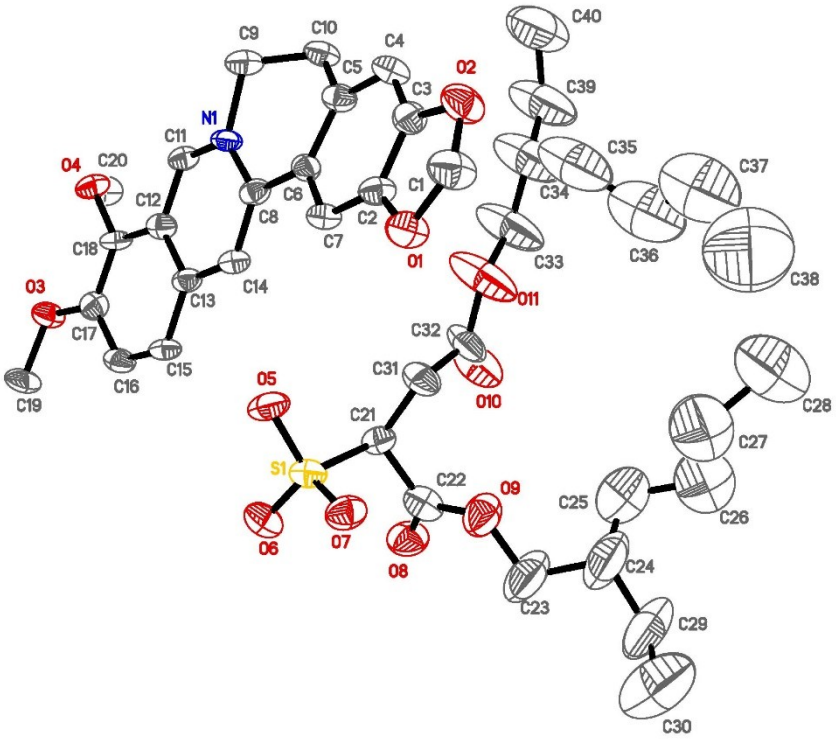

Figure S4. Molecular view of $Ber^{+}AOT^{-}$. Thermal ellipsoids are drawn at the 50% probability level. H atoms are omitted for clarity.

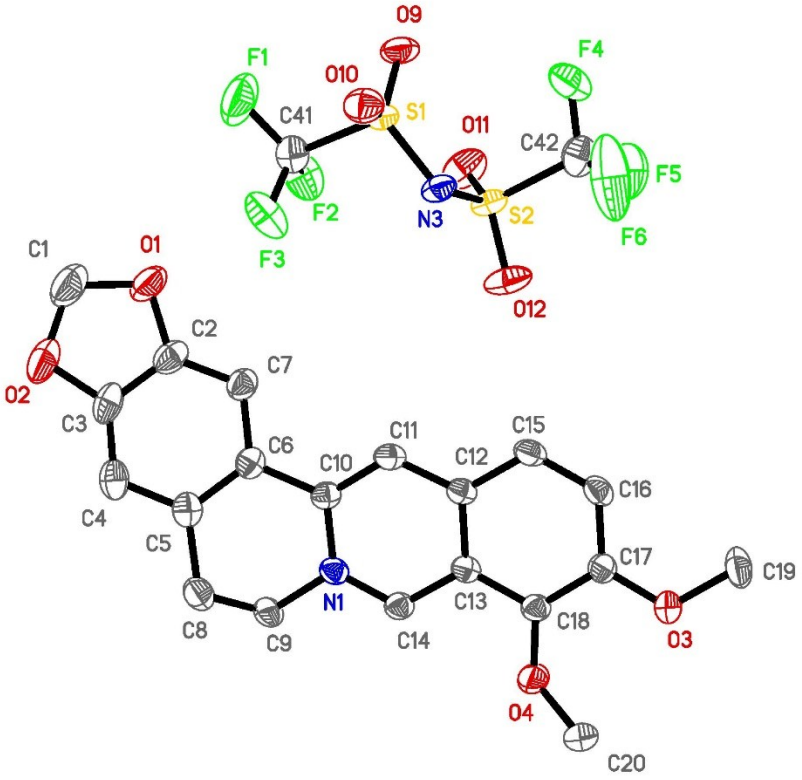

Figure S5. Molecular view of $Ber^{+}NTf_2^{-}$. Thermal ellipsoids are drawn at the 50% probability level. H atoms are omitted for clarity.

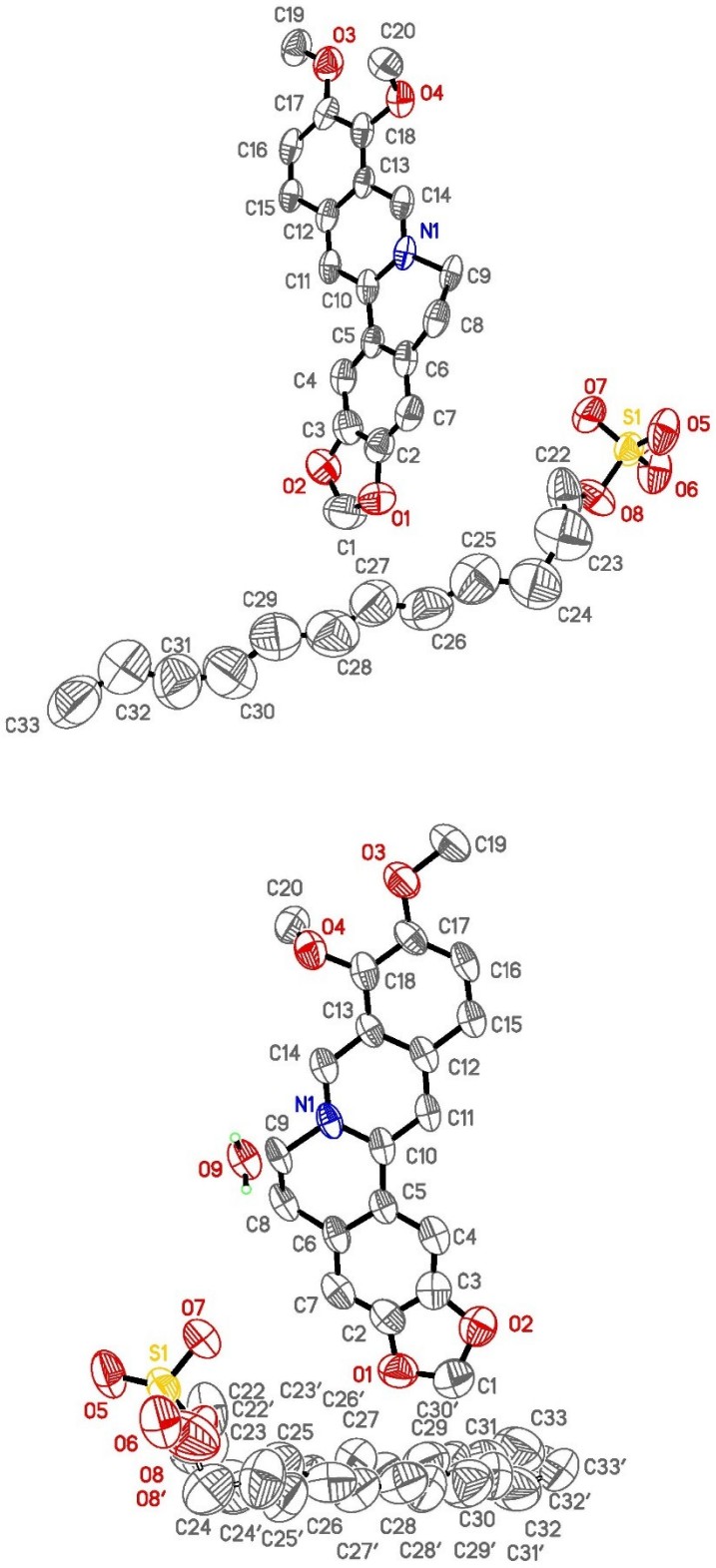

Figure S6. Molecular views of $Ber^{+}DS^{-}$. Thermal ellipsoids are drawn at the 50% probability level. H atoms are omitted for clarity.

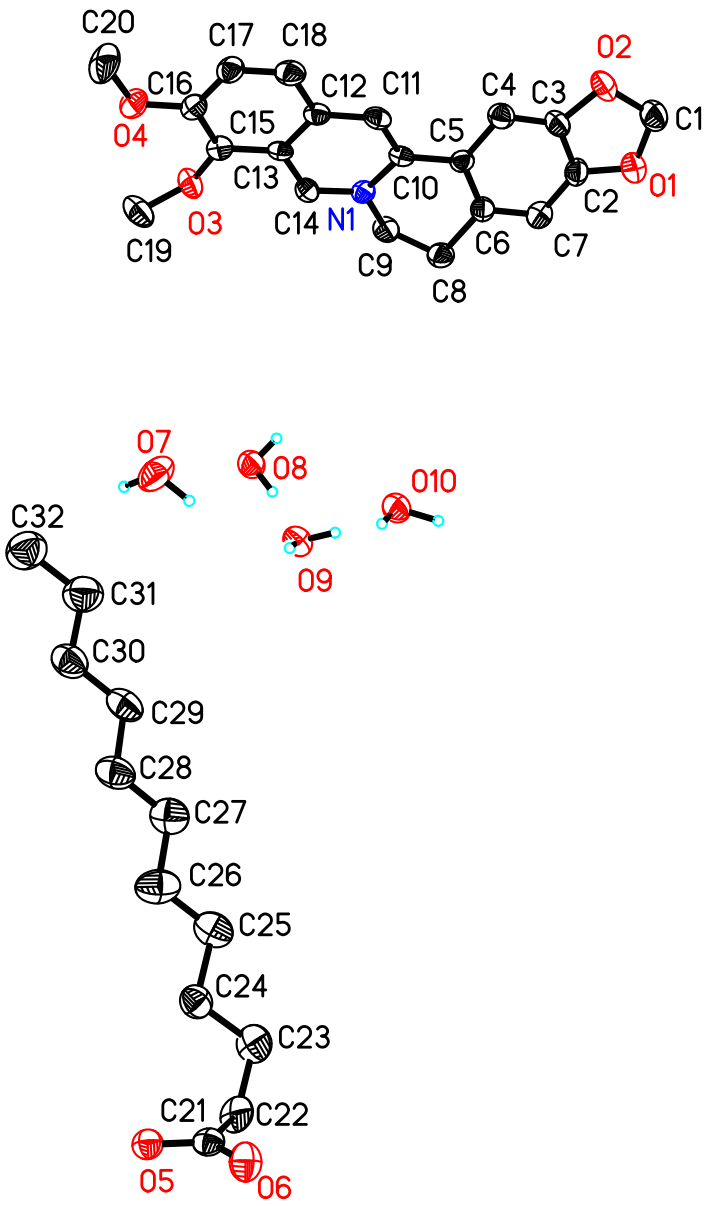

Figure S7. Molecular view of $Ber^{+}Lau^{-}$. Thermal ellipsoids are drawn at the 50% probability level. H atoms are omitted for clarity.

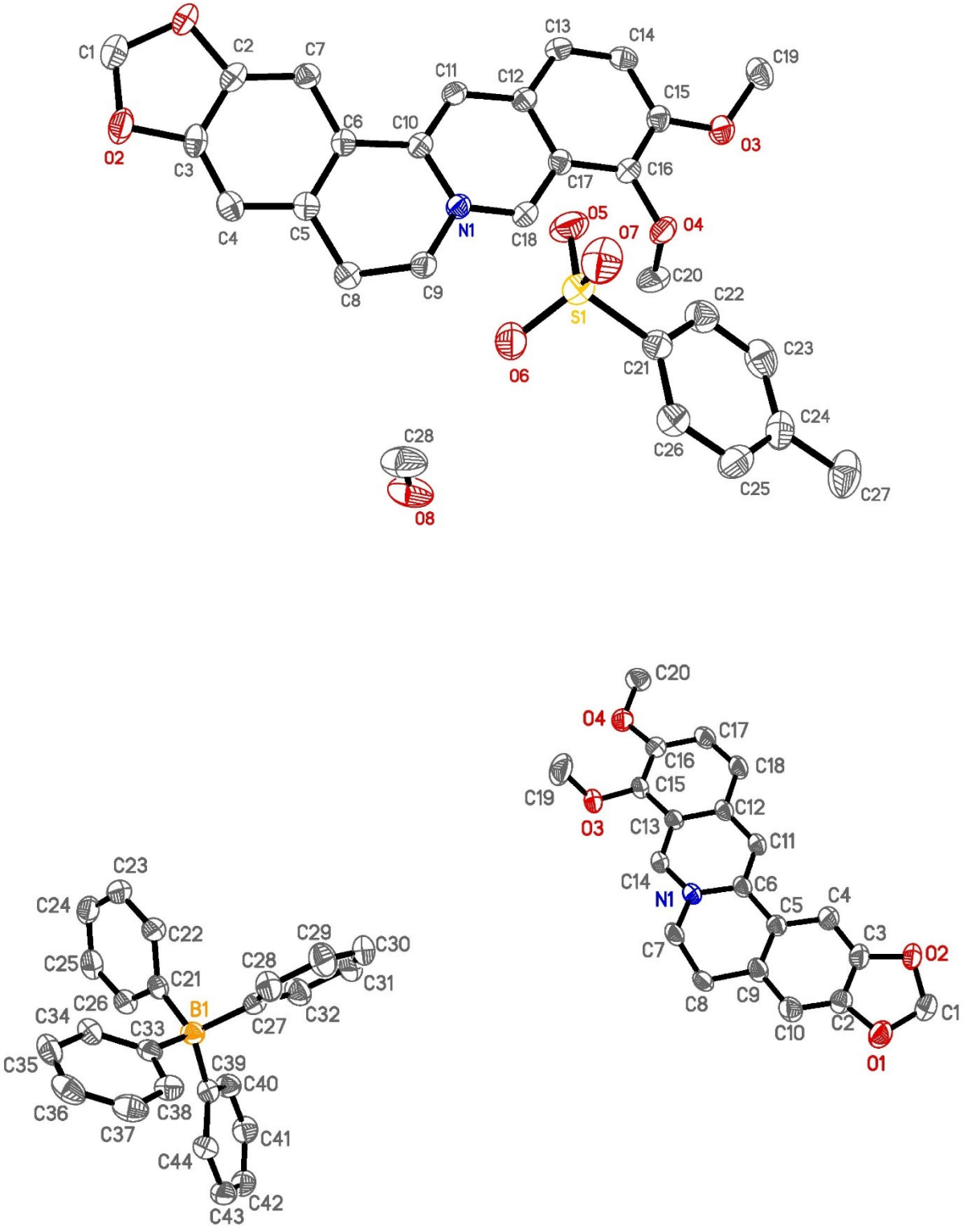

Figure S8. Molecular views of $Ber^{+}Tos^{-}$ (top) and $Ber^{+}TPB^{-}$ (bottom). Thermal ellipsoids are drawn at the 50% probability level. H atoms are omitted for clarity.