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Charge-transfer (CT) dynamics of iodide salts in tetrahydrofuran (THF) and THF-water mixtures. ARTHUR BRAGG, BENJAMIN SCHWARTZ, Department of Chemistry and Biochemistry, UCLA — We have used the spectral sensitivity of the solvated electron to its local environment to probe counterion and cosolvent effects on ultrafast CT dynamics in THF and THF-water mixtures following 1-photon excitation of the I^- CTTS band. We find that dynamics in pure THF are dramatically influenced by the presence of the counterion, such that CTTS-generated electrons associate strongly with nearby cations and recombine negligibly with the geminate iodine radical. Studies in solvent mixtures aim to examine preferential ion solvation according to its effects on CT, focusing on THF-rich mixtures, in which water is thought to preferentially solvate equilibrated electrons. Results demonstrate that electrons are initially introduced into *water-deficient* regions of these solutions, subsequently hydrating over 10's-100's of picoseconds. Trends in the CT and hydration dynamics of electrons generated near various counterions and in solutions of varied water content are used to develop an understanding of the local solvent environments of these ion pairs.

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