Supporting Information for the article entitled, "Excited State Charge Transfer Reaction in (Mixed Solvent + Electrolyte) Systems: Role of Reactant-Solvent and Reactant-Ion Interactions" by Harun Al Rasid Gazi and Ranjit Biswas*

Table S1: Mole fraction dependent viscosity of two mixtures in presence of $LiClO_4$.

Note that 0.5M and 1.0M $LiClO_4$ concentration used for PC-AN and PrOH-EA mixtures, respectively.

f_{AN}	density(gm/cc)	η(cP)	f_{EA}	density(gm/cc)	η(cP)
0.0	1.233	4.8334	0.0	0.884	4.7661
0.2	1.183	3.1632	0.1	0.895	3.6868
0.4	1.123	2.0528	0.2	0.903	2.9433
0.5	1.085	1.6543	0.3	0.916	2.2534
0.6	1.042	1.1345	0.5	0.938	1.6923
0.8	0.948	0.8050	0.8	0.966	1.1785
1.0	0.825	0.5088	1.0	0.980	0.9725

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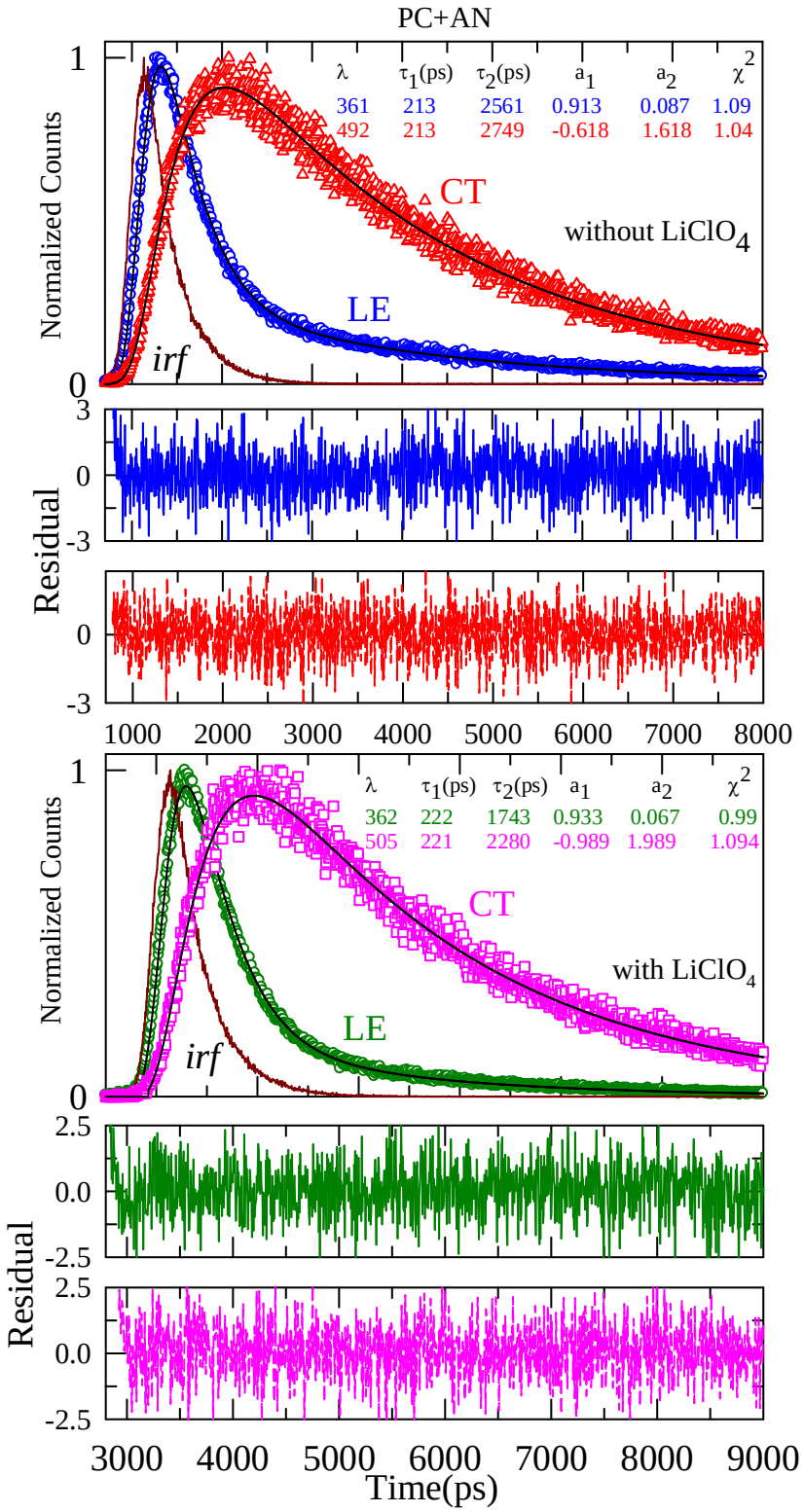

Fig. S1: Bi-exponential fits of the collected CT and LE emission decays of P4C in (PC + AN) mixed solvent system at 0.5 mole fraction of AN in the presence and absence of electrolyte, fit parameters, residuals and the instrument response function ("*irf*").

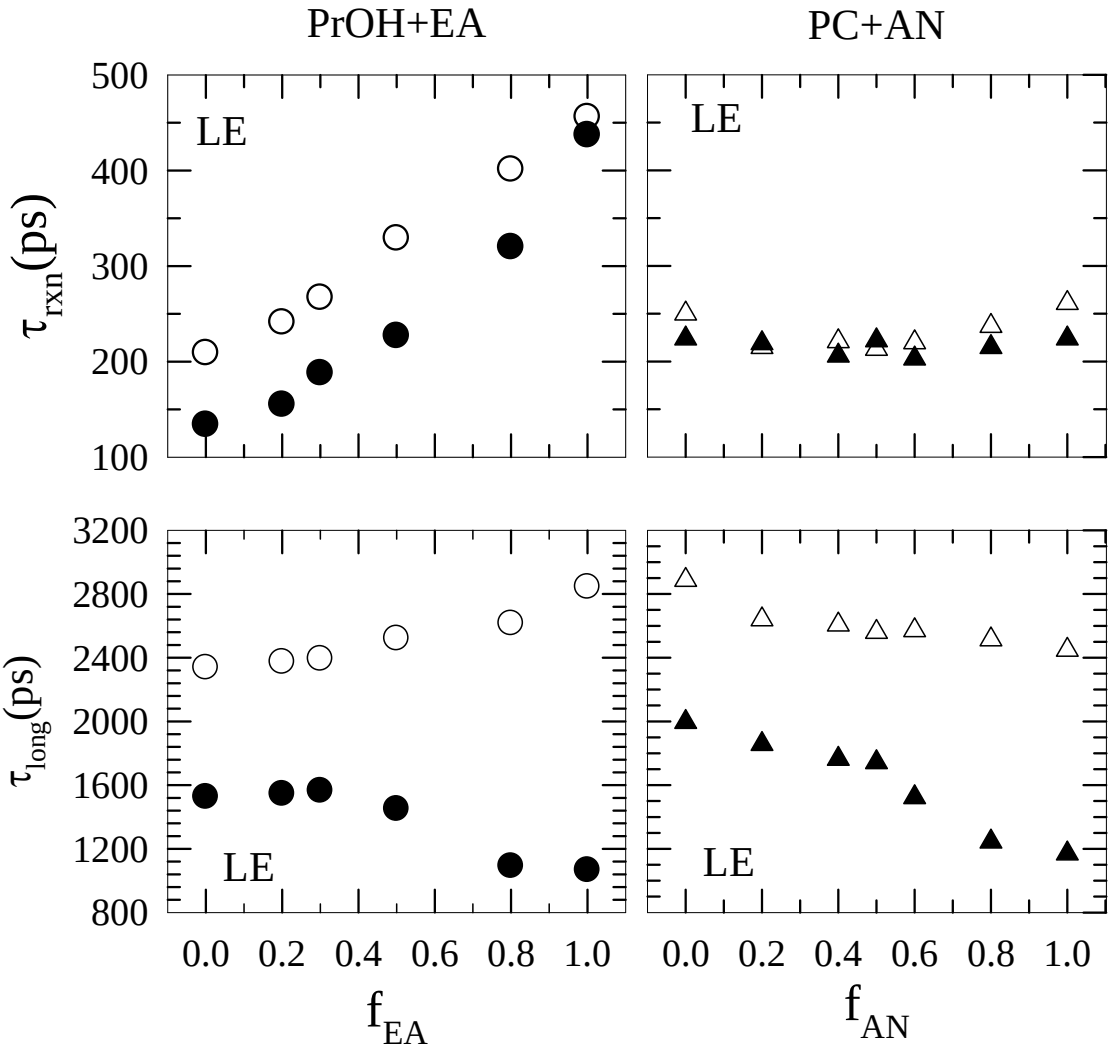

Fig. S2: Composition dependence of the reaction time (τ_{rxn}, upper panels) and long time (τ_{long} , lower panels) constants obtained from bi-exponential fit of the collected LE emission decays of P4C in (PrOH + EA) and (PC + AN) mixed solvent systems in the presence (filled symbols) and absence (open symbols) of electrolyte. The uncertainty associated with these time constants is within $\pm$ 5% of the reported values.

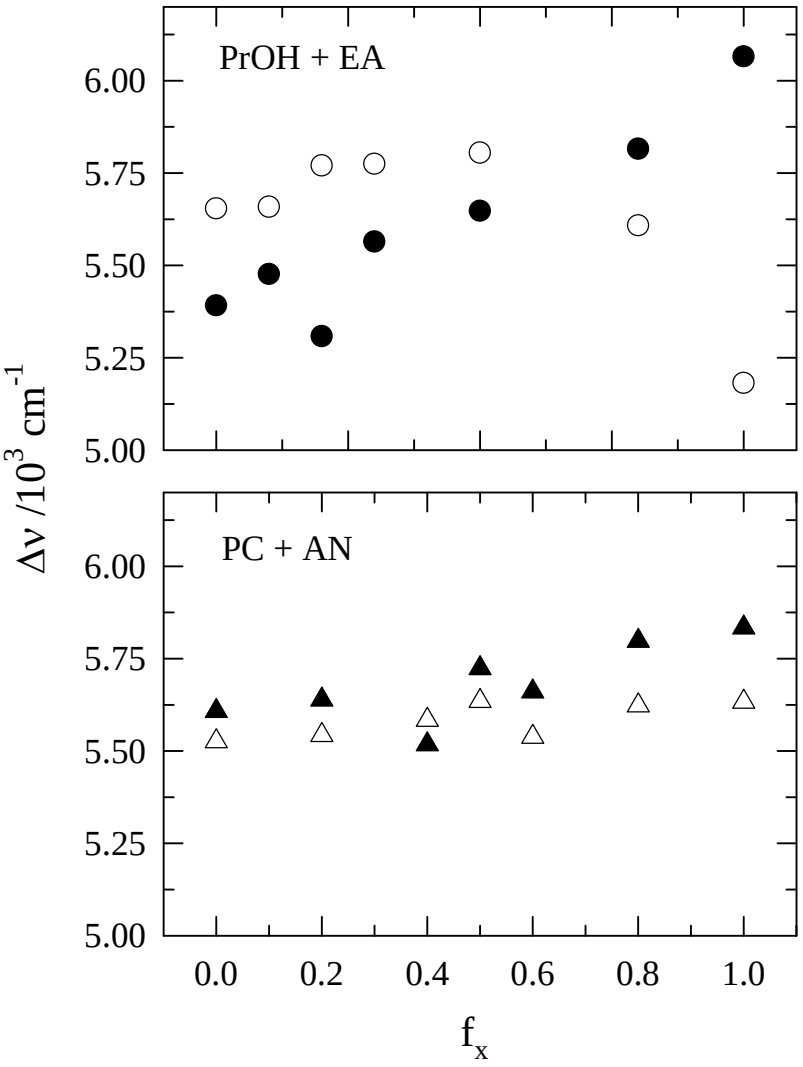

Fig. S3: Mole fraction (of the relatively less polar component in the binary mixtures) dependence of Stokes shift of C153 in ethyl acetate and propanol binary mixtures (upper panel, 'PrOH-EA') and acetonitrile and propylene carbonate binary mixture (lower panel, 'PC-ACN'). For (ethyl acetate + propanol) binary mixtures, 'f_x' represents mole fraction of ethyl acetate. Likewise, for (acetonitrile + propylene carbonate) mixtures, 'f_x' denotes mole fraction of acetonitrile. Open and filled circles represent Stokes shift in the absence and presence of 1.0 M $LiClO_4$, respectively in ethyl acetate and propanol binary mixtures. Open and filled triangles represent the Stokes' shift in binary mixtures of acetonitrile with propylene carbonate in the absence and presence of 0.5 M $LiClO_4$, respectively. Note that the Stokes' shift is calculated from the peak frequencies of the absorption (ν_{abs}) and emission (ν_{em}) spectra of the dissolved dipolar probe C153 as follows: $\Delta\nu = \nu_{abs} - \nu_{em}$. The relative Stokes' shift is then calculated as $\Delta\Delta\nu = \left[\nu_{abs} - \nu_{em}\right]^{polar} - \left[\nu_{abs} - \nu_{em}\right]^{nonpolar}$.