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Supporting Information

Pyrene-Capped CdSe@ZnS Nanoparticles as Sensitive Flexible Oxygen Sensors in Non-Aqueous Media**

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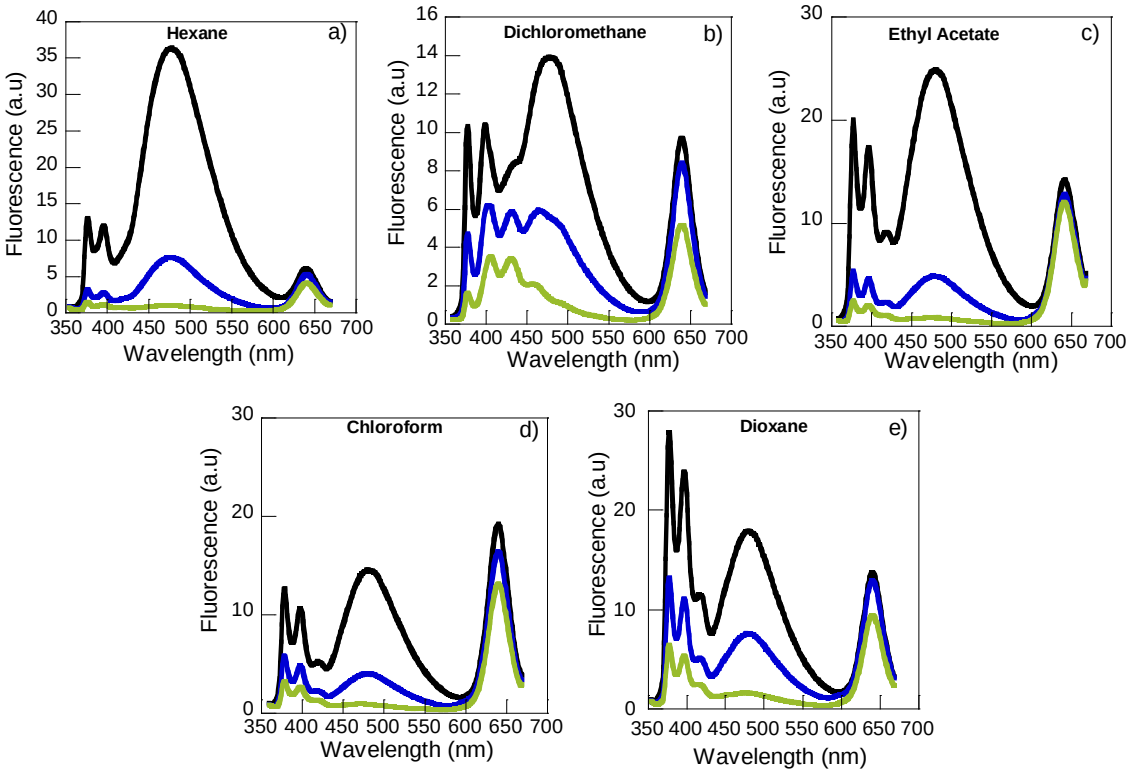

Figure S1. Emission spectra of CS@Py at λ_{exc}= 340 nm (A_{340} = 0.15) in hexane (a), dichlorometane (b), ethyl acetate (c), chloroform (d) and dioxane (e), in the presence of increasing [O_2]: the deaerated sample (black), the aerated sample (blue) and the O_2 saturated sample (green).

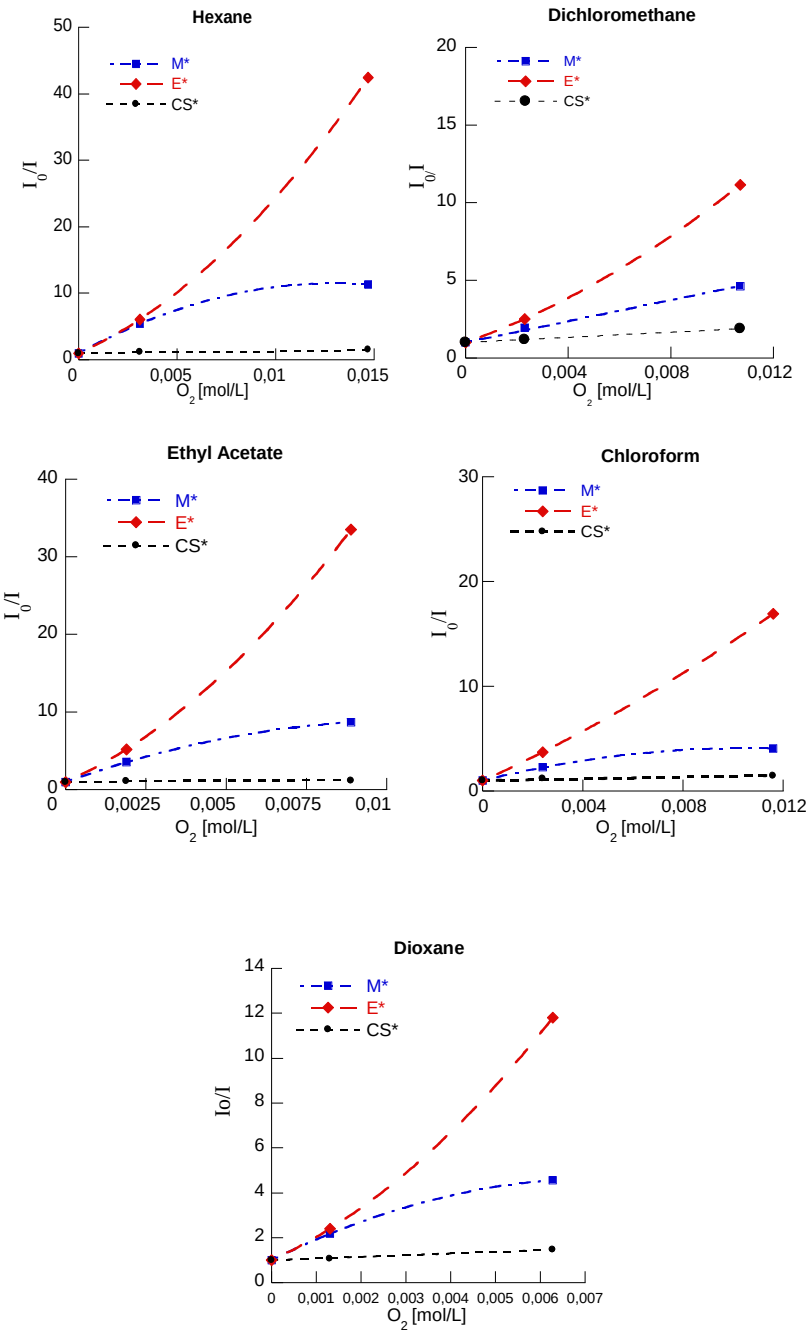

Figure S2 I_0/I dependence of $[O_2]$ for M*, E* and CS* of CS@Py in the solvents assayed

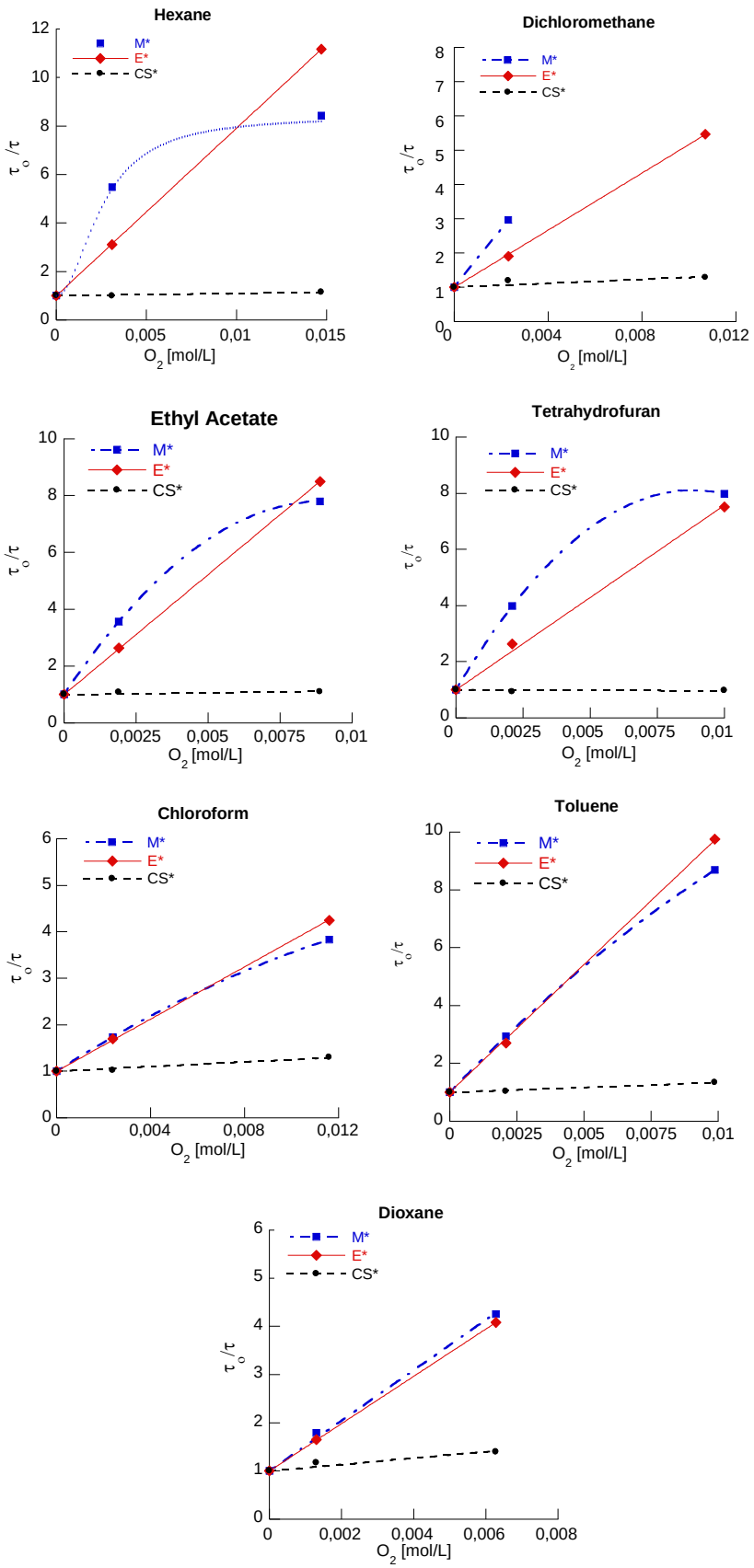

Figure S3 τ_0/τ dependence of $[O_2]$ for M*, E* and CS* in the solvents assayed

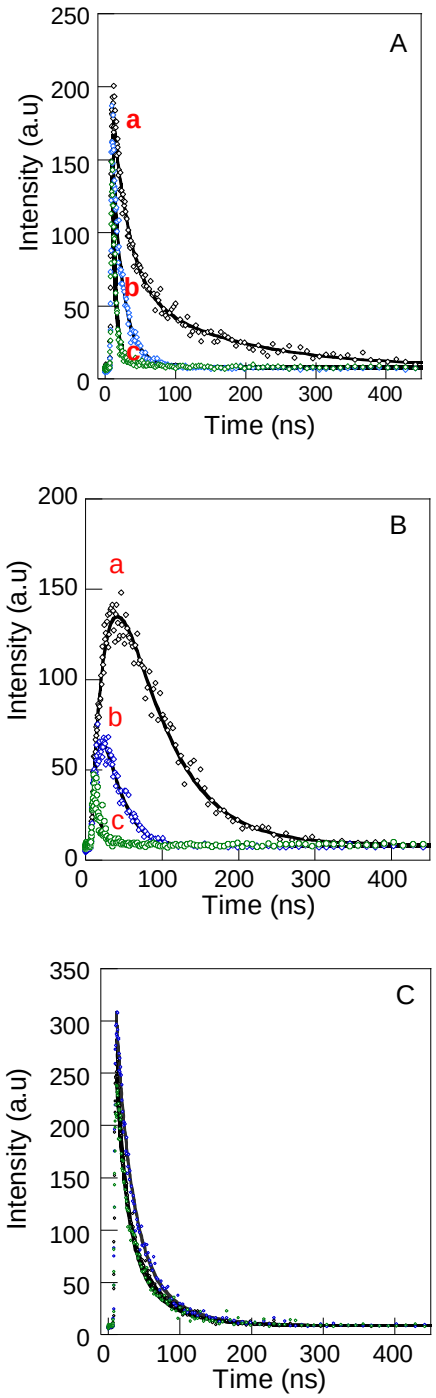

Figure S4 Kinetic decay traces, and their fitting to exponential functions of time, registered at λ_{exc}= 397 nm (A), 480 nm (B) and 640 nm (C) for CS@Py in THF in the presence of increasing [O_2]: a) 0 mM, b) 2 mM and c) 10 mM.

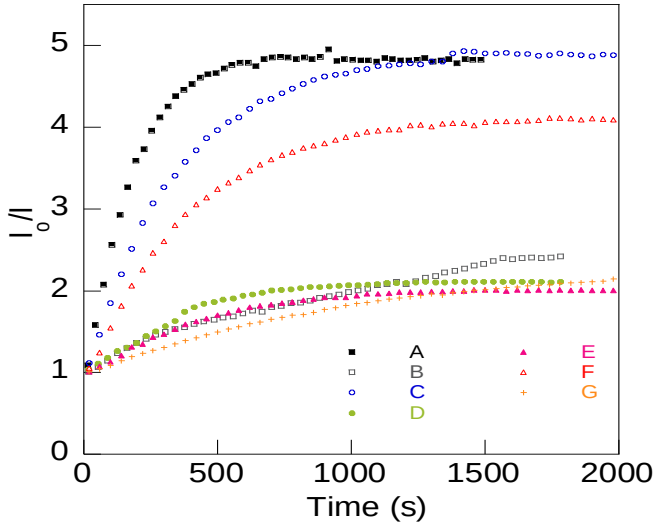

Figure S5 Change of monomer emission of deaerated CS@Py sample vs. the time under atmospheric pressure monitored for: hexane (A), dichloromethane (B), ethyl acetate (C), tetrahydrofuran (D), chloroform (E), toluene (F) and dioxane (G).

Table S2. Stern-Volmer quenching constant for pyrene excimer, K_{E^*}, and nanoparticle, K_{CS^*}

Solvent	K_{E^*} (M^{-1})	r [a]	K_{CS^*} (M^{-1})	r [a]
Hexane	691.09 ± 0.9	0.9999	9.0 ± 1.0	0.9453
Dichloromethane	416.6 ± 4	0.9998	28.9 ± 8.0	0.7760
Ethyl acetate	844.3 ± 2	0.9999	12.6 ± 4	0.6426
Tetrahydrofuran	657.3 ± 0.1	0.9986	[b]	[b]
Chloroform	280.6 ± 2	0.9999	25.1 ± 2	0.9848
Toluene	883.3 ± 11	0.9997	33.54 ± 1	0.9870
Dioxane	490.8 ± 1	0.9999	66.45 ± 9	0.9537

[a] Linear regression fits. [b] CS* Lifetime does not change with the oxygen concentration in this solvent.

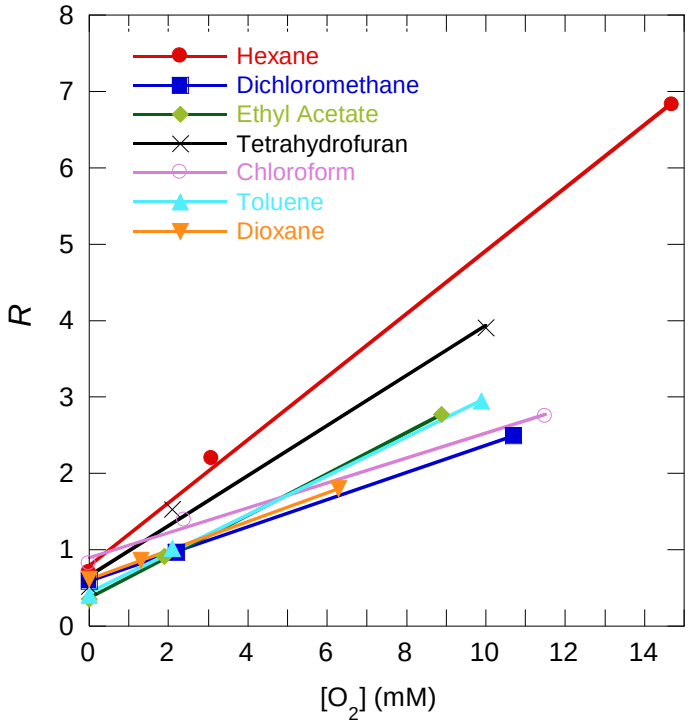

Figure S6. Dependence of the CS@Py response (R) under nitrogen, air, and oxygen for the different solvents