Supporting information

Distribution of guest molecules in Pluronic micelles studied by double electron electron resonance and small angle X-ray scattering

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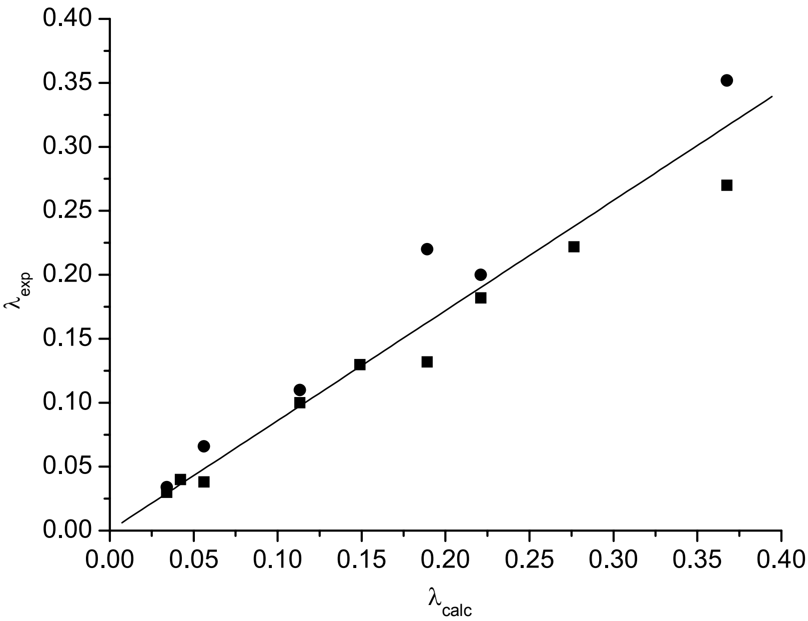

Figure S1. Experimetal calibration of λ obtained from measurements on solutions of TEMPO radicals in methanol/toluene (1:1) with two concentrations, 2 mM (circles) and 5 mM (squares). The 2 mM sample was measured with two pump pulses of durations 20 and 40 ns and the 5 mM sample with three pump pulse durations of 20, 30, and 40 ns. Other experimental parameters: T= 25K; ν_0=32.437GHz and B_0=1.158 T. λ_{exp} was determined from Eqs 7,8.

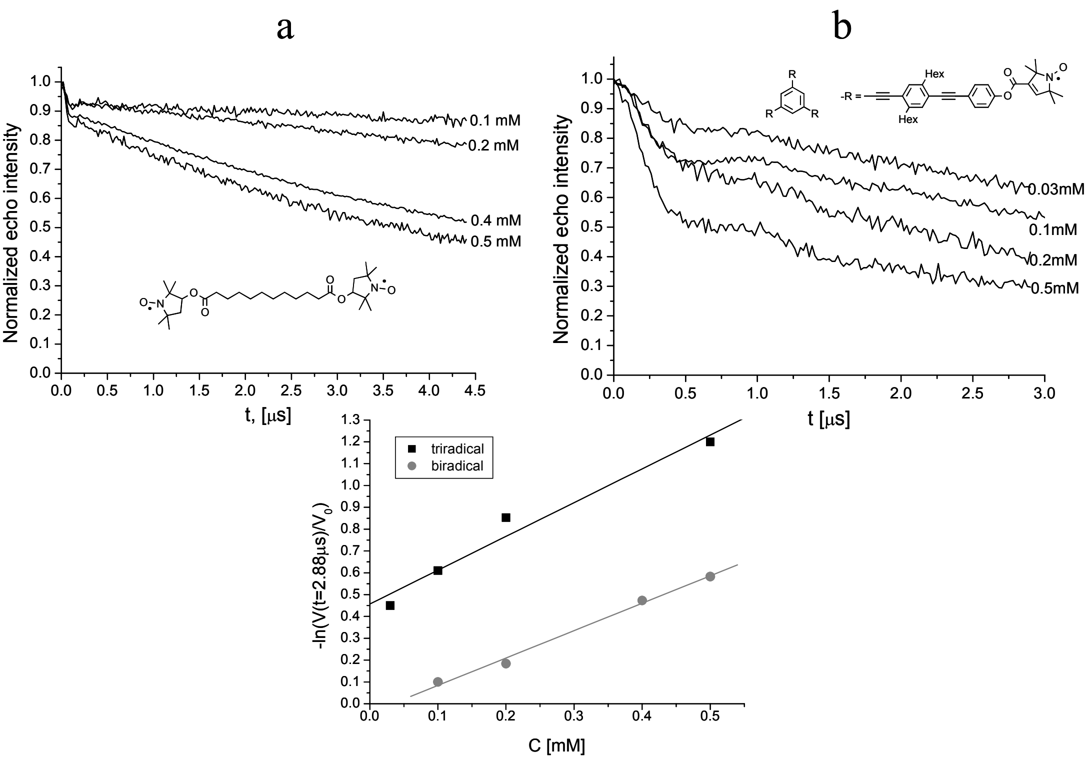

Figure **S2**. DEER decays at various concentrations of spin-probe for (a) a biradical and (b) a triradical. (c) Plot of ln(V(t=2.88 μs)/V_0) vs the molecular concentration of the biradical and triradical. According to Eq. 24, the slope is equal to $\lambda nt/\chi$, where t=2.88μs and n is the number of spins per spin-probe molecule. For λ=0.2 , χ=0.96 and 1.06 are obtained for the biradical and triradical, respectively. The intercept for the triradical give $\ln V_{intra}(t)$= -2ln(1-λ)=0.44 as expected. This is not the case for the biradical where the effective λ for the pair is lower because of the shorter distances, some of which are outside the range of the DEER method.