

Correction to Carbon Nanohoos: Excited Singlet and Triplet Behavior of [9]- and [12]-Cycloparaphenylene

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In the abstract and main text of this manuscript, we inadvertently entered wrong estimates of the rate constants of energy transfer (k_{et}) to biphenyl as well as the rate constants of triplet state quenching by molecular oxygen. The correct k_{et} values for reaction 5 are $1.9 \times 10^4 \text{ M}^{-1} \text{ s}^{-1}$ and $1.7 \times 10^4 \text{ M}^{-1} \text{ s}^{-1}$ for [9]CPP and [12]CPP, respectively. The corrected rates of triplet state quenching by oxygen are $1.7 \times 10^9 \text{ M}^{-1} \text{ s}^{-1}$ and $1.8 \times 10^9 \text{ M}^{-1} \text{ s}^{-1}$ for [9]CPP and [12]CPP, respectively. Figure 6 is revised to show these corrected values.

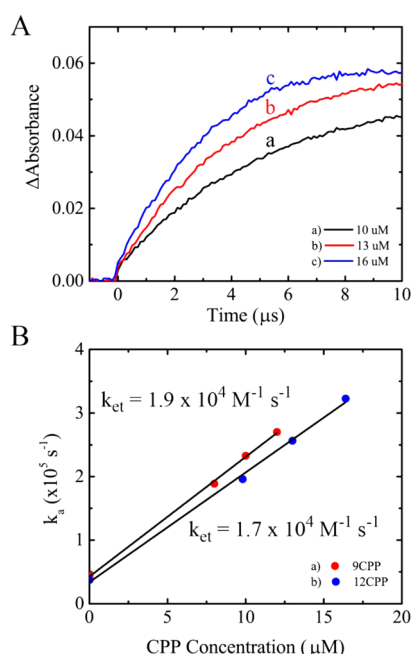


Figure 6. The average lifetime of the nanohoop/oxygen solution with different concentrations of dissolved oxygen. The filled dot represents the experimental data of [9]CPP, and the hollow dot represents [12]CPP. The experimental trends are fit to a straight line (red = [9]CPP; blue = [12]CPP), and the slope of the line is taken to be the bimolecular reaction rate of triplet quenching by oxygen.

Table 2 is revised to reflect the corrected values, and eq 1 is revised to reflect correct subscripts.

$$\Phi_f = \Phi_{\text{std}}(F_{\text{nh}}/F_{\text{std}})(1 - 10^{A_{\text{std}}}/1 - 10^{A_{\text{nh}}})(n_{\text{nh}}^2/n_{\text{std}}^2) \quad (1)$$

Table 2. Summary of Measured Extinction Coefficients and Φ Values

sample	λ_{max} (nm)	ϵ_T ($\text{M}^{-1} \text{ cm}^{-1}$)	k_{et} ($\text{M}^{-1} \text{ s}^{-1}$)	Φ_f	Φ_T	Φ_{nr}
[9]CPP	390	25000 ± 4000	1.9×10^4	0.46	0.18	0.36
[12]CPP	680	31000 ± 1300	1.7×10^4	0.83	0.13	0.04

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