Supporting Information

Linear Scaling Relationships in Homogeneous Photoredox Catalysis

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1 Charges as descriptors

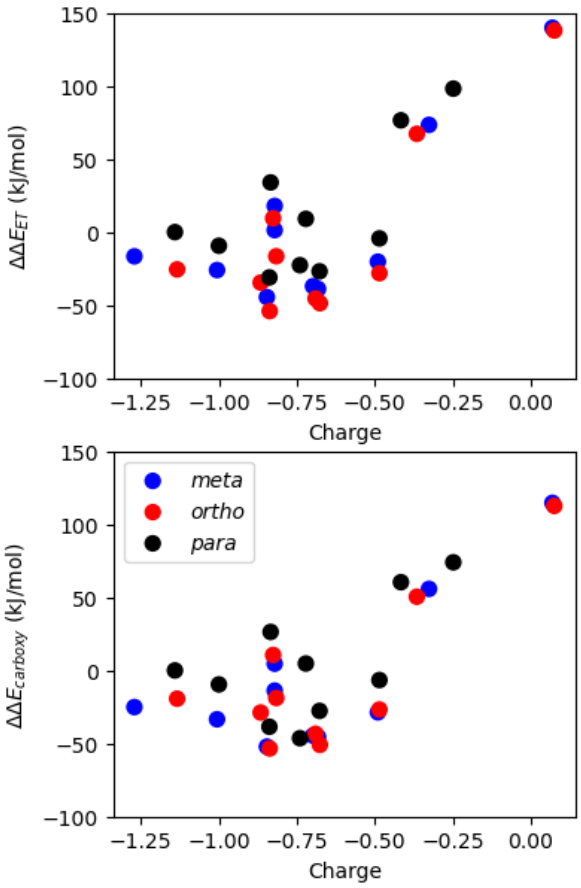

Figure S1: The correlations between either $\Delta\Delta E_{ET}$ (top) or $\Delta\Delta E_{carboxy}$ (bottom) and chromophore charge (excluding substituent) are weak.

2 Localized orbital bonding analysis

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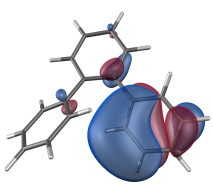
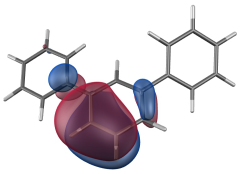
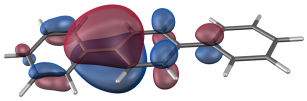


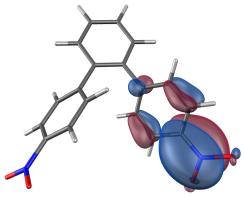
(a) H-substituted *o*- isomer



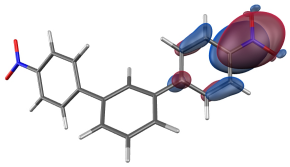
(b) H-substituted *m*- isomer



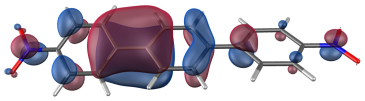
(c) H-substituted *p*- isomer



(d) NO_2-substituted *o*- isomer



(e) NO_2-substituted *m*- isomer



(f) NO_2-substituted *p*- isomer

Figure S2: Comparing density associated with the unpaired electron obtained using LOBA (Pipek–Mezey localization and Löwdin population analysis) across H-substituted (top) and NO_2-substituted isomers of terphenyl (isovalue = 0.05 $Å^3$).