Peptide Scaffolds for Component Arrangement

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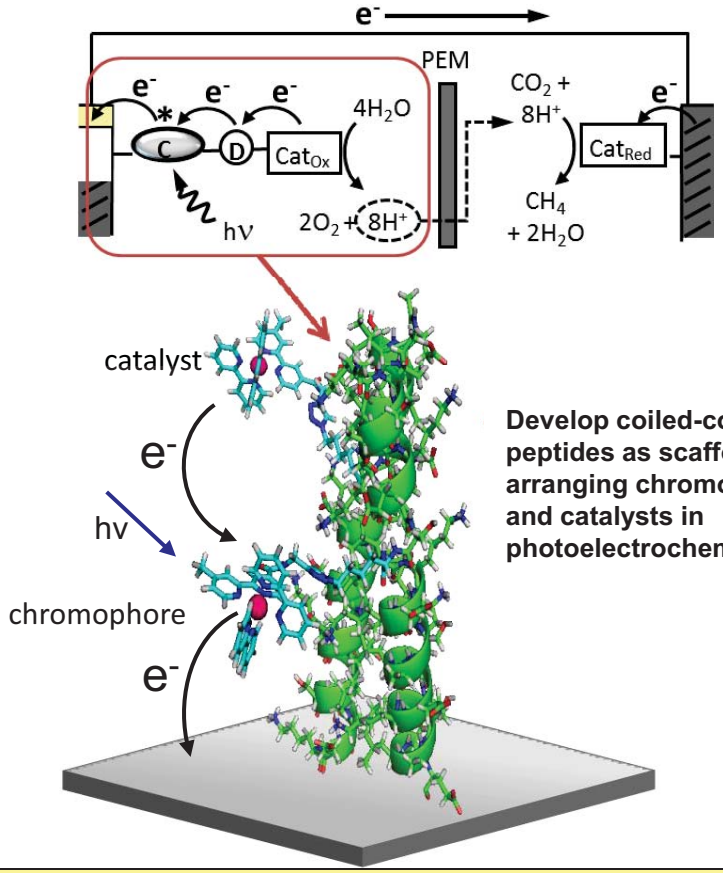
Photoelectrochemical Cell

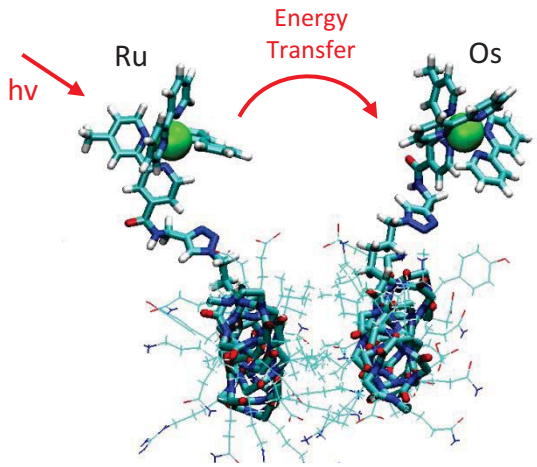


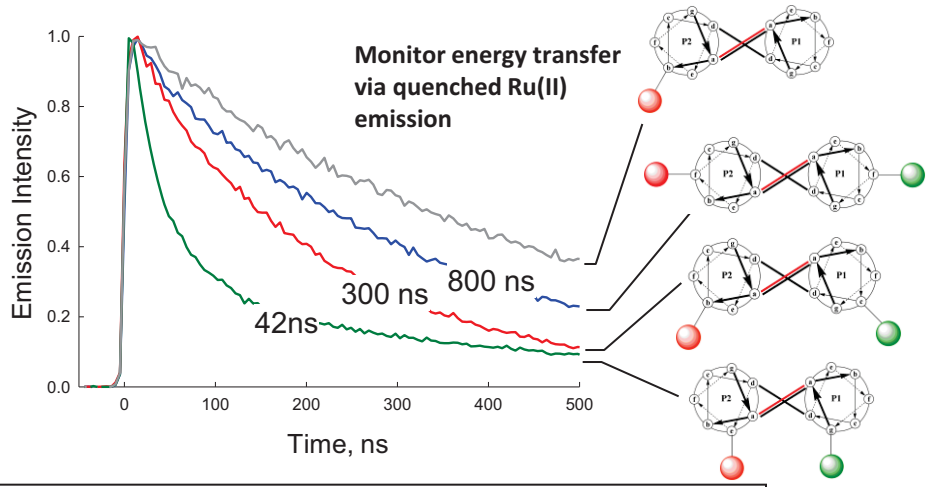
Develop coiled-coil peptides as scaffold for arranging chromophores and catalysts in photoelectrochemical cell

Dale J. Wilger, Stephanie Bettis, Christopher K. Matarese, Maria Minakova, Garegin A. Papoian, John M. Papanikolas and Marcey L. Waters, *"Position Dependent Energy Transfer Between Ruthenium(II) and Osmium(II) Modified Coiled-Coil α-Helical Peptide Dimers,"* **2011**, J. Am. Chem. Soc., In Preparation

INITIAL GOAL: Demonstrate that **(i) peptides fold in presence of metal complexes** and that **(ii) relative positioning of complexes can be controlled** and **(iii) positioning influences photophysical properties**.

COLLABORATION:
- Synthesis (Waters)
- Spectroscopy (Papanikolas)
- Simulation (Papoian)





Achievement: **Demonstrated that peptides scaffolds are effective at arranging coordination complexes, thus providing a potential avenue for construction of chromophore catalyst assemblies**

SOLAR FUELS & NEXT GENERATION PHOTOVOLTAICS

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