

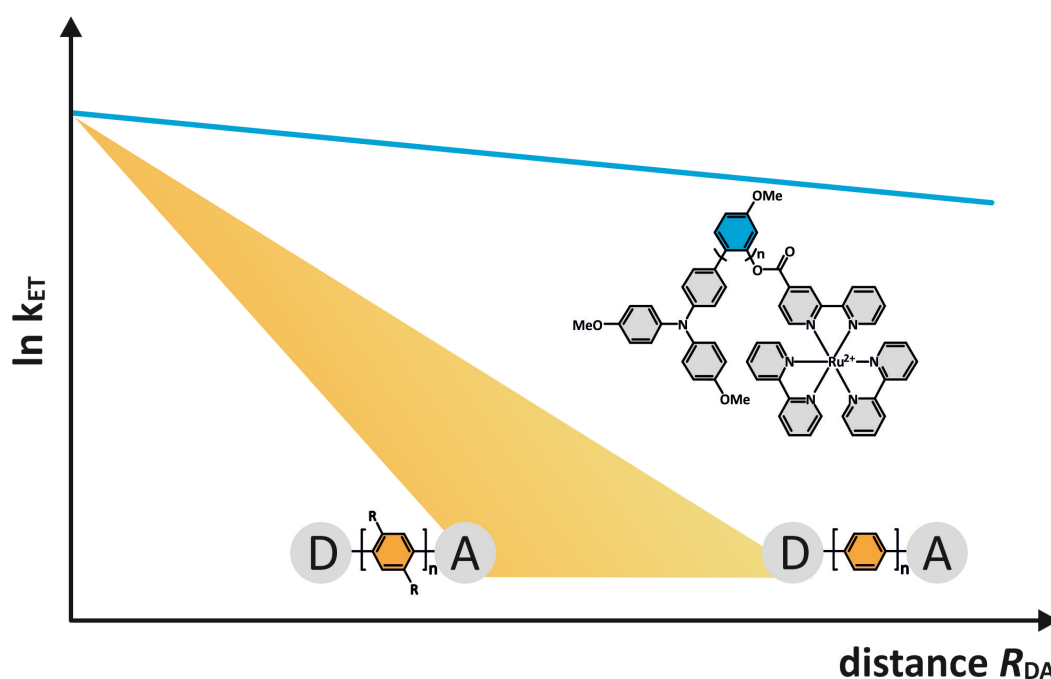
Electron transfer across oligo-ortho-phenylenes

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In photosynthesis electron transfer over long distances plays a crucial role and has been studied in many molecular donor-acceptor compounds. Especially *para*-substituted oligo-phenylenes as molecular bridges have received much attention.¹ For electron transfer across *para*-phenylenes and *para*-xylenes, time-resolved measurements revealed a significant distance dependence with β parameters of 0.2 \AA^{-1} to 0.8 \AA^{-1} , respectively.²

For the first time we investigated photoinduced electron transfer through a molecular bridge consisting of oligo-*ortho*-phenylenes. Compared to their *para* connected congeners, these molecules show a much weaker distance dependence for electron transfer.



Comparison of electron transfer rates (k_{ET}) vs. donor-acceptor-distances (R_{DA}) in *para*-phenylenes, *para*-xylenes, and oligo-*ortho*-phenylenes.

[1] E. A. Weiss, M. J. Ahrens, L. E. Sinks, A. V. Gusev, M. A. Ratner, M. R. Wasielewski, *J. Am. Chem. Soc.* **2004**, *126*, 5577–5584.

[2] D. Hanss, M. E. Walther O. S. Wenger, *Coord. Chem. Rev.* **2010**, *254*, 2584–2592.