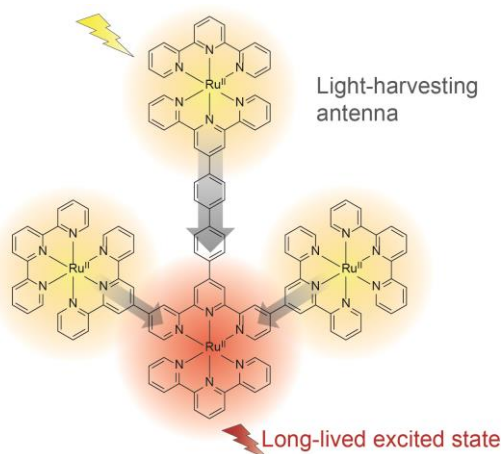


Converging Energy Transfer in Polynuclear Ru(II) Multiterpyridine complexes: Significant Enhancement of Luminescent Properties

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Ruthenium-based complexes are widely used as photocatalysts, photosensitizers or as building blocks for supramolecular assemblies.^[1] In the field of solar energy conversion, the elaboration of light harvesting antenna is of prime interest. Nevertheless, collecting light is essential but not sufficient; once collected and transferred, the exciton has to be long-lived enough to be transferred to a catalytic site. If Ru terpyridine complexes are prime building blocks for structural reasons, the short lifetime of their excited states prevents their use as a collecting centers in light antennae.^[2] In this communication, we present new polynuclear assemblies^[3], based on Ru-terpyridine units where delocalization of the excited state is combined with an antenna effect. As a consequence, the complexes synthesized display long-lived excited states compared to $[\text{Ru}(\text{terpy})_2]^{2+}$, making them promising efficient antenna building blocks to be connected to a final acceptor or a catalytic center.



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