

Publication

A visible-light promoted amine oxidation catalyzed by a Cp*Ir complex

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 4599481**Author(s)** Davis, Holly Jane; Häussinger, Daniel; Ward, Thomas R.; Okamoto, Yasunori**Author(s) at UniBasel** [Ward, Thomas R.](#) ; [Häussinger, Daniel](#) ;**Year** 2020**Title** A visible-light promoted amine oxidation catalyzed by a Cp*Ir complex**Journal** ChemCatChem**Volume** 12**Number** 18**Pages / Article-Number** 4512-4516

Through a rapid screening of Cp*Ir complexes based on a turn-on type fluorescence readout, a [Cp*Ir(dipyrido[3,2-a:2',3'-c]phenazine)Cl] + complex was found to catalyze the blue-light promoted dehydrogenation of N-heterocycles under physiological conditions. In the dehydrogenation of tetrahydroisoquinolines, the catalyst preferentially yielded the monodehydrogenated product, accompanying H₂ O₂ generation. We surmise that this mechanism may be reminiscent of flavin-dependent oxidases.

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