

Supplementary material for the article:

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Supporting Information

Improved Flavin-based Catalytic Photo-oxidation of Alcohols Through Intersystem Crossing Rate Enhancement

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Photocatalysis

The NMR studies of the reaction mixtures showed that BnOH undergoes a clean photooxidation both in case of Fl and I-Fl catalyst (Figures S1 and S2). Upon irradiation, the intensity of the resonance signals corresponding to the benzyl alcohol decreased, while benzaldehyde resonance signals appeared and no side products were observed.

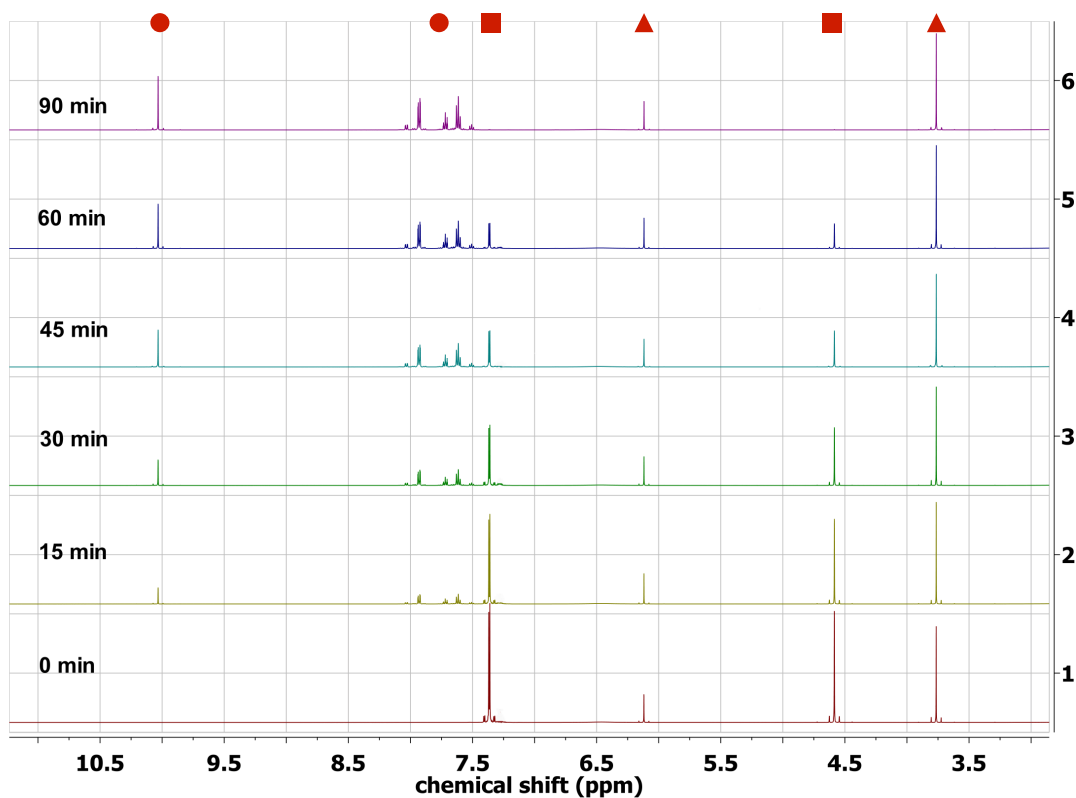


Figure S1. Photooxidation of BnOH catalyzed by I-F1 (Table 1 Entry 9). Conditions: benzyl alcohol 4.5×10^{-3} M, thiourea 15 mol%, 5% DMSO in ACN. Ellipsoids – benzaldehyde, squares – benzyl alcohol, triangles – 1,3,5-trimethoxybenzene.

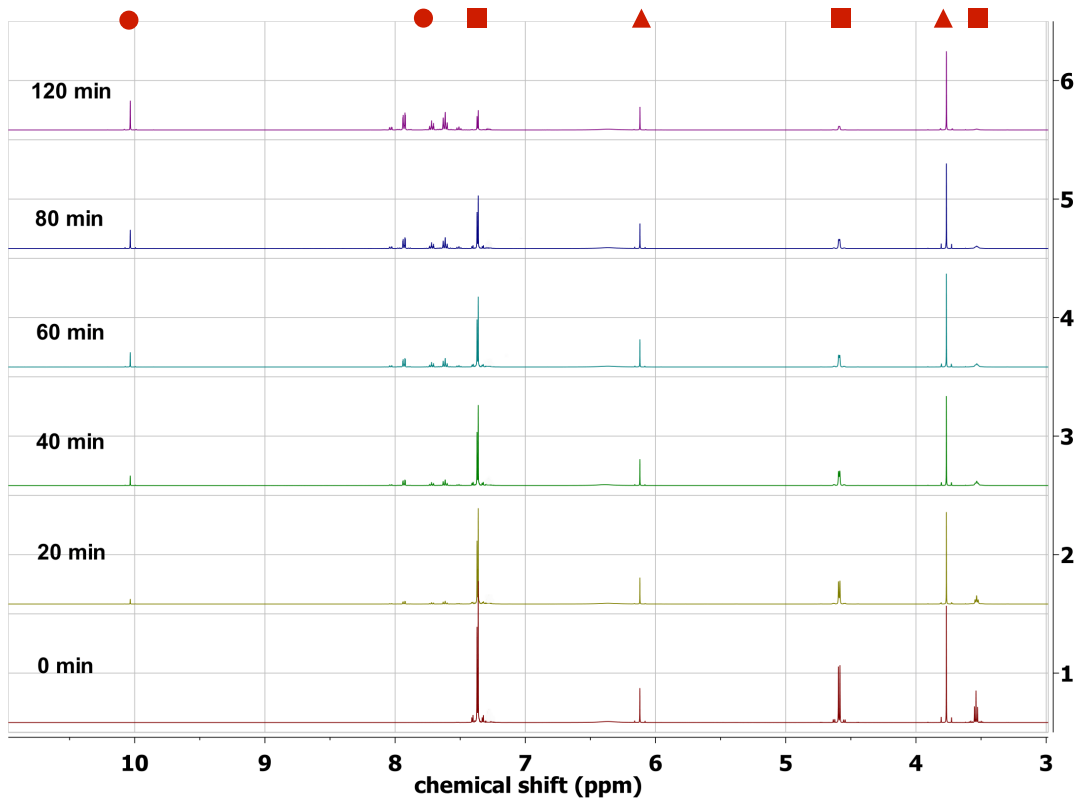


Figure S2. Photooxidation of BnOH catalyzed by F1 (Table 1 Entry 9). Conditions: benzyl alcohol 4.5×10^{-3} M, thiourea 15 mol%, 5% DMSO in ACN. Ellipsoids – benzaldehyde, squares – benzyl alcohol, triangles – 1,3,5-trimethoxybenzene.