DIRECT ARENE TRIFLUOROMETHYLATION ENABLED BY PROMISCUOUS ACTIVITY OF FUNGAL LACCASE

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Abstract: Laccase from *Trametes versicolor* (*Tv*L) was found to oxidize non-phenolic arenes and enable the trifluoromethylation of arenes in the presence of in situ generated-CF_3 radicals at a catalyst loading as low as 0.0042%. The biocatalytic trifluoromethylation proceeded under mild conditions and could increase the yield by up to 12 fold, as compared to the control.

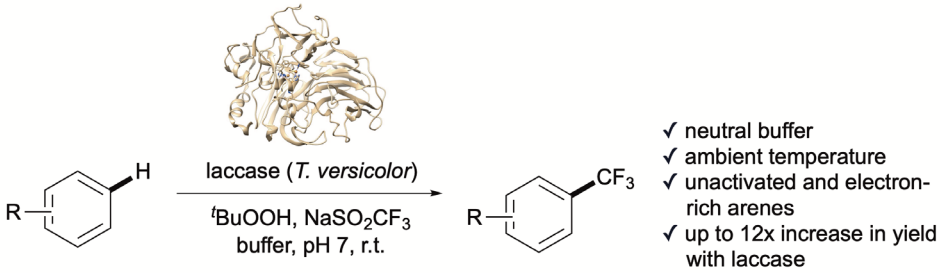

Figure 1 – Direct C-H trifluoromethylation of arenes catalyzed by TvL.