

Photocatalytic Functionalization of Alkenes with a Metal–Organic Layer Containing Eosin Y and Iron

Category

Polymer-Supported Synthesis

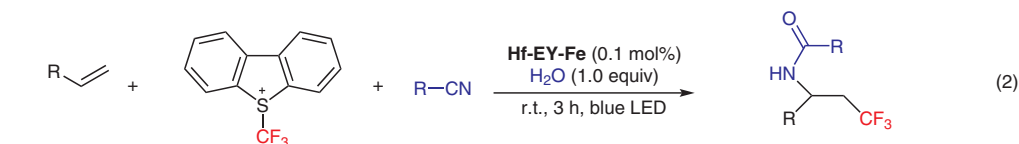
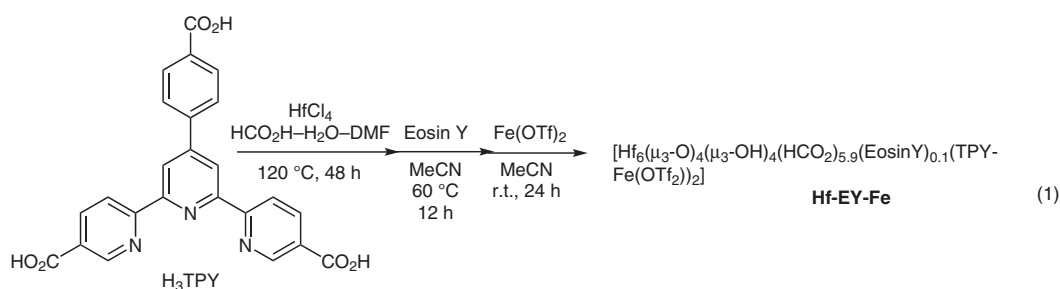
Key words

photocatalysis

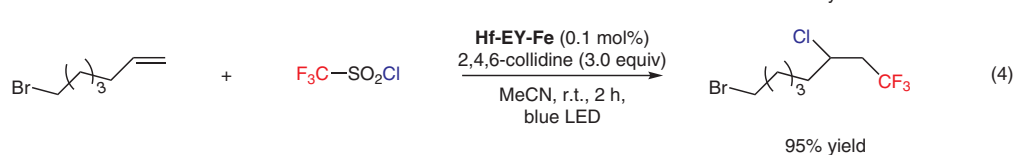
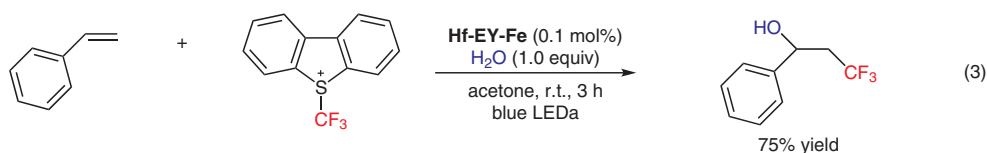
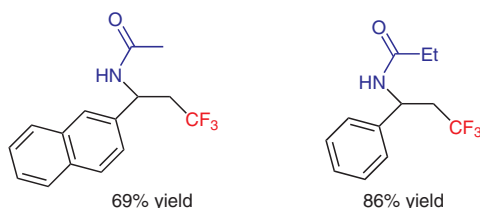
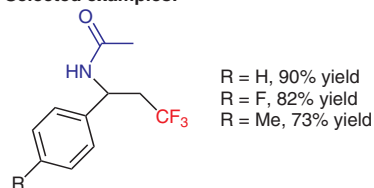
alkenes

trifluoromethylation

Synfact
of the Month



Selected examples:



Significance: A metal–organic layer (MOL) containing eosin Y and Fe-TPY ligands (**Hf-EY-Fe**), prepared according to equation 1, catalyzed the trifluoromethylative amination (eq. 2), hydroxylation (eq. 3), or chlorination (eq. 4) of alkenes to give the corresponding products in yields of up to 95%.

Comment: **Hf-EY-Fe** was characterized by means of ICP-MS, TEM, AFM, HRTEM, PXRD, UV-Vis, fluorescence, XANES, XPS, and EXAFS analyses. In the trifluoromethylative chlorination of 7-bromohept-1-ene with trifluoromethanesulfonyl chloride, the catalyst was recovered and reused four times without significant loss of its catalytic activity.