



Showcasing research from Professor Somnath Yadav's laboratory, Department of Chemistry & Chemical Biology, Indian Institute of Technology (ISM), Dhanbad, India.

A sugar-derived ligand for room temperature aerial oxidation or non-aqueous Markovnikov hydration of styrenes using a preformed or *in situ* generated Co complex

The oxidation of organic compounds generally requires strong and often toxic oxidants. A potential environment-friendly alternative of conducting these reactions involves activation of ambient oxygen with suitable catalysts. Acetophenones are bulk chemicals that are mostly synthesized by the traditional Tsuji-Wacker oxidation using pure oxygen at high temperatures and pressures *via* Pd-Cu catalysis.

With the aim of development of a more sustainable method for the synthesis of acetophenones, herein, we employ a sugar-based ligand-Co complex that enables the room temperature oxidation of styrenes to acetophenones *via* activation of ambient oxygen.

As featured in:



See Somnath Yadav *et al.*,
Catal. Sci. Technol., 2024, **14**, 4487.