

Oxidative Functionalization of Metallated β -Diketimate Analogues

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Metal complexes of β -diketimate analogues have gained profound recent attention by virtue of its multifarious reactivity strategy, functionalization of small molecules, catalytic activity amongst many others.¹ In this regard, our recent approach (experimental and theoretical) revealed C-H and C-C bond functionalizations of analogous β -diketimate as a function of varying metal platform and substrate backbone.² This includes-

- Aerobic oxygenation and acylation at central methine carbon of β -diketimate and β -ketoiminate on selective electron rich {Ru(acac)₂} (acac=acetylacetonate) platform.
- Impact of ancillary ligands (σ -donating acetylacetonate to moderately π -accepting bipyridine to strongly π -accepting phenylazopyridine) as well as ligand backbone on the oxygenation process.
- Influence of redox non-innocence of β -diketimate on the rate of oxygenation.
- Redox-active metal (Ru) versus redox-inactive metal (Zn).

References:

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