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*High-valent copper(III) complexes and their involvement
in novel fluoroalkylation reactions*

ABSTRACT: Copper has found a wide range of applications in homogenous catalysis. High-valent organocopper(III) compounds have long been proposed as key intermediates in many copper-catalyzed reactions, in which the carbon-carbon or carbon-heteroatom bond-forming reductive elimination from Cu(III) species is considered the final product-releasing step. However, well-defined copper (III) complexes are rare and reported examples require special ligands and/or are limited to specific structures. In this talk, I will discuss our group's recent efforts on the synthesis of well-defined Cu(III) complexes and the development of novel fluoroalkylation based on these copper(III) species.

Bio: Wei completed his undergraduate studies at Peking University under the supervision of Prof. Gu Yuan. In 2008, he moved to Princeton University for the doctoral studies under the supervision of Prof. John T. Groves, focusing on metalloporphyrin-catalyzed C-H halogenations. Wei then joined the Chang lab at Berkeley as a postdoctoral researcher, developing reaction-based probes for in vivo imaging and hybrid catalysts for CO reduction. He started his independent career at Miami's Department of Chemistry and Biochemistry in August 2017.