Electrooxidative C–H Functionalizations for Sustainable Chemical Transformation

C–H bond functionalization provides chemists with efficient and step-economical strategies in organic syntheses. However, oxidative/reductive transformations still require suprastoichiometric amounts of terminal oxidants or reductants, which generate a large quantity of chemical wastes and thereby prevents sustainable chemistry. In this talk, I present my recent research efforts toward the establishment of sustainable organic syntheses, spanning from transition metal-catalyzed oxidative C–H functionalization to metallaelectrooxidative C–H functionalization and electro-tunable divergent C–H functionalization.