OR12 – The Role of Design, Serendipity, and Scientific Competition in the Development of Oxidative Coupling Reactions

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This presentation will describe the development of novel reactions for the formation of both carbon–carbon (C–C) and carbon–nitrogen (C–N) bonds via dual C–H/C–H or C–H/N–H activation mechanisms. Each of the reactions involves dual C–H/C–H or C–H/N–H activation mechanisms and an organic or inorganic oxidant. Ultimately, regioselective oxidative arylation and amination reactions were developed, allowing the presenter and his research team to map the chemical reactivity of a variety of arenes and amines in oxidizing conditions.