

Ligand Total Synthesis: a Driving Force for Innovation

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Ligand Total Synthesis: a Driving Force for Innovation

Natural products are an abundant source of synthetic challenges that foster important breakthroughs in organic chemistry. Despite the superior complexity of these targets, ligand total synthesis can address unsolved chemical problems through new fundamental transformations and provide access to creative catalyst designs. In this talk I will present a comparative analysis of natural and ligand total synthesis to provide a context for our recent research and to motivate the importance of future undertakings in this area.

In particular, I will discuss our recent research in photochemical organometallic reactions (*Angew. Chem. Int. Ed.* **2015**, 14094) and our latest work in other challenging C–C coupling processes.

Dr. Abraham Mendoza Assistant Prof. Arrhenius Laboratory Stockholm University

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Dr. Abraham Mendoza was born and raised in Gijón, in the north coast of Spain. He obtained his BSc and PhD degrees in Chemistry (2009) at the Univ. of Oviedo with Profs. J. Barluenga, F. J. Fañanás and F. Rodríguez (*working in Cr and W carbene complexes, carbophilic activation of alkynes and the total synthesis of (–)-Berkelic acid*).

He awarded a Fulbright Fellowship (2010-2012) to join Prof. P. S. Baran at The Scripps Research Institute (*working on scalable taxane total synthesis and alkane dehydrogenation*) and then retuned to Europe as a Marie Curie Fellow (2012-2013) at the Univ. of Cambridge with Prof. M. J. Gaunt (*working in C–H insertion catalysis and bio-orthogonal arylation of biomolecules*).

In late 2013, he started his independent career at Stockholm University as a Junior Researcher of the Swedish Research Council and became a member of the Berzelii EXSELENT Center on Porous Materials.

His group is currently pursuing scalable and automatic synthetic methods involving C–H functionalization, oxidative coupling and main-group organometallic photochemistry.