

Gold Catalysis: The Journey from „Catalytically Dead“ to C,H Insertion and Photoredox Catalysis“

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The presentation will cover catalyst preparation, methodology development in the field of homogeneous gold catalysis of organic reactions, mechanistic studies and applications in synthesis.

The catalyst preparation will include synthetic ways to gold(I) and gold(III) catalysts, both inorganic coordination compounds as well as organometallic catalysts. The methodology development will cover a broad span from reactions proceeding through vinylgold(I) compounds, functionalized carbengold(I) complexes and even vinylidene-gold(I) complexes or vinylgold(III) intermediates.

The mechanistic studies are based on isotope labelling, in situ spectroscopy and detailed computational investigation.

