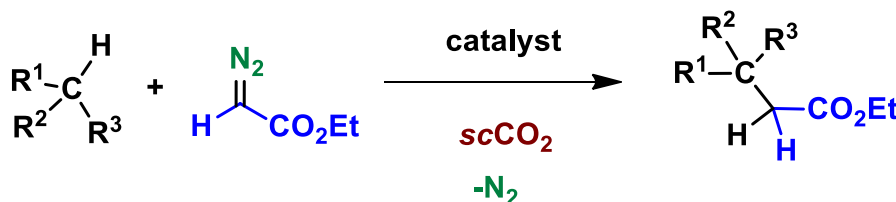


Coinage metal-based catalysis for methane functionalization

Pedro J. Pérez

Laboratorio de Catálisis Homogénea, Unidad Asociada al CSIC, CIQSO-Centro de Investigación en Química Sostenible and Departamento de Química, Universidad de Huelva, 21007 Huelva, Spain.

The development of practical catalytic systems that would employ methane as C1-source for synthetic purposes yet constitutes one of the challenges of modern chemistry [1]. Only a few systems have been described with soluble catalyst toward that end, albeit to date none of them find practical application. In the search for novel reaction pathways using methane and other light alkanes as starting materials, we have developed [2] a family of catalysts that promote the functionalization of the C-H bonds of such hydrocarbons by means of a carbene insertion reaction induced by a metal center. Diazo compounds are employed as the carbene source. In this contribution, the development of such catalytic systems along the years until such goal was achieved will be presented.



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