

# Hydrofunctionalization reactions catalysed by nickel–NHC systems: from well-defined catalytic precursors to NHC-stabilized nickel nanoparticles

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## ABSTRACT

In this talk, we will present our efforts toward the design and understanding of efficient nickel–N-heterocyclic carbene-based catalysts for various hydrofunctionalization reactions, including the hydroboration of alkenes, the hydrosilylation of carbonyl derivatives, and recently, the semi-hydrogenation of alkynes and ynamides. In particular, we will show how our efforts to get an insight to the reaction mechanisms has led us from the synthesis of well-defined half-sandwich nickel-NHC catalyst precursors to that of NHC-stabilized nickel nanoparticles.

## CURRICULUM VITAE:



Vincent Ritleng graduated from the University of Strasbourg where he received his Ph.D. in Organometallic Chemistry in 2001. From 2001 to 2003, he worked as a post-doc associate with prof. Richard Schrock at MIT (USA). After a second post-doc with professors Ben Feringa and Johannes de Vries at the Rijksuniversiteit Groningen (Netherlands) in 2003-2004, he was appointed Maître de Conférences at the University of Strasbourg, at the European School for Chemistry, Polymers and Materials (ECPM). From 2018 he is Full Professor at the Strasbourg University.

He has been the recipient of several awards and distinctions, such as the Fellow of the University of Strasbourg Institute for Advanced Study (USIAS) in 2012-2013, or the Young Talent Medal from the University of Strasbourg in 2014

His research interests lie at the interface of inorganic, organometallic, and organic chemistry. He is co-author of 52 publications (h = 25) and 3 patents with PCT.

<https://www.researchgate.net/profile/Vincent-Ritleng>