

Tentative Outline

Special Thematic Issue for the journal "Current Organic Synthesis"

Title of the Thematic Issue: CO Surrogates in palladium catalyzed carbonylative cross-coupling reactions

Sectional Editor: Laura Antonella Aronica

• **Scope of the Thematic Issue:**

Carbonylation reactions with carbon monoxide (CO) provide efficient and attractive routes for the synthesis of functionalized organic compounds. Due to the high toxicity of CO, the development of its surrogates has received much attention in the last twenty years in order to find green alternatives to gaseous CO. Many studies have reported on the development of benign and safe reagents to work as a CO source in carbonylative cross coupling reactions. This thematic issue is focused on the recent improvements in palladium-catalyzed carbonylative process performed with in situ and ex situ CO sources.

Keywords: Carbonylation, Carbon monoxide, Surrogate, Heck reaction, Suzuki reaction, Sonogashira reaction

Sub-topics:

- Carbonylative cross coupling reactions
- Synthesis of heterocycles by carbonylative reactions
- Metal-carbonyl complexes as CO surrogate
- Formic acid and its derivatives as CO source
- CO from CHCl_3
- Oxalic and silacarboxylic acids for CO generation
- Oxiranes as CO surrogates
- From CO_2 to CO
- In situ vs. ex situ carbonylations

Tentative titles of the articles:

- Heck, Sonogashira, Suzuki carbonylative cross coupling reactions in the presence of CO surrogates
- Synthesis of heterocycles by carbonylative reactions performed in the presence of CO surrogates:
- Metallo-Carbonyl complexes as CO surrogate
- Carboxylic acids and derivatives as CO source
- Carbon monoxide from CHCl_3
- From CO_2 to CO

Schedule:

- ✧ Thematic issue submission deadline: 30th of June 2023

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