B. YU, Y. ZHAO, H. ZHANG, J. XU, L. HAO, X. GAO, Z. LIU* (BEIJING NATIONAL LABORATORY FOR MOLECULAR SCIENCES, P. R. OF CHINA)
 Pd/C-Catalyzed Direct Formylation of Aromatic Iodides to Aryl Aldehydes Using Carbon Dioxide as a C1 Resource
Chem. Commun. **2014**, 50, 2330–2333.

Formylation of Aryl Iodides with CO₂ Using Palladium on Carbon

Selected examples:

Significance: Palladium on carbon (Pd/C) catalyzed the formylation of aryl iodides in the presence of poly(methylhydrosiloxane) (PMHS) and 1,8-diazabicyclo[5.4.0]undec-7-ene (DBU) under a CO₂ atmosphere in acetonitrile to give aryl aldehydes in up to 81% yield (20 examples).

Comment: The formylation of aryl iodides to aryl aldehydes using CO₂ as a C1 resource was achieved. The authors previously reported the cyclization of *ortho*-phenylenediamines to benzimidazoles (*Green Chem.* **2013**, 15, 95) and 2-aminothiophenol to benzothiazolone (*ACS Catal.* **2013**, 3, 2076) using CO₂ as a C1 resource.

Category

Polymer-Supported Synthesis

Key words

aryl iodides

aryl aldehydes

carbon dioxide

formylation

palladium on carbon

SYNFACT
of the month

SYNFACTS Contributors: Yasuhiro Uozumi, Shiguang Pan
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