

Iron Catalysis in C(sp)-C(sp²) Bond Forming Reactions

Gabriel TOMA

Kyoto University, Yoshida, Sakyo-ku, Kyoto, Japan

Abstract Although iron was known and widely used by people for hundreds of years, Grignard reagents also used for about a century, binding together these two concepts still took a long time and surprisingly it did not become a hot topic in chemistry until this decade. This paper is presenting several developments in iron catalysis done mainly during the past 5 years and where Grignard reagents are used as nucleophilic reagents and related papers. It is focused on Sonogashira type reaction, but it also presents other important and interesting reactions that gathered the attention of scientists worldwide during the past few years. We are also trying to explain why it is so.

Keywords: Sonogashira reaction, iron catalysis, cross-coupling, Grignard reagents
