TIFR Centre for Interdisciplinary Sciences
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Colloquium

Palladium Catalyzed Aryl C–H Olefination with Unactivated, Aliphatic Alkenes

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Palladium catalyzed coupling between aryl halides and alkenes (Mizoroki-Heck reaction) is one of the most popular reactions for synthesizing complex organic molecules. The limited availability, problematic synthesis, and higher cost of aryl halide precursors (or their equivalents) have encouraged exploration of direct olefination of aryl carbon-hydrogen (C–H) bonds (Fujiwara-Moritani reaction). Despite significant progress, the restricted substrate scope, in particular noncompliance of unactivated aliphatic olefins, has discouraged the use of this greener alternative. Overcoming this serious limitation, we report here a palladium-catalyzed chelation-assisted ortho-C–H bond olefination of phenyl acetic acid derivatives with unactivated, aliphatic alkenes in good to excellent yields with high regio- and stereoselectivities. The versatility of this operationally simple method has been demonstrated through drug diversification and sequential C–H olefination for synthesizing divinyl benzene derivatives.

Tuesday, Oct 21st 2014

11:30 AM (Tea/Coffee at 11:15 AM)

Seminar Hall, TCIS