VORTRAG IM RAHMEN DES SONDERFORSCHUNGSBEREICHS 623
DER UNIVERSITÄT HEIDELBERG
MOLEKULARE KATALYSATOREN: STRUKTUR UND FUNKTIONSDESIGN

Freitag, 28. Oktober 2011, 11h c. t.

Kleiner Hörsaal, Im Neuenheimer Feld 252

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"Atom-Efficient Direct Amination of (Bio)Alcohols with Ammonia"

Abstract: The use of biomass-derived feedstocks asks for the development of new and improved types of catalytic transformations. As we are typically dealing with highly functionalized feedstocks, selective defunctionalizations and functional group transformations are required to produce desired intermediates, rather than the classical functionalization reactions used in petrol-based chemistry. From an atom-efficiency point of view especially protective group-free transformations are highly desirable.

We recently developed the first highly efficient and selective Ru-catalyzed direct amination of secondary (bio)alcohols with ammonia towards primary amines. In this "hydrogen shuttling" approach protective groups are avoided and no additional hydrogen is needed. At full conversion of the starting alcohols, high selectivities to the desired primary amines, as high as 99+%, can be achieved. The right choice of Ru-precursor, ligand, and reaction conditions allows for the efficient conversion of a wide range of mono- and diol substrates.

Gäste sind herzlich willkommen.

Bei Interesse an einem Gesprächstermin bitte melden bei
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DER SPRECHER
gez. Prof. Dr. Lutz H. Gade