

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

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**Atom-Economic Catalytic Amine Synthesis
Using Early Transition Metal Amidate
Complexes**

Catalytic hydroamination is the 100% atom economic synthesis of C-N bonds from amines and C-C multiple bond containing substrates, while catalytic hydroaminoalkylation is a complementary C-C bond forming reaction α - to N. Inexpensive, low toxicity early transition metals show much promise for these desirable transformations. In particular, the recent development of modular, and easily varied ureate and amidate complexes of zirconium and tantalum have resulted in the preparation of novel complexes with unprecedented reactivity for the catalytic synthesis of amines. Zirconium ureate complexes can mediate the hydroamination of alkynes and alkenes with both primary and secondary amines to give a broad range of products, while tantalum amidate complexes promote sp^3 -hybridized C-H activation α - to N to give catalytically active metallazaaziridine intermediates for C-C bond formation. Recent advances in catalyst development including asymmetric catalysis, mechanistic investigations, and synthetic applications for the preparation of a broad range of amine and N-heterocyclic small molecules will be presented

Freitag, 7. Mai 2010, 11h c.t.
Kleiner HS Chemie

Gäste sind herzlich willkommen.

Bei Interesse an einem Gesprächstermin bitte melden bei Frau Apermann,
Tel.: 06221-54-8444

DER SPRECHER
gez. L. H. Gade