

## Publikationen Prof. Dr. Matthias Driess

### 2010

171. **Reversible P<sub>4</sub>-Activation with Nickel(I) and  $\eta^3$ -Coordinated Tetrphosphorus Ligand between Two Ni<sup>I</sup> Centers**  
S. Yao, Y. Xiong, C. Milsmann, E. Bill, S. Pfirrmann, C. Limberg, M. Driess  
*Chem. Eur. J.* **2010**, *16*, Issue 2, 436-439 (DOI: 10.1002/chem.200902820)
172. **N-Heterocyclic Carbene (NHC)-Stabilized Silanechalcogenones: NHC→Si(R<sub>2</sub>)=E (E = O, S, Se, Te)**  
S. Yao, Y. Xiong, M. Driess  
*Chem. Eur. J.* **2010**, *16*, Issue 4, 1281-1288 (DOI: 10.1002/chem.200902467)
173. **Synthesis and Rearrangement of Stable NHC → Silylene Adducts and Their Unique Reactivity towards Cyclohexylisocyanide**  
Y. Xiong, S. Yao, M. Driess  
*Chem. Asian J.* **2010**, *5*, Issue 2, 322-327 (DOI: 10.1002/asia.200900434)
174. **Lithium related deep and shallow acceptors in Li-doped ZnO nanocrystals**  
C. Rauch, W. Gehlhoff, M. R. Wagner, E. Malguth, G. Callsen, R. Kirste, B. Salameh, A. Hoffmann, S. Polarz, Y. Aksu, M. Driess  
*J. Appl. Phys.* **2010**, *107*, 024311, (DOI:10.1063/1.3275889)
175. **Methylmagesium Alkoxide Clusters with Mg<sub>4</sub>O<sub>4</sub> Cubane- and Mg<sub>7</sub>O<sub>8</sub> Biscubane-Like Cores: Organometallic Precursors for Low-Temperature Formation of MgO Nanoparticles with Variable Surface Defects**  
S. Heitz, Y. Aksu, C. Merschjann, M. Driess  
*Chem. Mater.* **2010**, *22*, 1376-1385 (DOI: 10.1021/cm9021535)
176. **Steering S-H and N-H Bond Activation by a Stable N-Heterocyclic Silylene: Different Addition of H<sub>2</sub>S, NH<sub>3</sub>, and Organoamines on a Silicon(II) Ligand versus Its Si(II)→Ni(CO)<sub>3</sub> Complex**  
A. Meltzer, S. Inoue, C. Präsang, M. Driess  
*J. Am. Chem. Soc.* **2010**, *132*, Issue 9, 3038-3046 (DOI: 10.1021/ja910305p)
177. **Activation of C–H bonds mediated by Mo≡Mo moieties in heterobimetallic Zn/O/Mo clusters**  
Jian-Gong Ma, Yilmaz Aksu, Laurence J. Gregoriades, Joachim Sauer and Matthias Driess  
*Dalton Trans.* **2010**, *39*, 103-106 (DOI: 10.1039/b917585g)
178. **Unusual [3+1] Cycloaddition of a Stable Silylene with a 2,3-Diazabuta-1,3-diene versus [4+1] Cycloaddition toward a Buta-1,3-diene**  
Y. Xiong, S. Yao, M. Driess  
*Organometallics* **2010**, *29*, Issue 4, 987-990 (DOI: 10.1021/om901034w)

179. **Si=X Multiple Bonding with Four-Coordinate Silicon? Insights into the Nature of the Si=O and Si=S Double Bonds in Stable Silanoic Esters and Related Thioesters: A Combined NMR Spectroscopic and Computational Study**  
J.-D. Epping, S. Yao, M. Karni, Y. Apeloig, M. Driess  
*J. Am. Chem. Soc.* **2010**, *132*, Issue 15, 5449-5455 (DOI: 10.1021/ja1004812)
180. **From silicon(II)-based dioxygen activation to adducts of elusive dioxasilirane and sila-urea stable at room temperature**  
Y. Xiong, S. Yao, R. Müller, M. Kaupp, M. Driess  
*Nature Chemistry* **2010**, *Vol. 2*, 577-580 (DOI:10.1038/NCHEM.666)
181. **High Efficiency in Catalytic Hydrosilylation of Ketones with Zinc-Based Precatalysts Featuring Hard and Soft Tridentate O,S,O-Ligands**  
N. Marinos, S. Enthaler, M. Driess  
*ChemCatChem* **2010**, *Vol. 2*, Issue 7, 846-853 (DOI: 10.1002/cctc.201000036)
182. **Dioxygenase-Like Reactivity of an Isolable Superoxo–Nickel(II) Complex**  
A. Company, S. Yao, K. Ray, M. Driess  
*Chem. Eur. J.* **2010**, *16*, Issue 31, 9669-9675 (DOI: 10.1002/chem.201001138)
183. **Molecular Heterobimetallic Approach to Li-Containing MgO Nanoparticles with Variable Li-Concentrations Using Lithium-Methylmagnesium Alkoxide Clusters**  
S. Heitz, J.-D. Epping, Y. Aksu, M. Driess  
*Chem. Mater.* **2010**, *Vol. 22*, No. 16, 4563-4571 (DOI: 10.1021/cm100415m)
184. **N-Heterocyclic Germylidenide and Stannylidenide Anions: Group 14 Metal(II) Cyclopentadienide Analogues**  
W. D. Woodul, A. F. Richards, A. Stasch, M. Driess, C. Jones  
*Organometallics* **2010**, *29*, No. 16, 3655-3660 (DOI: 10.1021/om100595a)
185. **Addition of [( $\eta^5$ -C<sub>5</sub>Me<sub>5</sub>)IrH<sub>4</sub>] to a zwitterionic silylene: stepwise formation of iridium(v)-silyl and iridium(III)-silylene complexes**  
A.-K. Jungton, A. Meltzer, C. Präsang, T. Braun, M. Driess, A. Penner  
*Dalton Trans.* **2010**, 39(23), 5436-5438 (DOI: 10.1039/c0dt00236d)
186. **Activation of Ammonia by a Si=O Double Bond and Formation of a Unique Pair of Sila-Hemiaminal and Silanoic Amide Tautomers**  
Y. Xiong, S. Yao, R. Müller, M. Kaupp, M. Driess  
*J. Am. Chem. Soc.* **2010**, *132*, Issue 20, 6912-6913 (DOI: 10.1021/ja1031024)
187. **Unifying Concepts in Catalysis**  
C. Limberg, M. Driess  
*ChemCatChem* **2010**, *Vol. 2*, Issue 7, 711-712 (DOI: 10.1002/cctc.201000200)
188. **Facile and Efficient Reduction of Ketones in the Presence of Zinc Catalysts Modified by Phenol Ligands**  
S. Enthaler, B. Eckhardt, S. Inoue, E. Irran, M. Driess  
*Chem. Asian J.* **2010**, *5*, Issue 9, 2027-2035 (DOI: 10.1002/asia.201000317)

189. **Isomerization of an N-Heterocyclic Germylene to an Azagermabenzen-1-ylidene and Its Coupling to a Unique Bis(germylene)**  
S. Yao, X. Zhang, Y. Xiong, H. Schwarz, M. Driess  
*Organometallics* **2010**, 29, No. 21, 5353-5357 (DOI: 10.1021/om100383y)
190. **Silicon Analogues of Carboxylic Acids: Synthesis of Isolable Silanoic Acids by Donor–Acceptor Stabilization**  
Y. Xiong, S. Yao, M. Driess  
*Angew. Chem. Int. Ed.* **2010**, 49, Issue 37, 6642-6645 (DOI: 10.1002/anie.201002970)
191. **Monooxygenase-Like Reactivity of an Unprecedented Heterobimetallic {FeO<sub>2</sub>Ni} Moiety**  
S. Yao, C. Herwig, Y. Xiong, A. Company, E. Bill, C. Limberg, M. Driess  
*Angew. Chem. Int. Ed.* **2010**, 49, Issue 39, 7054-7058 (DOI: 10.1002/anie.201001914)
192. **Formamidines – Versatile Ligands for Zinc-Catalyzed Hydrosilylation and Iron-Catalyzed Epoxidation Reactions**  
S. Enthaler, K. Schröder, S. Inoue, B. Eckhardt, K. Junge, M. Beller, M. Driess  
*Eur. J. Org. Chem.* **2010**, Vol. 2010, Iss. 25, 4893-4901 (DOI: 10.1002/ejoc.201000648)
193. **Coordination of a Si=O subunit to metals: complexes of donor-stabilized silanone featuring a terminal Si=O→M coordination (M = Zn, Al)**  
Y. Xiong, S. Yao, M. Driess  
*Dalton Trans.* **2010**, 39, 9282-9287 (DOI: 10.1039/C0DT00148A)
194. **An Isolable Bis-Silylene Oxide (“Disilylenoxane”) and Its Metal Coordination**  
W. Wang, S. Inoue, S. Yao, M. Driess  
*J. Am. Chem. Soc.* **2010**, 132, Issue 45, 15890-15892 (DOI: 10.1021/ja106458p)
195. **An N-Heterocyclic Carbene–Disilyne Complex and Its Reactivity toward ZnCl<sub>2</sub>**  
T. Yamaguchi, A. Sekiguchi, M. Driess  
*J. Am. Chem. Soc.* **2010**, 132, Issue 40, 14061-14063 (DOI: 10.1021/ja107160g)
196. **Metal-Free Activation of EH<sub>3</sub> (E=P, As) by an Ylide-like Silylene and Formation of a Donor-Stabilized Arsilene with a HSi=AsH Subunit**  
C. Präsang, M. Stoelzel, S. Inoue, A. Meltzer, M. Driess  
*Angew. Chem. Int. Ed.* **2010**, 49, Issue 51, 10002-10005 (DOI: 10.1002/anie.201005903)