

Seminar "Modern Methods in Organic Chemistry"

WS 2006/07

October 31st, 2006, 5 p.m., room 442

Florian LOTZ

Problems!

November 7th, 2006, 5 p.m., room 442

Simone DIETZ, Nina TÖLLE

Lithium in Organic Synthesis – Reagents, Additives and Intermediates

(a) de Carvalho da Silva, F.; Synthetic Applications of Lithium Hydroxide, *Synlett* **2006**, 9, 1451–1452; (b) Rudrawar, S.; Lithium Bromide: A Versatile Reagent in Organic Synthesis, *Synlett* **2005**, 7, 1197–1198. (c) Wu, R. R.; Huang, M.; Organolithium in Asymmetric Processes, *Topics in Organom. Chem.* **2004**, 6, 1–35. (d) Schwindemann, J. A.; New, Stable, Protected Functionalized Lithium Reagents and their Application in Synthesis, *PharmaChem* **2003**, 2(3), 4–6. (e) Krasovskiy, A., Straub, B. F., Knochel, P.; Highly Efficient Reagents for Br/Mg Exchange, *Angew. Chem. Int. Ed.* **2006**, 45(1), 159–162. (f) Najera, C., Yus, M.; Functionalized Organolithium Compounds: New Synthetic Adventures, *Curr. Org. Chem.* **2003**, 7(9), 867–926. (g) Chinchilla, R., Najera, C., Yus, M.; Metalated Heterocycles and their Applications in Synthetic Organic Chemistry, *Chem. Rev.* **2004**, 104(5), 2667–2722. (h) Yang, X., Knochel, P., Preparation and Reactions of Functionalized Organocopper Reagents, *Synthesis* **2006**, 15, 2618–2623.

November 21st, 2006, 5 p.m., room 442

Deshan LIU

Problems!

December 5th, 2006, 5 p.m., room 442

Linda NACKE

Problems!

December 12th, 2006, 5 p.m., room 442

Alexander GRUBE

Problems!

December 19th, 2006, 5 p.m., room 442

Henning BÖCKEMEIER, Marian VON HOF

Immobilized Reagents and Catalysts

(a) Toy, P. H., Shi, M.; Polymer-supported Reagents and Catalysts: Increasingly Important Tools for Organic Synthesis, *Tetrahedron* **2005**, 61(51), 12025. (b) Donohoe, T. J., Harris, R. M., Butterworth, S., Burrows, J. N.; New Osmium-Based Reagent for the Dihydroxylation of Alkenes,

J. Org. Chem. **2006**, 71(12), 4481–4489. (c) Storer, R. I., Takemoto, T., Jackson, P. S., Ley, S. V.; A Total Synthesis of Epothilones using Solid-Supported Reagents and Scavengers, *Angew. Chem. Int. Ed.* **2003**, 42(22), 2521–2525. (d) Bergbreiter, D. E.; Using Soluble Polymers to Recover Catalysts and Ligands, *Chem. Rev.* **2002**, 102(10), 3345–3383. (e) Crosignani, S., White, P. D., Linclau, B.; Polymer-Supported *O*-Alkylisoureas: Useful Reagents for the *O*-Alkylation of Carboxylic Acids, *J. Org. Chem.* **2004**, 69(18), 5897–5905. (f) Baxendale, I. R., Ernst, M., Krahnert, W.-R., Ley, S. V.; Application of Polymer-Supported Enzymes and Reagents in the Synthesis of γ -Aminobutyric Acid (GABA), *Synlett* **2002**, 10, 1641–1644. (g) Chiara, J. L., Encinas, L., Diaz, B.; A Study of Polymer-Supported Bases for the Solution Phase Synthesis of Glycosyl tTrichloroacetimidates, *Tetrahedron Lett.* **2005**, 46(14), 2445–2448.

January 9th, 2007, 5 p.m., room 442

Nina SCHÜTZENMEISTER

Surveying Biomolecular Interactions: Surface Plasmon Resonance Spectroscopy

(a) Czeslik, C.; Protein Adsorption on Solid Interfaces, *Chemie in unserer Zeit* **2006**, 40(4), 238–245. (b) Karlsson, R.; SPR for Molecular Interaction Analysis: A Review of Emerging Application Areas, *J. Mol. Recognit.* **2004**, 17(3), 151–161. (c) Slepak, V. Z.; Application of Surface Plasmon Resonance for Analysis of Protein-Protein Interactions in the G Protein-mediated Signal Transduction Pathway, *J. Mol. Recognit.* **2000**, 13(1), 20–26. (d) Van Regenmortel, M. H., Altschuh, D., Chatellier, J., Christensen, L., Rauffer-Bruyere, N., Richalet-Secordel, P., Witz, J., Zeder-Lutz, G.; Measurement of Antigen-Antibody Interactions with Biosensors, *J. Mol. Recognit.* **1998**, 11(1–6), 163–7. (e) Aslan, K., Lakowicz, J. R., Geddes, C.; Plasmon Light Scattering in Biology and Medicine: New Sensing Approaches, Visions and Perspectives, *Curr. Opin. Chem. Biol.* **2005**, 9, 538–544. (f) Smith, E. A., Corn, R. M.; Surface Plasmon Resonance Imaging as a Tool to Monitor Biomolecular Interactions in an Array Based Format, *Appl. Spectroscopy* **2003**, 57, 320A–332A.

January 16th, 2007, 5 p.m., room 442

Tom KINZEL

Problems!

January 23rd, 2007, 5 p.m., room 442

Wang FEI

Iridium and Rhodium Catalysis in Organic Synthesis

(a) Cho, J.-Y., Tse, M. K., Holmes, D., Maleczka, R. E., Jr., Smith, M. R., III.; Remarkably Selective Iridium Catalysts for the Elaboration of Aromatic C-H Bonds, *Science* **2002**, 295(5553), 305–308. (b) Hiroto, S., Hisaki, I., Shinokubo, H., Osuka, A.; Synthesis of Corrole Derivatives through Regioselective Ir-Catalyzed Direct Borylation, *Angew. Chem. Int. Ed.* **2005**, 44(41), 6763–6766. (c) Takeuchi, R.; Iridium Complex-Catalyzed Allylic Alkylation, *Polyhedron* **2000**, 19(5), 557–561. (d) Yasui, H., Yorimitsu, H., Oshima, K.; Isomerization of Alkynes to 1,3-Dienes under Rhodium or Palladium Catalysis, *Synlett* **2006**, 11, 1783–1785. (e) Yanagisawa, S., Sudo, T., Noyori, R., Itami, K.; Direct C-H Arylation of (Hetero)arenes with Aryl Iodides via Rhodium Catalysis, *J. Am. Chem. Soc.* **2006**, 128(36), 11748–11749. (f) Takada, Y., Hayashi, S., Hirano, K., Yorimitsu, H., Oshima, K.; Rhodium-Catalyzed Allyl Transfer from Homoallyl Alcohols to

Aldehydes via Retro-Allylation followed by Isomerization into Ketones, *Org. Lett.* **2006**, *12*, 2515–2517. (g) Morrill, T. C., D'Souza, C. A.; Efficient Hydride-Assisted Isomerization of Alkenes via Rhodium Catalysis, *Organometallics* **2003**, *22*(8), 1626–1629. (h) Bienayme, H., Ancel, J.-E., Meilland, P., Simonato, J.-P.; Rhodium(I)-Catalyzed Addition of Phenols to Dienes: A New Convergent Synthesis of Vitamin E, *Tetrahedron Lett.* **2000**, *41*(18), 3339–3343.

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