

# Seminar "Modern Methods in Organic Chemistry"

WS 2010/11

November 2<sup>th</sup>, 2010, 5 p.m., room 442

Dr. Mohammad Baag

Problems!

November 16<sup>th</sup>, 2010, 5 p.m., room 442

Tim Hungerland

## Radical Chemistry

a) K. C. Nicolaou, S. P. Ellery, J. S. Chen, Samarium Diiodide Mediated Reactions in Total Synthesis, *Angew. Chem.* **2009**, *121*, 7276–7301; *Angew. Chem. Int. Ed.* **2009**, *48*, 7140–7165. b) G. J. Rowlands, Radicals in organic synthesis. Part 1, *Tetrahedron* **2009**, *65*, 8603–8655. c) R. G. Hicks, What's new in stable radical chemistry?, *Org. Biomol. Chem.* **2007**, *5*, 1321–1338. d) A. Gansäuer, Radicals in Synthesis I and II, *Top. Curr. Chem.* **2006**, *263* and *264*. e) A. Gansäuer, T. Lauterbach, S. Narayan, Strained Heterocycles in Radical Chemistry, *Angew. Chem.* **2003**, *115*, 5714–5731; *Angew. Chem. Int. Ed.* **2003**, *42*, 5556–5573. f) G. Bar, A. F. Parsons, Stereoselective radical reactions, *Chem. Soc. Rev.*, **2003**, *32*, 251–263. g) D. P. Curran, Highlights from Two Decades of Synthetic Radical Chemistry, *Aldrichimica Acta* **2000**, *33*, 104–110.

November 23<sup>th</sup>, 2010, 5 p.m., room 442

Ling Ma

Problems!

November 30<sup>th</sup>, 2010, 5 p.m., room 442

Svenia Schild

## Silicium in Organic Chemistry

a) S. E. Denmark, J. H.-C. Liu, Silicon-Based Cross-Coupling Reactions in the Total Synthesis of Natural Products, *Angew. Chem.* **2010**, *122*, 3040–3049; *Angew. Chem. Int. Ed.* **2010**, *49*, 2978–2986. b) H. F. T. Klare, M. Oestreich, Silylium ions in catalysis, *Dalton Trans.* **2010**, *39*, 9176–9184. c) A. Weickgenannt, M. Mewald, M. Oestreich, Asymmetric Si–O coupling of alcohols, *Org. Biomol. Chem.* **2010**, *8*, 1497–1504. d) L. Chabaud, P. James, Y. Landais, Allylsilanes in Organic Synthesis - Recent Developments, *Eur. J. Org. Chem.* **2004**, 3173–3199. e) A. D. Dilman, S. L. Ioffe, Carbon-Carbon Bond Forming Reactions Mediated by Silicon Lewis Acids, *Chem. Rev.* **2003**, *103*, 733–772. f) L. F. van Staden, D. Gravestock, D. J. Ager, New developments in the Peterson olefination reaction, *Chem. Soc. Rev.* **2002**, *31*, 195–200. g) W. H. Moser, The Brook Rearrangement in Tandem Bond Formation Strategies, *Tetrahedron* **2001**, *57*, 2065–84. g) I. Fleming, A. Barbero, D. Walter, Stereochemical Control in Organic Synthesis Using Silicon-Containing Compounds, *Chem. Rev.* **1997**, *97*, 2063–2192. h) E. Langkopf, D. Schinze, Uses of Silicon-Containing Compounds in the Synthesis of Natural Products, *Chem. Rev.* **1995**, *95*, 1375–1406.

December 07<sup>th</sup>, 2010, 5 p.m., room 442

Stefan Jackenkroll

Problems!

December 14<sup>th</sup>, 2010, 5 p.m., room 442

Thomas Wolfram

### Enantioselective Protonation

a) J. T. Mohr, A. Y. Hong, B. M. Stoltz, Enantioselective protonation, *Nat. Chem.* **2009**, *1*, 359–369. b) L. Duhamel, P. Duhamel, J.-C. Plaquevent, *Tetrahedron Asymmetry* **2004**, *15*, 3653–3691. c) J. Eames, N. Weerasooriya, *Tetrahedron Asymmetry* **2001**, *12*, 1–24. d) A. Yanagisawa, K. Ishihara, H. Yamamoto, *Synlett* **1997**, 411–420. e) C. Fehr, Enantioselective protonation of enolates and enols, *Angew. Chem.* **1996**, *108*, 2726–2748; *Angew. Chem. Int. Ed.* **1996**, *35*, 2567–2587.

January 11<sup>th</sup>, 2011, 5 p.m., room 442

Nina Schützenmeister

Problems!

January 25<sup>th</sup>, 2011, 5 p.m., room 442

Dr. Holm Frauendorf, Simon Biller

### Mass Spectrometry

a) M. Hesse, H. Meier, B. Zeeh, *Spektroskopische Methoden in der organischen Chemie*, 7. Ed. Thieme, Stuttgart, **2005**. b) H. Budzikiewicz, M. Schäfer, *Massenspektrometrie – Eine Einführung*, 4. Ed., Wiley-VCH, Weinheim, **1998**. c) J. T. Watson, O. D. Sparkman, *Introduction to Mass Spectrometry: Instrumentation, Application and Strategies*, 3. Ed., John Wiley & Sons, Chirchester, **1997**. d) E. de Hoffmann, V. Stroobant, *Mass Spectrometry: Principles and Applications*, 1. Ed. John Wiley & Sons, Chirchester, **1996**.

February 8<sup>th</sup>, 2010, 5 p.m., room 442

Galina Pestel

Problems!