

8-3 実践の化学・物質科学英語講義等

8-3-1 英語集中講義：総合化学特論II

Modern Trends in Chemical Sciences and Engineering II

Date	Course	Instructor
10/2-3	(Special Lecture 2014 – I) “Kinetics and Mechanisms” “High Vacuum Techniques” “Well-Defined Complex Macromolecular Architectures by Anionic Polymerization High Vacuum Techniques: Synthesis, Properties, Applications” “From High-Vacuum Apparatuses to Industrial Application” “Well-Defined Polyethylene-Based Block Copolymers and Molecular Brushes by Combining Anionic or Ring Opening Metathesis Polymerization with Polyhomologation Catalysts”	Prof. Nikolaos Hadjichristidis King Abdullah University of Science and Technology, Kingdom of Saudi Arabia
10/15-17	(Special Lecture 2014 – II) “Basics of organometallic metal complexes and their reactivities” “Transition-metal catalyzed hydrogenation and hydroformylation reactions” “Olefin metathesis reaction and polymerizations” “Transition-metal catalyzed cross-coupling reactions” “Iron-catalyzed carbon-carbon and carbon-heteroatom bond forming reactions”	Prof. Eike Bauer University of Missouri-St. Louis, USA
11/5-7	(Special Lecture 2014 – III) “Introduction to steroids chemistry” “Synthesis of steroids part I” “Synthesis of steroids part II” “Synthesis of steroids part III” “Cycloalkanones tethered to activated alkynes and olefins as versatile tools for the synthesis of polycyclic scaffolds”	Prof. Michel Miesch Université de Strasbourg, France
11/17-19	(Special Lecture 2014 – IV) “Density Functional Theory (DFT)” “Approximate Density Functional Theory: Density-Functional Tight-Binding (DFTB) and linear scaling approaches” “Nonequilibrium DFTB/MD simulations of carbon nanostructure growth and erosion processes” “DFTB for the treatment of complex molecular systems in electronically excited states” “Recent methodological developments for the quantum chemical study of complex systems”	Prof. Stephan Irlé Nagoya University, Japan
11/26-28	(Special Lecture 2014 – V) “Nonideal phase behavior and Gibbs energy analysis” “Equations of state and phase behavior for supercritical fluid systems” “Chemical equilibria in supercritical fluids” “Project presentation of problems in Introduction to Supercritical Fluids. A Spreadsheet-based Approach” “Physical properties of water and carbon dioxide as the key to developing green processes”	Prof. Richard L. Smith, Jr Research Center of Supercritical Fluid Technology, Tohoku University, Japan
1/14-16	(Special Lecture 2014 – VI) “Introduction into Peptide Synthesis” “Chemical Modification of Peptides” “Introduction to G Protein Coupled Receptors” “Peptide Drugs to Target GPCR” “Trafficking of Neuropeptide Y Receptors - and their Applications in Cancer Therapy”	Prof. Annette G. Beck-Sickinger Universität Leipzig, Germany