8-4　平成 24 年度実践的化学・物質科学英語講義

8-4-1　英語集中講義：総合化学特論II

Modern Trends in Chemical Sciences and Engineering II

Date	Course	Instructor
10/4-5, 9	Modern Trends in Chemical Sciences and Engineering II (Special Lecture 2012 – I) "Tools for Studying Reaction Mechanisms in Organic Solids – The EPR of Radical Pairs" "The Role of Stress in Solid State Reactions: EPR Kinetics and FTIR" "Substituent Effects on the Reactivity and Physical Properties of Solids. Chain Reactions and Crystal Optics" "The Mechanism of Crystal Growth: Crystal Optics and AFM" "Viedma pipening: Homochirality from New Kinds of Crystal Growth"	Prof. J. Michael McBride Yale University, USA
10/9-11	Modern Trends in Chemical Sciences and Engineering II (Special Lecture 2012 – II) "Determination of Protein Structure by NMR" "Protein Structure and Function" "Protein-DNA Interactions" "At the Crossroads of Transcription and Repair: XPC/Rad4 competes with XPG/Rad2 and TFIIE α for Binding to TFIIH"	Prof. James G. Omichinski Université de Montréal, Canada
10/23-25	Modern Trends in Chemical Sciences and Engineering II (Special Lecture 2012 – III) "Optical Absorption" "Vibrational Modes" "Infrared Absorption" "Raman Scattering" "Cytochrome c Oxidase: Oxygen Reduction and Electron Transfer Coupled to Proton Translocation"	Prof. Denis L. Rousseau Albert Einstein College of Medicine, USA
10/29-31	Modern Trends in Chemical Sciences and Engineering II (Special Lecture 2012– IV) "Synthesis of Metallacycles and Applications in Organic Synthesis" "Catalytic Properties of Cyclopalladated Derivatives" "Cycloruthenation, Applications in Enantioselective Processes" "Ruthenium and Osmium Metalacyclic Complexes as Candidates for Anticancer Drugs" "Cycloruthenation and Applications: From CH Activation to Medicinal Chemistry"	Prof. Michel E. Pfeffer Université de Strasbourg, France
11/5-6	Modern Trends in Chemical Sciences and Engineering II (Special Lecture 2012 – V) "Introduction to Organic Electronics" "Principle of OLED and OPV" "Organic Semiconductor" "Organic Thin Film Transistor" "Printed Electronics and Printed Memory"	Prof. Jiro Kasahara Hokkaido University, Japan and This Film Electronics ASA, Norway
11/28-30	Modern Trends in Chemical Sciences and Engineering II (Special Lecture 2012 – VI) "Introduction & Controlled Radical Polymerization: NMP" "Controlled Radical Polymerization: ATRP and RAFT" "End Group Functionalization & Controlled of Step Growth Polymerizations" "Post-Polymerization Modifications" "Controlled Installation of Single Reactive Groups Along a Polymer Chain or at the Chain Ends"	Prof. Patrick Theato Universität Hamburg, Germany

8-4-3　英語スタンプラリー講義：総合化学特別研究第二／化学研究先端講義

Lecture Schedules

Research in Chemical Sciences & Engineering II

Topical Lectures in Chemical Sciences & Engineering:

Notice;
To satisfy to get the course credits, you must
1) attend the lectures at least 7 times and submit at least 1 report through the year, then you will get 1 credit.
2) submit the reports to the "FCC Office" by e-mail <mc104@eng.hokudai.ac.jp>, within 2 weeks after the each
lecture finishes.
If there are no special suggestions from the lecturers, the subject of the report will be summaries or comments on the lectures.

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1. 25 June, 16:00 - 17:30 @ Science-#5-206
   Prof. Iqbal Hamza (University of Maryland, USA)
   "Heme Trafficking from the Ground-Up: Lessons from *C. elegans*"

2. 15 July, 10:30 – 12:00 @Jozankei Manseikaku Hotel Milione <CSE Summer School>
   Prof. Noboru Kitamura (Hokkaido University, Japan)
   "Laser Trapping – Spectroscopy of Single Microparticles in Solution"

3. 15 July, 13:00 – 14:30 @Jozankei Manseikaku Hotel Milione <CSE Summer School>
   Prof. Marc T. M. Koper (Leiden University, USA)
   "Fundamental Aspects of Electrocatalysis for Fuel Cells and Solar Fuels"

4. 17 July @ MC030, Engineering
   Morning Session
   <HU-PU Joint Symposium>

5. 17 July @ MC030, Engineering
   Afternoon Session
   <HU-PU Joint Symposium>

6. 02 August, 11:00 – 12:00 @ MC526, Engineering
   Prof. Soo-Gil Park (Chungbuk National University, Korea)
   "The Research Trend and Industrial Technology of Energy Storage Devices; Electrochemical Capacitors"

7. 09 August, 10:30 – 12:00 @ MC117, Engineering
   Prof. Junpo He (Fudan University, China)
   "Facile Synthesis of Dendritic Polymers by Anionic Polymerization"

8. 09 October, 10:30 – 12:00 @ Science-#6-204-2
   Prof. J. Michael McBride (Yale University, USA)
   "Viedma Ripening: Homochirality from New Kinds of Crystal Growth"

9. 10 October, 15:00 – 16:00 @ Science-#6-204-2
   Prof. James G. Omichinski (Université de Montréal, Canada)
   “At the crossroads of transcription and repair: XPC/Rad4 cinoketes with XPG/Rad2 and
   TFIIEα for biding to TFIIH”

10. 25 October, 15:00 – 16:00 @ Science-#6-204-2
    Prof. Denis L. Rousseau (Albert Einstein College of Medicine, USA)
    “Cytochrome c Oxidase: Oxygen Reduction and Electron Transfer Coupled to Proton Translocation”

11. 25 October, 16:30 – 18:00 @ Science-N308
    Prof. Ingmar Grenthe (Royal Institute of Technology, Sweden)
    “Uranium peroxide complexes, structures, chemical equilibria and chemical bonding”

12. 31 October, 15:00 – 16:00 @ **MC208**, Engineering
    Prof. Michel E. Pfeffer (Université de Strasbourg, France)
    “Cycloruthenation and Applications: From CH Activation to Medicinal Chemistry”

13. 02 November, 15:00 – 16:00 @ Science-#5-205
    Prof. R. David Britt (University of California, USA)
    “Multifrequency EPR of Paramagnetic Intermediates with Relevance to Energy and Medicine”

14. 06 November, 13:00 – 14:00 @ **MC204**, Engineering
    Prof. Jiro Kasahara
    (Hokkaido University, Japan and Thin Film Electronics ASA, Norway)
    “Printed electronics and printed memory”

15. 08 November, 16:00 – 17:30 @ Science#7-310
    Prof. Prashant V. Kamat (University of Notre Dame, USA)
    “Many Faces of Gold. Charge Equilibration versus Plasmonic Effects in Metal-Semiconductor Nanocomposites”

16. 30 November, 15:00 – 16:00 @ **MC208**, Engineering
    Prof. Patrick Theato (Hamburg Universität, Germany)
    “Controlled Installation of Single Reactive Groups along a Polymer Chain or at the Chain Ends”

17. 06 December @ Conference Hall
    <HU-NU/HU-SNU Joint Symposium>

18. 07 December @ Conference Hall
    <HU-NU/HU-SNU Joint Symposium>

19. 08 January, 14:30 – 15:30 @ Science#7-219
    Prof. Nikita Matsunaga (Long Island University, USA)
    “Motion of Nuclei and Motion of Electron”

20. 04 February, 16:30 – 17:30 @ MC102, Engineering
    Prof. Moonhor Ree (Pohang University of Science and Technology, Korea)
    “New Functional Aliphatic Polyethers, Polyisocyanates, and Their Block Copolymers”