

# 13th International Symposium on Novel Aromatic Compounds

## Program

### Sunday July 19, 2009

**14:00**      **Registration**

**15:30**      **Opening Ceremony**

Prof. François DIEDERICH (ETH ZURICH, Zürich, Switzerland)  
Mr Gitty THIEL (MINISTRY OF CULTURE, HIGHER EDUCATION AND RESEARCH, Luxembourg, Luxembourg)  
Prof. Rolf TARRACH (UNIVERSITY OF LUXEMBOURG, Luxembourg, Luxembourg)  
Mr. Raymond BAUSCH (NATIONAL RESEARCH FUND, Luxembourg, Luxembourg)  
Prof David BLACK (IUPAC REPRESENTATIVE, Sydney, Australia)

**16:00**      **Opening Plenary Lecture: Perspectives in Chemistry: From Supramolecular Chemistry Towards Adaptative Chemistry**

Prof. Jean-Marie LEHN  
(ISIS/UNIVERSITY OF STRASBOURG, Strasbourg, France)

**17:00**      **The 2009 Nozoe Lecture: Exploration of Novel Porphyrinoids with Intriguing Electronic Properties**

Prof. Atsuhiro OSUKA  
(KYOTO UNIVERSITY, Kyoto, Japan)

**18:30**      **Welcome Reception**

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## Program

### Monday July 20, 2009

#### Session Chair

Prof. Paul von Ragué SCHLEYER  
(THE UNIVERSITY OF GEORGIA, Athens, United States)

**09:00 Cycloadditions to Enes, Ynes, and Arenes: Distortion/Interaction Model of Reactivity**

Prof. Kendall N. HOUK  
(UNIVERSITY OF CALIFORNIA, Los Angeles, United States)

**09:35 Using NICS-scan for Assessing Induced Dia- and Paramagnetic Ring Currents**

Prof. Amnon STANGER  
(TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY, Haifa, Israel)

**10:10 Quantum Chemical Study of Heteroanalogs and Derivatives of [8]-Circulene**

Prof. Nikolay ZEFIROV  
(MOSCOW STATE UNIVERSITY, Moscow, Russia)

**10:25 New pi-Electron Materials Built with Unusual Aromatics: from Methano[10]Annulene to Polycyclic Borepins**

Prof. J. D. TOVAR  
(JOHNS HOPKINS UNIVERSITY, Baltimore, United States)

**10:40 Coffee Break**

#### Session Chair

Prof. Rainer HERGES  
(CHRISTIAN-ALBRECHTS-UNIVERSITÄT KIEL, Kiel, Germany)

**11:10 Variation of Aromaticity by Twisting or Expanding the Ring Content**

Prof. Remi CHAUVIN  
(LABORATOIRE DE CHIMIE DE COORDINATION DU CNRS, Toulouse, France)

**11:45 Aromaticity Switching in Porphyrinoids**

Prof. Iechosław LATOS - GRAZYŃSKI  
(UNIVERSITY OF WROCLAW, Wrocław, Poland)

**12:20 Aromaticity and Antiaromaticity in the Larger Heteroacenes**

Dr. Uwe H.F. BUNZ  
(GEORGIA INSTITUTE OF TECHNOLOGY, Atlanta, United States)

**12:35 Intramolecular Methylacridan-Acrinium Complexes: Isolation, Structure, and Reactivities of the C...H-Bridged Carbocations**

Prof. Takanori SUZUKI  
(HOKKAIDO UNIVERSITY, Sapporo, Japan)

**12:50 Lunch**

#### Session Chair

Prof. Nazario MARTÍN  
(UNIVERSIDAD COMPLUTENSE DE MADRID, Madrid, Spain)

**14:10 New Strategies for the Synthesis of Polycyclic Aromatic Hydrocarbons**

Prof. Antonio M. ECHAVARREN  
(INSTITUTE OF CHEMICAL RESEARCH OF CATALONIA (ICIQ), Tarragona, Spain)

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- 14:45      Single Chirality Carbon Nanotubes: Challenging Targets for Chemical Synthesis**  
Prof. Lawrence T. SCOTT  
(BOSTON COLLEGE, Chestnut Hill, United States)
- 15:20      Towards Large Openings in Fullerenes**  
Prof. Yves RUBIN  
(UNIVERSITY OF CALIFORNIA, Los Angeles, United States)
- 15:35      Metallation, Derivatization, and Function of pi-Bowl Sumanene**  
Prof. Toshikazu HIRAO  
(OSAKA UNIVERSITY, Osaka, Japan)
- 15:50      Coffee Break**
- Session Chair**  
Prof Koichi KOMATSU  
(FUKUI UNIVERSITY OF TECHNOLOGY, Kyoto, Japan)
- 16:20      In-depth Understanding of pi-Electron Systems: New Vistas in Fullerene Endohedrals**  
Prof. Takeshi AKASAKA  
(UNIVERSITY OF TSUKUBA, Tsukuba, Japan)
- 16:55      Buckyball Maracas: Chemical and Electrochemical Properties of Trimetallic Nitride Endohedral Fullerenes**  
Prof. Luis ECHEGOYEN  
(CLEMSON UNIVERSITY, Clemson, SC, United States)
- 17:30      Preparation of Open-Cage Fullerene Derivatives**  
Prof. Liangbing GAN  
(PEKING UNIVERSITY, Beijing, China)
- 17:45      Synthesis and Properties of Novel Open-Cage Fullerenes and Endohedral Fullerenes**  
Prof. Yasujiro MURATA  
(KYOTO UNIVERSITY, Kyoto, Japan)
- 18:00      Poster Session**

# 13th International Symposium on Novel Aromatic Compounds

## Program

**Tuesday July 21, 2009**

**Session Chair**

Prof. Marcel MAYOR  
(UNIVERSITY OF BASEL, Basel, Switzerland)

**09:00 C-H...F-C Hydrogen Bonding in the Crystal Structures of Fluoroaromatic Compounds**

Prof. Gautam R. DESIRAJU  
(INDIAN INSTITUTE OF SCIENCE, Bangalore, India)

**09:35 Aromatic Mimics of Biomolecular Folding**

Dr Ivan HUC  
(IECB & CNRS - UNIVERSITÉ DE BORDEAUX, Bordeaux, France)

**10:10 The Effect of Molecular Clips and Tweezers on Enzymatic Reactions by Binding Coenzymes and Basic Aminoacids**

Mr Frank-Gerrit KLÄRNER  
(UNIVERSITÄT ESSEN, ESSEN, Germany)

**10:25 Charge-by-Charge Assemblies from  $\pi$ -Conjugated Acyclic Anion Receptors**

Prof. Hiromitsu MAEDA  
(INSTITUTE OF SCIENCE AND ENGINEERING, RITSUMEIKAN UNIVERSITY, Kusatsu, Japan)

**10:40 Coffee Break**

**Session Chair**

Prof. Graham J. BODWELL  
(MEMORIAL UNIVERSITY, St. John's, NL, Canada)

**11:10 Title not yet available**

Prof. René JANSSEN  
(EINDHOVEN UNIVERSITY OF TECHNOLOGY, Eindhoven, The Netherlands)

**11:45 Three-Dimensional Conjugated Macromolecules: Synthesis and Applications**

Prof. Zhishan BO  
(CHINESE ACADEMY OF SCIENCES, Beijing, China)

**12:20 Synthesis of Dibenzo[d,d']benzo[1,2-b:4,5-b']difurans and  $\pi$ -Conjugated Polymers with the Heteroacene Framework**

Prof. Koji NAKANO  
(UNIVERSITY OF TOKYO, Tokyo, Japan)

**12:35 Pushing The Limits in Acene Chemistry: Synthesis of Octacene and Nonacene**

Prof. Holger BETTINGER  
(UNIVERSITÄT TÜBINGEN, Tübingen, Germany)

**12:50 Lunch + IAB Meeting**

**Session Chair**

Prof. Tien-Yau LUH  
(NATIONAL TAIWAN UNIVERSITY, Taipei, Taiwan)

**14:10 Giant Macrocycles Composed of Thiophene, Acetylene, and Ethylene Building Blocks**

Prof. Masahiko IYODA  
(TOKYO METROPOLITAN UNIVERSITY, Tokyo, Japan)

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**14:45      Toward Carbyne: Synthesis and Stability of Really Long Polyynes**

Prof. Rik R. TYKWINSKI  
(UNIVERSITY OF ALBERTA, Edmonton, Alberta, Canada)

**15:20      An Alternative Approach to Highly Congested Acenes**

Prof. Kathleen Vi. KILWAY  
(UNIVERSITY OF MISSOURI, Kansas City, MO, United States)

**15:35      The Aromaticity of 1,2-Dihydro-1,2-azaborine**

Prof. Shih-Yuan LIU  
(UNIVERSITY OF OREGON, Eugene, United States)

**15:50      Coffee Break**

**Session Chair**

Prof. A. Dieter SCHLÜTER  
(ETH ZURICH, Zurich, Switzerland)

**16:20      Synthesis and Properties of Shape-Persistent Rings and Wheels**

Prof. Sigurd HÖGER  
(UNIVERSITÄT BONN, Bonn, Germany)

**16:55      Novel Thiophene-based pi-Conjugated Structures and Topologies**

Prof. Peter BÄUERLE  
(UNIVERSITÄT ULM, Ulm, Germany)

**17:30      Click Synthesis of Donor-Acceptor Type Aromatic Polymers**

Dr. Tsuyoshi MICHINOBU  
(TOKYO INSTITUTE OF TECHNOLOGY, Tokyo, Japan)

**17:45      Macrocyclic Oligoarylamine-Based Spin System**

Dr. AKIHIRO ITO  
(KYOTO UNIVERSITY, KYOTO CITY, Japan)

**18:00      Poster Session**

# 13th International Symposium on Novel Aromatic Compounds

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### Wednesday July 22, 2009

#### Session Chair

Prof. Klaus MÜLLEN  
(MAX PLANCK INSTITUT FÜR POLYMERFORSCHUNG, Mainz, Germany)

#### 09:00 Electronic Polymers with Designed Electron Affinities

Prof. Timothy M. SWAGER  
(MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Cambridge, United States)

#### 09:35 Syntheses, Properties, and Applications of Carbon-bridged Coplanar Conjugated Aromatics

Prof. Ken-Tsung WONG  
(NATIONAL TAIWAN UNIVERSITY, Taipei, Taiwan)

#### 10:10 Durable Supramolecular Assemblies Based On Fullerene Organizations

Dr. Takashi NAKANISHI  
(MAX PLANCK INSTITUTE OF COLLOIDS AND INTERFACES, Potsdam, Germany)

#### 10:25 Novel Anodic Concepts for the Selective Phenol Coupling Reaction

Prof. Siegfried WALDVOGEL  
(BONN UNIVERSITY, Bonn, Germany)

#### 10:40 Coffee Break

#### Session Chair

Prof. Mogens Brøndsted NIELSEN  
(UNIVERSITY OF COPENHAGEN, Copenhagen, Denmark)

#### 11:10 Some New Reactions of a Kinetically Stabilized Silabenzene and Isolation of a Stable 1,1'-Disila-4,4'-biphenyl

Prof. Norihiro TOKITOH  
(KYOTO UNIVERSITY, Kyoto, Japan)

#### 11:45 Scaffold-directed Synthesis of Aromatic and Carbon-rich Materials

Prof. Nancy S. GOROFF  
(STATE UNIVERSITY OF NEW YORK, Stony Brook, United States)

#### 12:20 Observing Marcus Inverted Region in Photoinduced Electron Transfer in Alternating Silylene-Separated Donor-Acceptor Copolymers

Dr. Chih-Hsien CHEN  
(NATIONAL TAIWAN UNIVERSITY, Taipei, Taiwan)

#### 12:35 Tetramethylenedicyclobutabenzene and Related Oxo-Derivatives: Synthesis and Characterization

Prof. Toshiyuki HAMURA  
(KWANSEI GAKUIN UNIVERSITY, Hyogo, Japan)

#### 12:50 Lunch

#### 14:10 Excursion

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## Program

**Thursday July 23, 2009**

### **Session Chair**

Prof. Ken-Tsung WONG  
(NATIONAL TAIWAN UNIVERSITY, Taipei, Taiwan)

**09:00      Aromatic Materials in Luminescence and Light Harvesting**

Prof. Andrew B. HOLMES  
(THE UNIVERSITY OF MELBOURNE, Melbourne, Australia)

**09:35      Aggregation-Induced Emission of Novel Aromatic Luminogens**

Prof. Ben Zhong TANG  
(THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY, Hong Kong, China)

**10:10      Forty Years with Dihydropyrene - Excellent Aromaticity Probe and Not a Bad Photochrome**

Prof. Reginald H. MITCHELL  
(UNIVERSITY OF VICTORIA, Victoria, BC, Canada)

**10:25      Radical-Substituted  $\pi$ -Conjugated Radical Cations**

Prof. Keiji OKADA  
(OSAKA CITY UNIVERSITY, Osaka, Japan)

**10:40      Coffee Break**

### **Session Chair**

Prof. Peter BÄUERLE  
(UNIVERSITÄT ULM, Ulm, Germany)

**11:10      Some Uncovered Facets in Dehydroannulene Chemistry: Reactivity, Aromaticity, and Self-Assembly on Solid Surface**

Prof. Yoshito TOBE  
(OSAKA UNIVERSITY, Osaka, Japan)

**11:45      "Aromatics in Flatland": Expressions of Chirality, Host-Guest Complexation and Network Formation on Metal Surfaces**

Dr. Roman FASEL  
(EMPA – MATERIALS SCIENCE AND TECHNOLOGY, Dübendorf, Switzerland)

**12:20      From the Bulk to the Interfaces: The Supramolecular Route towards Nanostructured Organic Materials**

Prof. Davide BONIFAZI  
(THE UNIVERSITY OF NAMUR, Namur, Belgium)

**12:35      On Surface Synthesis of Covalent 1D and 2D Polymers**

Prof. Stefan HECHT  
(HUMBOLDT UNIVERSITY, Berlin, Germany)

**12:50      Lunch**

### **Session Chair**

Dr Michal CYRĄSKI  
(UNIVERSITY OF WARSAW, Warsaw, Poland)

**14:10      Molecular to Supramolecular Engineering of Organic Compounds for Multiphotonics. Beyond the Standard Approach**

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Dr. Mireille BLANCHARD-DESCE  
(UNIVERSITÉ DE RENNES, Rennes, France)

**14:45 Two-Photon Probes for Bioimaging**

Prof. Bong Rae CHO  
(KOREA UNIVERSITY, Seoul, Korea, South)

**15:20 A Molecular Force Probe**

Prof. Roman BOULATOV  
(UNIVERSITY OF ILLINOIS, Liverpool, United Kingdom)

**15:35 Control of the Helical Columnar Organization of Discotic Nanographenes towards High Performance Electronic Materials**

Dr. Xinliang FENG  
(MAX PLANCK INSTITUTE FOR POLYMER RESEARCH, Mainz, Germany)

**15:50 Coffee Break**

**Session Chair**

Prof. Michael M. HALEY  
(UNIVERSITY OF OREGON, Eugene, Oregon, United States)

**16:20 Dye Assemblies for Supramolecular Electronics and Photovoltaics**

Prof. Frank WÜRTHNER  
(UNIVERSITÄT WÜRZBURG, Würzburg, Germany)

**16:55 New Dihydroazulene Photoswitches**

Prof. Mogens Brøndsted NIELSEN  
(UNIVERSITY OF COPENHAGEN, Copenhagen, Denmark)

**17:30 Public Lecture**

**Research in Luxembourg, Small but Beautiful**

Prof. Lucienne BLESSING  
(UNIVERSITÉ DU LUXEMBOURG, Luxembourg, Luxembourg)

**18:30 Reception**

**20:00 Banquet**



# 13th International Symposium on Novel Aromatic Compounds

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**Friday July 24, 2009**

**Session Chair**

Prof. Armin DE MEIJERE  
(GEORG-AUGUST UNIVERSITÄT, GÖTTINGEN, Germany)

**09:00 Molecular Switches and Motors**

Prof. Ben FERINGA  
(UNIVERSITY OF GRONINGEN, Groningen, The Netherlands)

**09:35 Synthetic Molecular Motors and Machines**

Prof. David LEIGH  
(UNIVERSITY OF EDINBURGH, Edinburgh, United Kingdom)

**10:10 Molecular Electronics: from Molecular Design to New Integration Strategies**

Prof. Marcel MAYOR  
(UNIVERSITY OF BASEL, Basel, Switzerland)

**10:45 Coffee Break**

**Session Chair**

Prof. Lawrence T. SCOTT  
(BOSTON COLLEGE, Chestnut Hill, United States)

**11:15 Graphene and its Chemical Derivatives**

Dr. Kostya NOVOSELOV  
(UNIVERSITY OF MANCHESTER, Manchester, United Kingdom)

**11:50 Functionalization of Carbon Nanotubes: Synthesis, Applications and Challenges**

Prof. Maurizio PRATO  
(UNIVERSITY OF TRIESTE, Trieste, Italy)

**12:25 Water-Soluble Perylenebisimides and their Role in Exfoliation and Doping of Nano Tubes and Graphene**

Prof. Andreas HIRSCH  
(UNIVERSITÄT ERLANGEN-NÜRNBERG, Erlangen, Germany)

**13:00 Closing Ceremony**