

Pacifichem 2010

Chemical scientists and engineers in countries bordering the Pacific Ocean and elsewhere are invited to submit abstracts for the 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem). The congress, which will take place on Dec. 15–20 in Honolulu, is sponsored jointly by the American Chemical Society, the Canadian Society for Chemistry (CSC), the Chemical Society of Japan (CSJ), the New Zealand Institute of Chemistry, the Royal Australian Chemical Institute, the Korean Chemical Society, and the Chinese Chemical Society.



Photo by Jim Harper

Official and up-to-date information regarding Pacifichem 2010, including the technical program information, important deadlines, and exhibit availability, along with registration, hotel, travel, and visa information, is online at www.pacifichem.org.

The preliminary program for Pacifichem 2010 is scheduled to be published in the July 12 issue of C&EN. The final program will be published in the Oct. 4 issue.

CSC is the host society for Pacifichem 2010, and Howard Alper, a chemistry professor at the University of Ottawa, is chairing the congress. The vice chairs are ACS's Peter J. Stang, a professor of organic chemistry at the University of Utah, and CSJ's Kazuyuki Tatsumi, a chemistry professor at Nagoya University.

Pacifichem 2010 is the sixth in the series of meetings that are held in Honolulu approximately every five years with the goal of fostering collaborations among Pacific Basin chemical scientists. The program highlights recent research contributions aimed at improving the quality of life throughout the world. The most recent congress, Pacifichem 2005, attracted 11,484 professionals in academia, industry, and government from 67 countries representing all degree levels within the fields of chemistry and the chemical sciences.

The technical program of Pacifichem 2010 is being developed and will consist of 236 symposia spread over 13 areas of contemporary chemical science. All papers require an abstract submission via the Pacifichem website, www.pacifichem.org. The site began accepting abstracts on Jan. 1 and will continue to do so until April 5.

Unlike other conferences, Pacifichem 2010 is not accepting general papers. Abstracts must be submitted to a symposium to be considered for presentation. Abstracts not accepted into an oral session may be scheduled as posters at the discretion of the organizers.

The abstract system will limit the number of abstracts that one person may submit. An individual may submit up to two abstracts in which they are the invited presenting author and up to three abstracts in which they are the presenting author (total contributed and invited). There is no limit on the number of abstracts in which an individual is the corresponding author or a coauthor.

AREA 1—ANALYTICAL CHEMISTRY

- 036. On-Site & In Vivo Instrumentation & Applications
- 039. Innovation in Chemical Sensing & Separation Systems toward Advanced Chemical Analysis
- 056. Recent Advances in Bioanalysis: Ultra-Small Volumes, Global Metabolite Profiling & Single Cells
- 074. Optical Waveguide Techniques for the Analyses of Materials & Interfaces
- 084. New Frontiers of Plasma Spectrochemistry
- 113. New Frontiers in Separation Science
- 145. Analytical Applications & New Technical Developments of Soft X-Ray Spectroscopy
- 166. Ionic Liquids for Analytical Chemistry & Analytical Chemistry for Ionic Liquids
- 181. Fluorescent Sensors by Design
- 191. Comprehensive Multidimensional Separations
- 193. Electroanalytical Sciences
- 198. Microfluidic & Nanofluidic Devices for Chemical & Biochemical Experimentation
- 206. Analytical & Environmental Chemistry in Human Health
- 207. Advances in Flow-Based Analytical Techniques
- 253. Rapid, Multicomponent Environmental Analysis
- 255. Biochemical/Electrochemical Sensors & Sensing Materials
- 260. Novel Applications of Magnetic Fields in Analytical Chemistry
- 276. Non- & Minimally Invasive Diagnostics of Biological Systems Using Vibrational Spectroscopy
- 277. Enabling Mass Spectrometric Techniques for Proteomics

AREA 2—INORGANIC CHEMISTRY

- 009. Molecular Photonics
- 020. Controlling the Structure & Properties of Solids
- 022. Olefin Oligomerization & Polymerization Catalyzed by Early Transition Metals
- 025. Functional Molecule-Based Magnets
- 030. Metal Ion Complex Interactions with Nucleic Acids
- 035. Organoboron, Organosilicon & Organophosphorus as Optoelectronic & Energy-Related Materials
- 038. Actinides & the Environment: A Multidisciplinary Look at What We Know & What We Need To Know
- 046. Organo-f-Element Compounds: From Novel Chemical Transformations to Applications in Catalysis & Materials Science
- 060. Schiff Base Macrocycles & Materials
- 068. Frontiers in Organometallic Chemistry
- 094. Construction of Photofunctional Supramolecular Metal Complexes
- 096. Chemistry of Sulfur-Bridged Multimetallic Complexes
- 097. Syntheses & Applications of Metal-Organic Frameworks
- 100. Early Main-Group Chemistry
- 108. Dioxygen Activation Chemistry & Catalytic Oxidation Reactions
- 133. Structural & Functional Aspects of Coordination Polymers
- 143. Discrete Coordination Systems with Switchable Structures & Properties
- 146. Advances in Metal-Mediated Bond Activation: From Unusual Bonding Motifs to Applications in Catalysis
- 150. Preparation & Reactions of Early Transition-Metal & Lanthanide Compounds
- 156. Functional Molecules of the Heavier Main-Group & Transition-Metal Elements
- 164. Self-Assembly & Coordination Chemistry
- 173. Molecular Design in Bioinorganic Chemistry
- 187. Electron Transfer & Electrochemistry of Transition-Metal-Containing Inorganic & Organometallic Materials
- 194. Coordination Chemistry toward Artificial Photosynthesis & Energy Conversion Processes
- 217. Redox Redux: The Renaissance of Non-Innocent Ligand Complexes

- 218. Advances in Nuclear Chemistry of Transactinide Elements
- 239. Chemistry & Materials Science at High Pressures
- 248. Carbon-Fluorine Bond Activation: A Crossroads for Inorganic, Organic & Environmental Chemistry
- 249. Fundamental & Applied Inorganic Fluorine Chemistry & Their Impacts on Energy Conservation & the Environment
- 251. New Frontiers in Polyoxometalate Chemistry
- 275. Nanoscale Characterization of Functional Materials by Nuclear Probes

AREA 3—MACROMOLECULAR CHEMISTRY

- 006. Polymeric Materials from Renewable Resources
- 007. Starch as a Polymer
- 012. NMR Spectroscopy of Polymers: Innovative NMR Strategies for Complex Macromolecular Systems
- 042. Chemistry & Functional Properties of Soft Interfaces
- 051. Advanced Polymeric Membranes for Environmental, Biomedical & Bioengineering Applications
- 057. Functional Block Copolymer Assemblies
- 064. Polymeric Materials: Performance, Degradation & Optimization
- 082. Hybrid Conjugated Polymer Materials
- 095. Biodegradable & Biomass Plastics
- 098. The New Age of Advanced Materials: Supramolecular Architectures & Smart Materials
- 102. Molecular-Based Ordered Materials Formed through Self-Organization
- 126. Biomimetic Engineering of Hierarchically Structured Polymer Materials
- 127. Polymer Nano-Hybrids at Bio-Interfaces
- 136. Synthesis, Structure & Physical Properties of Advanced Polymer Gels
- 144. Azobenzene Polymers for Photoreversible Structures & Surfaces
- 152. Nanostructure & Function of Organic-Inorganic Hybrid Polymers
- 160. Controlled/Living Radical Polymerization in Dispersed Systems
- 179. Separation & Characterization of Synthetic and/or Biological Macromolecules: Principles, Practices & Applications
- 211. Polyolefins Chemistry & Beyond: From Bench to Commercial Scale
- 219. Radical Polymerization Kinetics & Mechanisms
- 231. Amphiphilic Polymers: Fundamentals & Applications
- 236. Controlled/Living Radical Polymerization: Mechanisms, Catalysts, Reaction Engineering, Materials & Applications
- 257. Frontiers of Precisely Controlled Polymer Synthesis: Fine Control of Polymerization Reaction & Impact on Advanced Material Designs

AREA 4—ORGANIC CHEMISTRY

- 001. Reactive Intermediates & Unusual Molecules: Celebrating Bob Moss's 70 Years
- 004. Cooperative Catalysis
- 015. Anion Coordination Chemistry
- 018. C–H Functionalization: Memorial Symposium for Professor Keith Fagnou
- 019. Interface between Organic Synthesis & Chromatography
- 029. Designed Pi-Electronic Systems: Synthesis, Properties, Theory & Function
- 032. Diversity-Oriented Synthesis
- 045. Chemistry of Novel Nanocarbons: Fullerenes, Carbon Nanotubes & Related Materials
- 047. New Directions of Supramolecular Chemistry toward Nanomaterials Science, Biomedical Science & Supramolecular Catalysts
- 062. Asymmetric Organocatalysis
- 063. Novel Synthetic Methodology & Its Application to Natural Product Synthesis
- 080. Marine Natural Products: Isolation, Biology, Ecology & Synthesis
- 085. Science & Strategy of Process Chemistry: From Molecules to Pharmaceuticals

- 089. Mechanistic Organic Photochemistry
- 115. New Advances in Metal-Catalyzed Alkylation & Fluoroalkylation
- 124. Frontiers in Biocatalysis Applications to Organic Synthesis
- 125. Supramolecular Photochemistry
- 132. New Dimensions of Green Sustainable Chemistry: Novel Reactions & Catalysts
- 134. Total Synthesis of Natural Products & Related Compounds
- 139. Achieving Efficiency in Organic Reactions via Greener Processes & Practices
- 148. Design & Synthesis of Biologically Active Compounds for Elucidating Mode-of-Action
- 155. Organic Solid-State Chemistry: Structure, Synthesis & Reactivity
- 157. Molecular Probes & Fluorophores for Cellular Imaging
- 199. Boronic Acids: Synthetic & Biological Applications
- 216. Molecular Complex Systems: Reversible Aggregation/Disaggregation of Organic Molecules
- 222. Practical Applications of Basic Research on Molecular Recognition
- 229. Carbanions: Modern Perspectives in Structure, Reactivity & Synthesis
- 279. Recent Advances in Natural Products as Anticancer Agents
- 280. Supramolecular Catalysis
- 282. Metal Catalysis for Asymmetric Synthesis
- 283. Transition-Metal Catalysis: Mechanism & Practice

AREA 5—PHYSICAL, THEORETICAL & COMPUTATIONAL CHEMISTRY

- 010. Computational Quantum Chemistry: Theory & Interactions with Experiment
- 017. Gas-Phase Studies of Metal-Ligand Interactions: Relevance in Organic Chemistry & Biochemistry
- 021. Recent Advances in Studies of Molecular Processes at Liquid Interfaces
- 024. Ultrafast Intense Laser Chemistry
- 031. Kuiper Belt Objects: Laboratory Studies, Models, Theory & Observations
- 037. Advances in Quantum Monte Carlo
- 040. Interfacial Electrochemistry: New Systems, Experimental Methods & Theoretical Approaches
- 066. Theory of Excited-State Structures & Dynamics: Application to Organic Materials & Biosystems
- 072. Frontiers of Surface-Enhanced Raman Scattering: Single Nanoparticles & Single Cells
- 075. Dynamics & Mechanisms of Photochemical Reactions of Biological Proteins
- 081. Challenges & Solutions to Accurate Calculations on Large Molecular Systems
- 087. Spectroscopic Probes of Intramolecular & Intermolecular Interactions in Molecules & Molecular Clusters
- 103. Systems Chemistry: Toward the Holistic Understanding of Complex Molecular Systems
- 116. Anharmonic Vibrations of Molecules & Clusters: Experiment & Theory
- 130. New Experimental & Computational Probes of Water in Biological Systems
- 138. Molecular Theory for Real Systems & Chemical Reactions
- 140. Re-Encounter of Computational Chemistry & Chemometrics
- 161. Quantum Coherence & Its Control in Condensed Phases
- 163. Cold Molecules & Quantum Computation/Information Processes
- 171. Nanostructure-Enhanced Photochemical Reactions
- 204. DNA Photonics
- 212. Frontiers of State-to-State Dynamics
- 220. Molecular Dynamics in Complex Environments: Theory & Experiments
- 228. Solid-State NMR Methods & Applications in Inorganic Materials
- 252. Interfacial Phenomena for Bubbles, Droplets, Films & Soft Matter
- 254. Advanced Linear & Nonlinear Vibrational Spectroscopy
- 258. Orbital-Free Density Functional Theory & Its Applications to Large-Scale Materials Simulations
- 259. Plasmonics & Nanophotonics for Chemical Sensing, Imaging & Spectroscopy
- 265. Frontiers of Colloid & Interface Chemistry
- 267. Frontiers of Biomolecular Dynamics

AREA 6—AGROCHEMISTRY

- 050. Cellulose-Based Nanomaterials: Fundamentals & Applications
- 088. Flavonoids: Synthesis toward Functions
- 111. Metabolomics for Fundamental & Applied Plant Sciences
- 118. Application of Liquid & Gas Chromatography/Mass Spectrometry to Agrochemical Challenges
- 162. Value-Added Food Products from Fruits & Vegetables
- 210. Ionic Liquids: Novel Processing Platforms of Cellulose & Biomass
- 214. Fungi & Mushrooms: Ecology, Chemistry & Agricultural Relevance
- 227. Rodenticide-Based Opportunities for Protection of Agriculture, Ecosystems & Public Health
- 230. International Food Safety Issues & Opportunities
- 243. Genomics Approach to the Analysis of Fungal Secondary Metabolites & Diversity

AREA 7—BIOLOGICAL CHEMISTRY

- 005. Chemical Biology of Botulinum Neurotoxin
- 041. Frontiers in Peptide Chemistry: Synthesis & Applications
- 043. Biomolecular Structure & Dynamics: Recent Advances in NMR
- 055. Molecular Control of Stem-Cell Fate
- 058. Advances in Solid-State NMR of Biological Molecules
- 076. Pectin: Effect on Structural & Functional Properties by Enzyme or Chemical Modification
- 090. Polypharmacology for Drug Discovery
- 093. Studying the Chemistry inside Living Cells with Infrared Spectromicroscopy
- 105. Biomarkers: PET/SPECT Imaging
- 106. Biosynthesis of Natural Products
- 117. Chemical Approaches to Astrobiology
- 119. Gas-Sensor Proteins/Enzymes: Molecular Mechanisms of Gas Sensing & Intramolecular Signal Transduction
- 129. Bioorganic Reaction Mechanisms
- 149. Protein, Peptide & Peptidomimetics Design
- 200. Carbohydrate Recognition in Health & Disease
- 208. New Frontiers of Functional Nucleic Acids
- 213. Protein Alteration by Mutagenesis & Chemical Modification: Applications in Biochemistry, Drug Discovery, Diagnostics & Nutrition
- 235. Recent Advances in Research on Leukotrienes & Prostaglandins in Inflammatory & Respiratory Diseases
- 244. Ubiquitin Research: Structures, Mechanisms, Biology & Drug Development
- 256. Frontiers of Metalloproteins in Biology
- 278. Molecular Recognition of Nucleic Acids: Biological Applications

AREA 8—ENVIRONMENTAL CHEMISTRY

- 002. Interfacial Chemistry: Fate, Transport & Adsorption of Nanoparticles, Biocolloids & Trace Organics in Aquatic Systems
- 023. Environmental Forensics
- 026. Chemistry of UV Treatment for Water
- 048. Sources, Transport, Fate & Behavior of Global Contaminants
- 061. Advances in Water Disinfection & Disinfection By-Product Chemistry
- 073. Free-Radical Chemistry in the Environment
- 083. Environmentally Friendly Syntheses Using Ionic Liquids
- 086. Recycling of Polymeric Waste Materials: Challenges & Perspectives
- 128. Green Electrochemistry
- 131. Chemistry of Postcombustion Carbon Dioxide Capture
- 237. Environmental Chemistry of Aerosols
- 247. Sonochemistry & Sonoprocessing
- 250. Innovative Green Chemistry with Microwave Energy

262. Challenges of Heterogeneous Catalysts for Environmentally Benign Materials Conversions

AREA 9—MATERIALS & NANOTECHNOLOGY

013. Nanoparticles & Nanoparticle-Based Materials

065. Measurement Sciences for Life-Cycle Performance of Nanomaterials & Nanocomposites

077. Titanium Dioxide: Synthesis & Applications for Energy, Environment & Devices

092. Ionic Liquids in a Sustainable World

104. Synchrotron Radiation: Emerging Techniques & Applications

120. Nitroxide Radicals: Synthesis & Advanced Bio- & Nanomaterials Applications

121. Green Biomacromolecular Materials & Biocomposites

123. Nanofluidics & Chemical Manipulations in Restricted Environments

135. Carbon Nanotubes & Nanocarbon Materials

141. Emerging Perovskite & Spinel Compounds for Materials Science & Applications

142. Fundamentals & Applications of Nanomaterials for Electronics & Photonics

165. New Materials & Concepts for Next-Generation Membranes

168. Supramolecular Nanoassemblies & Extended Frameworks

178. Design of Zeolite Catalysts for Clean Synthesis of Chemicals

182. Computational Chemistry in Materials & Nanotechnology

184. Standard Reference Materials & Methods for Nanotechnology

202. Liquid Crystals in Materials Chemistry

224. Polymer/Organic Solar Cells

225. Organic Electronic Materials: From Small Molecules to Conducting Polymers

226. Biological & Bio-Inspired Materials Synthesis & Assembly

233. High-Performance Solution-Processed Materials for Electronic/Optoelectronic Device Applications

242. Self-Assembly & Directed Assembly of Small Molecules, Macromolecules & Colloids

264. Inorganic Nanowires: Syntheses & Growth Mechanisms

272. Redox Processes on Nanoparticles, Nanomaterials & Nanostructured Systems in the Environment

AREA 10—ALTERNATE ENERGY TECHNOLOGY

069. Advances in Chemistry & Materials for On-Board Hydrogen Storage

122. Nanoporous Materials for Renewable Energy & Chemicals

172. Clean Fuels from Coal, Natural Gas & Biomass

176. Thermochemical & Metal-Catalyzed Transformations of Biomass to Petrochemical Feedstocks, Polymer Precursors & Fuels

180. Chemistry, Structure & Properties of Fuel-Cell Membranes

205. Nanocatalysis for Fuels & Chemicals

221. Bioconversion of Lignocellulose to Fuel Ethanol, Chemicals & Materials

238. Light-Driven Generation of Hydrogen from Water

266. Petroleomics: A Road Map for Better Extraction & Processing of Petroleum

AREA 11—CHEMISTRY OUTREACH TO THE COMMUNITY

028. Green Chemistry & Micro-/Small-Scale Chemistry in the Curriculum

099. Two Sides of Research & Development

154. Best Practices for Teaching Chemistry at Every Level

185. Women at the Forefront of the Time: Challenges toward Next Decades

203. Chemical Security & Safety in the University & Laboratory

245. Pharmaceutical & Chemical Patent Protection & Enforcement around the Pacific Basin

246. Visualization in Chemical Education

273. Cultural & Professional Ethics

AREA 12—HEALTH & TECHNOLOGY

003. Advances in the Chemistry of Targeted Radionuclide Therapy

011. Biological Interactions of Engineered Nanoparticles: Novel Functions & Nanosafety Issues

071. Photodynamic Therapy & Photodetection

110. Phytochemical Antioxidants & Their Role in Human Health & Wellness

114. Chemistry, Safety, Quality & Regulatory Aspects of Functional Food Ingredients, Nutraceuticals & Natural Health Products

153. Nucleic Acid-Based Therapeutics

175. Tuberculosis Drug Development in the Pacific Rim

192. G-Quadruplexes & i-Motifs: Structures, Biological Roles & Therapeutic & Technological Applications

223. Chemical Glycobiology toward Development of New Diagnostics & Therapeutics

271. Advances in Nanomedicine 2010

284. Assembling New Biomedical Materials for Tissue Regeneration

AREA 13—SECURITY

044. Laser-Induced Breakdown Spectroscopy Detection of CBRNE Threats

137. Targeting Chemical & Biological Warfare Agents

167. Smart Materials & Devices for CBRNE Detection

201. Sampling & Analysis of Weapons of Mass Destruction Threats for Antiterrorism

240. Spectroscopic, Radioanalytical & Nuclear Methods for Security Applications

281. Laser-Based Detection of Chemical, Biological & Explosive Threats

Student Poster Competition

All pre-Ph.D. students are invited to enter the Pacifichem 2010 Student Poster Competition. To do so, submit an abstract to one of the symposia within the technical program and mark the option to participate in the Student Poster Competition. An abstract must be accepted by the symposium organizers before it can be considered for the competition. Instructions for submitting abstracts are on page 46.

Because of the large number of submissions expected, a limited number of posters will be preselected based on the abstract. Judges will be appointed by the Pacifichem Organizing Committee from chemical scientists attending the conference.

Before the meeting, judges will select a maximum of 200 posters from all submissions for the on-site competition. The winners in this round will be notified at least one month before the meeting. These students will present their posters for judging on Saturday, Dec. 16, and winners will be selected.

Those selected for the on-site competition are expected to present their research at the student poster competition on Dec. 16 and also at the session that the paper was submitted in. Posters not selected for the on-site competition but accepted for a symposium within the technical program will be presented during that session.

Pacifichem Housing Opens In February

Pacifichem 2010 will open for housing reservations in early February, well before conference registration opens in June or the preliminary program is printed in C&EN's July 12 issue.

All attendees who book their room through the Housing Connection, the official housing bureau, will receive complimentary Internet access in their sleeping rooms. The congress does not endorse booking hotel reservations through any other source. See pacifichem.org for information. Early reservations are encouraged.

Technical sessions will be held at the Hawaii Convention Center, the Hilton Hawaiian Village, the Sheraton Waikiki, the Royal Hawaiian Hotel, and the Westin Moana Surfrider. Sleeping rooms for Pacifichem 2010 have been blocked at the Hilton Hawaiian Village, the Ala Moana Hotel, the Sheraton Waikiki, the Royal Hawaiian Hotel, the Westin Moana Surfrider, the Sheraton Princess Kaiulani, the Hyatt Regency Waikiki, the Waikiki Marriott, the Holiday Inn Waikiki, and the Aqua Palms. Rates range from \$99 to \$259 per night plus taxes.

Residents of Japan may book their hotel reservations (as well as register for the meeting and book airline reservations) by contacting Nippon Travel Agency directly by calling 03-5369-4540 or by fax at 03-3225-1009.