

Strategic Planning for a New East Asian Network for Organic Chemistry

Since October 2005, an IUPAC project has been laying the groundwork for the establishment of an East and South East Asian Network for Organic Chemistry. It has been estimated that 30 percent of the research done in the field of organic chemistry in the world is being produced in Asia. While this statistic is encouraging, a careful inspection shows that productive research is presently concentrated in a few countries in the region, and is by no means a common phenomenon across all countries in Asia.

The Japan Society for the Promotion of Science's Asian CORE program has been designed to create world-class research hubs, "core institutions within the Asian region," in selected cutting-edge fields with topics deemed to be of high international importance, while fostering the next generation of leading researchers by establishing sustainable collaborative relations among members in seven countries/regions. The activities of the program involve scientific conferences, researcher exchanges, lectureship tours, and joint research.

The purpose of the IUPAC project (# 2005-039-2-300) is to plan the best strategy to link with the JSPS program and establish a cooperative network that will provide maximum support for organic chemists throughout the East Asian region. The proposed network would be expected to promote collaborative research work based on interactive relationships, academic exchanges, and activities. The network would be responsible for the organization of workshops on aspects of organic chemistry, chemical techniques, and current research trends, with the aim of enhancing the level of organic chemistry and research in less developed Asian countries.

A recent example of the cooperative network in action was the 2nd International Conference on Cutting-Edge Organic Chemistry in Asia, held 2-6 September 2007 in Busan, Korea. The 138 organic chemists who participated were from the 7 member regions/countries.

Prior to the conference, about 40 organic chemists attended the second workshop under the IUPAC project. IUPAC supported the lecturers as well as the organic chemists whose home countries were not part of the Asian CORE program and attendees from countries that are not National Adhering Organizations of IUPAC, such as the Philippines and Malaysia. The work-



Group photo at the 2nd International Conference on Cutting-Edge Organic Chemistry in Asia.

shop featured two speakers who delivered lectures and gave demonstrations to update attendees on new techniques Takao Ikariya of the Tokyo Institute of Technology spoke on "Applications of Supercritical Fluids in Organic Chemistry," and Kong Hung Sze from the University of Hong Kong delivered a talk on "Application of New NMR techniques in Organic Chemistry." The workshop was recorded on video for possible use at future workshops. Extensive notes were also made available.

The 3rd International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-3) will be held 19-23 October 2008 in Hangzhou, China. This will be followed by ICCEOCA-4 in Bangkok (2009) and ICCEOCA-5 in Taipei (2010).

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 www.iupac.org/web/ins/2005-039-2-300

Critically Evaluated Techniques for Size Separation Characterization of Starch

A better understanding of structure-property relations for starch is needed to address human and animal nutritional needs and industrial applications such as paper manufacture. Characterizing the structure is complex because one of the two types of starch in grains, amylopectin, is hyperbranched and of very high molecular weight.

Size separation techniques (size-exclusion chromatography, field-flow fractionation), with multiple detection, in principle provide powerful tools for obtaining data that are sensitive to this complex structure. However, reliable application of these methods is bedeviled by two problems: (1) not all the starch may be dissolved, and (2) shear scission may occur