Macromolecule-Metal Complexes  
by Francesco Ciardelli and Giacomo Ruggeri

The 11th International Symposium on Macromolecule-Metal Complexes (MMC-11), sponsored by IUPAC, was held in Tirrenia (Pisa, Italy) 10–13 September 2005, chaired by R. Barbucci, of Siena, and F. Ciardelli, of Pisa. The symposium was part of the series of regular biennial meetings of the MMC group sponsored by IUPAC Polymer Division.

Approximately 170 participants from 30 countries demonstrated the increasing interest and exciting progress in the field of macromolecule-metal systems and complexes, which is devoted to the synthesis of artificial combinations of metal ions/metals, ligands, and macromolecules and has the aim of creating new materials with a variety of properties.

The meeting was organized by the University of Pisa and University of Siena with the sponsorship of the European Polymer Federation; AIM (Associazione Italiana di Scienza e Tecnologia delle Macromolecole); The Society of Polymer Science, Japan; and the Chemical Society of Japan.

Scientific topics debated during the symposium included:

- biological aspects
- synthesis, formation, and characterization
- environmental applications
- binding of small molecules, sensors
- catalysis and photocatalysis
- conductivity, photoconductivity, and ionic conductivity
- electronic, optical, and magnetic applications
- alternative processes of energy conversion

As invited speakers, a number of specialists covered both basic areas and new developments. The founder and honorary chairman of MMC, Professor Tsuchida (Waseda University, Japan), gave an opening lecture on “Safety of Oxygen-Infusion and Efficacy as Artificial Red Blood Cells,” followed by invited speakers from 13 countries. All lectures and titles of conferences are available at <www.dcci.unipi.it/~bea/mmc-11>, along with information about poster sessions and poster awards. Nearly 100 other participants made oral or poster presentations.

Proceedings of this conference will appear in an upcoming issue of Macromolecular Symposia.

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Analytical Chemistry and Chemical Analysis  
by Vladimir Zaitsev

The International Congress on Analytical Chemistry and Chemical Analysis (AC&CA-05) took place in Kiev, Ukraine, 12–18 September 2005.

AC&CA-05 belongs to the series of Ukrainian conferences in analytical chemistry established in 1970 by the Ukrainian Chemical Society and Chemical Division of the Ukrainian Academy of Sciences. AC&CA-05 is the seventh conference in analytical chemistry in Ukraine and the first international meeting on analytical science in Ukraine.

AC&CA-05 was organized by the Scientific Council of Analytical Chemistry at the Academy of Sciences of Ukraine, the Ukrainian Chemical Society, and Kyiv Taras Shevchenko National University, in collaboration with the European Association for Chemical and Molecular Sciences (EuCheMS) and IUPAC. The congress was
dedicated to the centenary of the birth of the outstanding Ukrainian scientist Anatoly K. Babko for his expertise in analytical chemistry and in the chemistry of complex compounds. The congress was sponsored by IUPAC and by the International Association for the Promotion of Cooperation with Scientists from the New Independent States of the Former Soviet Union (INTAS). The organizing committee was chaired by Professor Vladimir Zaitsev (Kiev, Ukraine), and the program committee was chaired by Professor Valery Antonovich (Odessa, Ukraine).

The main goals of the conference were to survey the status of modern analytical science in Ukraine against the status of modern analytical science globally, to renew international collaboration of Ukrainian analytical chemists and educators, and to approach positions of scientists and analytical engineers.

The organizing committee received great help and support from many international bodies, including chemical societies from Russia, Japan, Austria, Germany, and Great Britain, as well as scientific Web portals such as SpectroscopyNOW and ChemWeb.


AC&CA-05 had 327 participants from 30 countries, including Ukraine (45%), Russia (25%), Iran, Serbia and Montenegro, Byelorussia, Germany, France, Japan, and Spain. There were 303 presentations in total: 123 oral sessions and 180 posters. Oral presentations were distributed as follows: 12 invited, 40 keynote, and 71 regular lectures. The highlight of the congress was active participation of young scientists. The audience was distributed as follows: 47% PhD students and 26% young scientists. The congress provided an excellent opportunity for young Ukrainian researchers, teachers, and students, as well as for scientists from neighboring countries to meet representatives of the international scientific community and to reestablish links with European colleagues, thus initiating new collaborative work.

The main results of the congress as well as list of participants and a book of abstracts is available through the congress Web site: www.achem.univ.kiev.ua/conference/babko/.

The congress materials were published in the book of abstracts and as special issue of Ukrainian Journal of Chemistry (Issues 9 and 10, 2005).

Professor Vladimir Zaitsev <zaitsev@univ.kiev.ua>, who chaired the local organizing committee, is chair of the Analytical Chemistry Department at Taras Shevchenko National University in Kiev, Ukraine.

**Novel Materials and Synthesis**

by Yuping Wu

The International Symposium on Novel Materials and Synthesis (NMS) was initiated in 2005 and was held jointly with the International Symposium on Fine Chemistry and Functional Polymers (FCFP), held for the first time in 1985 in China and on a near-annual basis since. This year, the 15th symposium (FCFP-XV) was held 16–20 October 2005 at Fudan University in Shanghai, China. The joint holding of these two important symposia was part of the celebration of the Centennial Anniversary of Fudan University.

Fudan University, established in 1905, is one of the most famous universities in China. The name “Fudan,” which means “unremitting effort,” comes from the Confucian classics. The university is situated in Shanghai City, on the west coast of the Pacific. Shanghai City is one of the most dynamic metropolises in China and recently won a bid to host the 2010 World Expo.

NMS-I was sponsored by the National Natural Science Foundation of China, IUPAC, the Shanghai Key Laboratory of Molecular Catalysis and Innovative Materials, and the Shanghai Society of Chemistry and Chemical Industry. Cochairman Professor Yingyan Jiang, vice president of Fudan University, Professor Xiaoman Chen, and IUPAC representative Professor S. Penczek delivered welcome and opening addresses on the morning of 17 October 2005.
Joining the symposium were 188 participants, including 117 from outside China. Foreign participants included industry representatives from Sony Corporation, Sanyo Chemical Industries Ltd., Sharp Corporation, Givaudan Schweiz AG, DSM Pharma Chemicals, and Givaudan Ltd. Speakers from companies introduced their latest development on novel materials. The symposium concentrated on novel polymers with various functions, novel organic chemicals, asymmetric synthesis and other synthesis methods, and other novel materials and synthesis related to energy, environment, medicine, fragrance, and nanotechnologies. Prominent scientists who lectured on their research work included Professor Robert Ballini (Italy), Professor Heinz Berke (Switzerland), Professor Shohei Inoue (Japan), Professor Ming Jiang (China), Professor Yusuke Kawakami (Japan), Professor Shun-Ichi Murahashi (Japan), Professor S. Penczek (Poland), Professor Makoto Shimizu (Japan), Professor James M. Takacs (United States), Professor M.G. Voronkov (Russia), Professor Changchun Wang (China), and Professor Peter Zugenmaier (Germany).

The symposium discussion was active, and participants highly evaluated the symposium and its organization, regarding it as a good high-level platform for exchanging academic ideas on novel materials and synthesis.

The organization committee arranged wonderful social programs such as a night tour by boat along the Pujiang River, a Shanghai Opera, and a city tour. Participants left the symposium knowing more about Fudan University, Shanghai, and China. Organization activities were shouldered by Professor Yuping Wu’s group.

The NMS-I International Organizing Committee has decided to hold this symposium in Shanghai biennially, with the next symposium scheduled for 21-25 October 2007.

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at the La Pirogue Hotel, Flic en Flac, Mauritius. The first day of the conference started with the opening ceremony in the presence of University of Mauritius officials and other distinguished guests. UNESCO and IUPAC were represented by Dr. M.S. Alam and Professor R. Gilbert, respectively.

The IUPAC Conference was attended by approximately 100 participants, including 70 from 17 foreign countries. Participants included high-caliber polymer scientists as well as young researchers and postgraduate students. Major objectives of the conference included providing young scientists of the region a forum for presenting their research work, providing networking opportunities, and fostering research collaborations between the north and the south.

The conference featured five plenary lectures, 27 invited lectures, 15 contributed papers, and 30 poster presentations covering the following five major themes in polymer science and frontier areas of particular interest to the greater African region (Africa and Indian Ocean island states):

- biopolymers/biodegradable polymers/polysaccharides
- polymers in food and textile
- polymers in health and medicine
- functional polymers
- new emerging materials and characterization techniques

The enthusiastic participation of numerous young graduate students and scientists led to many lively discussions during the well-attended poster sessions. Eighteen papers presented at the IUPAC Conference have been collected in a special volume of *Macromolecular Symposia* entitled “Polymers for Africa” (Vol 231, 2006; ISBN 3-527-31334-6). In the preface of that volume, Professor Jean Fréchet writes:

“It is obvious that this conference series can make an important contribution to the development of polymer science in the African continent as more young scientists are exposed to and participate in state-of-the-art polymer research in contexts of relevance to their local environment. While it is clear that holding such conferences on the African continent stimulates the all-important participation of both young and more mature African scientists, should the rest of the world not be exposed to the needs and issues of polymer science in the developing world? Should topics such as “Polymers for Africa” or “Polymers for the Developing World” be included in the major IUPAC-sponsored polymer conferences held in the developed world to sensitize polymer scientists to the special needs of developing nations? It is hoped that the readers will be stimulated to attend and participate in the next edition of the “Polymers for Africa” conference for a better understanding of the global significance of this topic.”
It is undeniable that the organization of such meetings in countries far from the major centers of education and research can contribute to the development of polymer science and help lay the groundwork for future economic development in those countries and regions. Professor Gilbert wrote: “Because of the excellent organization, the relaxed atmosphere and the high quality of invited speakers, this was one of the most fruitful conferences I have ever attended.”

Sponsors included the University of Mauritius, UNESCO, IUPAC, ACU, the French Embassy in Mauritius, TWAS, and the Tertiary Education Commission (Mauritius).

Dhanjay Jhurry <djhurry@uom.ac.mu> is associate professor and head of the Department of Chemistry at the University of Mauritius in Réduit. He was chairman of the local organizing committee.

Carotenoids by George Britton

When the first satellite meeting on the chemistry of carotenoids was held in Trondheim, Norway, in 1996, only 30 participants attended. But almost 300 came from nearly 40 countries to the 14th International Symposium on Carotenoids held 17–22 July 2005. The growing attendance clearly illustrates interest in carotenoids and the diversification of the field, especially in the areas of human nutrition and health, which are of particular public concern.

The 1996 meeting proved to be the first of a series of IUPAC International Carotenoid Symposia, the latest of which was held in the Edinburgh International Conference Centre (EICC) in Edinburgh, Scotland, with George Britton from the University of Liverpool as chairman. Much of the framework of the symposium was put in place by Andrew Young from Liverpool John Moores University, before George Britton took on the role for the last few months.

The program in Edinburgh was designed to encourage an integrated, interdisciplinary approach for tackling key issues and to stress the importance of a solid foundation of knowledge of the fundamental physical and chemical properties of carotenoids for understanding and controlling biological functions and actions. The excellent facilities and services of the EICC helped the symposium to maintain the tradition of a friendly, lively atmosphere and stimulating formal and informal discussions. Generous financial support from commercial sponsors in many countries made the symposium possible.

In the formal scientific program, about 220 papers were presented, 80 as lectures or selected oral communications in plenary or parallel sessions, and 140 as posters. As with previous symposia, the texts of plenary and invited lectures will be published in *Pure and Applied Chemistry*, with Richard Cogdell and Peter Bramley as symposium editors. For the first time, the book of abstracts has also been published as an issue of *Carotenoid Science* (Volume 9, July 2005, Hideki Hashimoto, ed.), the journal of the Japanese Society for Carotenoid Research.

In the opening session on “Skin Protection by Carotenoids,” lectures by Helmut Sies, Peter Schroeder, and Regina Goralscyk concentrated on molecular studies and insights into the mechanism of the photoprotective effect of beta-carotene in human skin. Two plenary sessions emphasised the importance of interdisciplinary approaches and studies. In the session “Oxidation and Breakdown Products,” topics included the chemistry of the oxidative breakdown of carotenoids (presented by Catherine Caris-Veyrat) and the significance of such oxidation and its products for human health (presented by Werner Siems). In a highly informative and entertaining lecture, Roman Kaiser used example extracts to illustrate the role of “Carotenoid-Derived Aroma Compounds in Flower Scents.” The important influence of the natural physical states of carotenoids and of interactions with proteins on properties and functions was the subject of a further session in which Robert Birge and Tom Moore also reported some novel applications of carotenoids and retinal-proteins. Jonathan Blount spoke in a session on “Carotenoids and Nature” that highlighted the role of carotenoids in coloration and behavior in birds and invertebrate animals. Two plenary sessions reported progress in studies of carotenoids in relation to cancer (speakers included John Bertram and Angelika Herzog) and other aspects of human health (including an invited lecture by Olaf Sommerburg). In additional plenary lectures, Frederick Khachik evaluated available procedures for the analysis of carotenoids by HPLC in his...
Inorganic Materials
23–26 September 2006, Ljubljana, Slovenia

The Fifth International Conference on Inorganic Materials will be held 23–26 September 2006 in Ljubljana, Slovenia. The meeting aims to bring together scientists working in fundamental and applied areas to review recent developments in aspects of inorganic materials research and to identify emerging and future areas of growth in this exciting field. The conference will comprise six sessions covering electronic, optical and multifunctional materials; biomaterials; nanostructured materials; catalytic and porous materials; new materials for energy systems; and ceramics and glasses.

Contributions on the latest scientific and technological results will be supplemented by a number of high-level invited presentations and reviews by world experts in these fields.

For more details, contact Nick Williams, Inorganic Materials Conference Secretariat, at +44 (0) 1743 241289 or <im-conference@elsevier.com>.

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talk “Distribution and Metabolism of Dietary Carotenoids in Humans as a Criterion for Development of Nutritional Supplements;” while Aldona Dembinska-Kiec reported on a major European project and presented details of her own work on “Beta-Carotene and Angiogenesis.”

The remainder of the program was filled with parallel sessions covering “Nutrition and Conversion into Vitamin A,” “Photosynthesis and Photochemistry,” “Eye Health,” “Biosynthesis,” “Chemistry,” and “Commercial Production and Applications.”

The standard of posters displayed was high, and prizes for best poster presentation were awarded to four young researchers: Marc David Grynbaum (Germany), Thais Guaratini (Brazil), Nicole Tillinger (Austria), and Tokutake Sashima (Japan). Each received a copy of *The Carotenoids Handbook*, from the carotenoids book series.

As a new venture for the symposia, International Carotenoid Society Awards were presented to mark distinguished achievements and dedicated service to the carotenoid field. The Otto Isler Award was presented to Synnove Liaaen-Jensen for “a lifetime of achievement in research on carotenoid chemistry and of dedicated service to the carotenoid field.” Unfortunately, Norman Krinsky was unable to attend the meeting to receive the Trevor Goodwin Award for “achievement in research on carotenoid biochemistry and a lifetime of dedicated service to the carotenoid field”; the award was presented to him later. Finally, the President’s Outstanding Service Award was presented to George Britton “in appreciation of exceptional service and dedication to the principles and scholarship of The International Carotenoid Society.”

In addition to an energizing week of inspiring carotenoid science, participants delighted in exploring Edinburgh and taking part in a whisky-tasting event and a Scottish-themed symposium dinner and Ceilidh.

The 15th International Symposium on Carotenoids will be held in 2008 in Okinawa, Japan, with Hideki Hashimoto from Osaka City University as chairman. Information about this and other carotenoid-related events is on the Web site of the International Carotenoid Society: www.carotenoidsociety.org.

George Britton <g.britton@liv.ac.uk>, who was program chair of the 2005 conference, recently retired from the School of Biological Sciences at the University of Liverpool.