

Division IV: Polymer Division

The objective of this report is to summarize activities of Division IV since the summer of 2009 (General Assembly in Glasgow) to March 2010 for the Bureau Meeting, April 16-18, 2010, Sofia, Bulgaria and to discuss future goals for the division.

International Year of Chemistry

The Division organized a small summit of representatives of polymer societies at the Glasgow WCC last year. Representatives of polymer societies from around the globe attended. We plan to use this opportunity (IYC) to raise public awareness of the value and importance of polymer chemistry and to engage young people in polymer chemistry. While exact details of our activities are still taking shape, we plan the following events to celebrate IYC.

- 1) Symposia at polymer conferences on each of the inhabited continents will be sponsored by the polymer division on the role of polymer chemistry in society and focused on younger polymer chemists.
- 2) An essay contest on "Life without Polymers" with a possible prize being attendance at the WCC.
- 3) An enhanced IUPAC Polymer Education web site with videos of leading industrial and academic polymer chemists describing their view of polymer chemistry.

Polymer Chemistry Awards

The "DSM Performance Materials Award (with the cooperation of IUPAC)" will be presented for the second time at the upcoming World Polymer Congress (WPC) in Glasgow, Scotland this summer. It will be presented in conjunction with a special ½ day symposium. The awardee has been selected by a committee with representation from DSM, the Polymer Division, and the Congress organizing committee. There is no age limit on the recipient. A financial award of 50,000 Euros will be given to the very fortunate recipient. Besides the financial award, DSM will provide financial support for organizing the symposium.

The IUPAC-Polymer International Award will also be presented for the second time at the 2010 World Polymer Congress. A \$5000 award plus expenses will be presented by Wiley to a scientist <40 years old. The awardee must attend the World Polymer Congress and agree to present a lecture on the work for which s/he will receive the award. The awardee has been

selected by a committee of 5-7 scientists with Polymer Division representation.

The well-established IUPAC-Samsung Young Polymer Scientist Award will also be presented to a younger scientist attending the WPC. The conference organizers are providing a short list of attendees who have been nominated for this prize.

All three prizes will be announced during the opening ceremonies to the Congress and award talks will be presented over the course of the first few days.

Interdivisional Activities

The polymer division remains a committed member of the Interdivisional Subcommittee on Materials Chemistry, working on significance of Materials Chemistry with IUPAC and increasing the interaction between IUPAC and the Materials Chemistry user communities. Division I, II and IV have met recently in Ithaca, NY and subsequently in Zurich, Switzerland to reinvigorate and focus our activities. A report will be submitted to Chemistry International (CI) regarding the Zurich meeting. We have also started a prototype website on Materials Chemistry Education that can be seen at:

<http://people.ccmr.cornell.edu/~cober/IUPACMatChem/index.html>

We expect this site to grow in importance. This new site is modeled on the highly rated Polymer Education site that has now become one of the top websites whether it is searched on Google, Yahoo or Bing (<http://www.iupac.org/polyedu/>).

Education Initiatives

The Education sub-committee, headed by J.-P. Vairon, has in line with the strategic goals of the Polymer Division, a particular focus on educational activities for the developing world and younger scientists. Both are key elements for activities of the division as it moves into the new biennium. It has established the first international web site for polymer education (hosted on the IUPAC server) and it is continuing to develop links to polymer education sites across the globe. Educational material developed for IUPAC sponsored polymer division conferences is now posted on the web site for free download.

As an outgrowth of this educational effort, Division IV is now deeply involved in a showcase project with the IUPAC CCRF Task Group on “International Research Funding in the Chemical Sciences” to examine the possible role of IUPAC in fostering international joint research projects and to establish best practices among the international funding agencies. Discussions were held in Glasgow at the WCC 2009 under the chairmanship of Bryan Henry

and the plan for a funding call, review process and award structure was developed. This call is underway with the participation of funding agencies and scientists from France (CNRS), Germany (DFG), Brazil (FAPESP), Ireland (IRCSET), Portugal (FCT), Spain (MICINN), and the United States of America (NSF). Evaluation of the proposals is underway right now and the top proposals will be determined at a meeting held at the WPC 2010 in Glasgow. We expect on the order of \$3,000,000 in research funding to be distributed.

The aim of an additional recently completed project has been to provide the French-speaking countries with a standard for polymer education based on various tools such as books, multi-media or databases. The task group for this project includes professors from European several countries, Africa and America. Their work focused on the development of new books and other media in an effort to provide an attractive approach to polymer education in French speaking countries around the world.

Off-Year Division Committee Meeting

The Off-Year Division Committee Meeting will be held in Glasgow, 10-11 July, 2010. We expect to have good representation at the meeting. To date 33 members (10 TMs, 5 AMs, 3 NRs, 15 Subcommittee Members) are expected to attend the meeting.

World Polymer Congress – MACRO 2010

The 42nd World Polymer Congress (WPC) (Chief Organizer: Prof. Peter Lovell) will be held in Glasgow, 11-15 July 2010. Already over 1000 speakers and poster presenters have committed to the meeting. Past meetings have regularly had more than 1000 participants from 50 or more countries and we expect an even greater turnout. There will be 8 plenary speakers and 28 symposia will be held in 11 parallel sessions. The WPC sponsored by Division IV and held biannually is the very largest polymer congress in the world and the next one is going to be held in Blacksburg, USA, 24 -29 June, 2012 with Prof. Tim Long (Virginia Tech) as the lead organizer.

Sub-committees and Projects

A list of the current projects is compiled by the Secretariat and is available at the IUPAC web site. Division IV remains one of more active division in attracting and handling IUPAC projects. This division also is actively involved in interdivisional projects especially with Divisions VIII and II (Interdivisional Subcommittee on Materials Chemistry). In the past year several new projects have been submitted. We expect that some current projects will receive extension after discussion at the new Polymer Division meeting. Presently, 19 projects are

ongoing activities. The Chairman of each Subcommittee closely monitors relevant projects including progress reports from the Task Force Leaders.

Reports on each Subcommittee's activities especially in relation to projects and subcommittee meetings can be found in the Division Meeting minutes that is being posted on the IUPAC web site.

Conferences

Of special note, the WCC in Glasgow continued the tradition of holding symposia with a polymer focus. These symposia, jointly organized by the RSC and the IUPAC Polymer Division, were well attended and included sessions on Developing Polymers (Conveners: Chris Ober (Cornell, USA), Wilhelm Huck (Cambridge, UK), Polymer Molecular Characterization (Conveners: Harald Pasch (Darmstadt, Germany); Taihyun Chang (Pohang, Korea)) and Polymerization Kinetics – Fundamentals for the Design of Novel Processes (Convener: Michael Buback (Göttingen, Germany)).

The IUPAC web site describing sponsored Symposia lists the additional conferences sponsored by Div. IV. In the immediately past and current years, 15 sponsored conferences were or are scheduled. This includes the WPC 2010 separately mentioned above. In addition, four conferences to be held in 2011 are in the process of being granted IUPAC sponsorship. WPC 2010 is to be held shortly this summer in Glasgow (U. K.) Both WPC 2012 (Virginia, USA) and WPC 2014 (Thailand) have been approved by the Polymer Division and are in the final planning stages. The Division is in the process of identifying the site of the 2016 WPC.

Division Election in 2009 (prior to WCC, Glasgow, Scotland)

The following Titular Members continue to serve in the division: Christopher Ober (Division President), Michael Buback (Division Vice President) and Michael Hess (Division Secretary). The Division elected 2 TMs, and 6 AMs and appointed 10 NRs for the GA. Michael Buback (Division Vice President) served as Chair of the Nominating Committee. Geographic consideration was a factor in the selection of the other Nominating Committee members. The elected members may be found in the Division minutes and web site.

Points of Note

1. Division Elections. Some unorthodox steps were taken in the last Division elections. We have worked with David Black to ensure this will not be repeated.
2. Fund Raising. The Division plans to do fundraising for IYC and will work with COCI and

the Secretariat to co-ordinate activities.

3. IUPAC Sponsorship of Symposia. It would be very useful if IUPAC developed a method of sponsoring symposia at larger meetings. In Polymer Chemistry, for example, a larger conference on materials would not merit sponsorship, but a single symposium might.

2. IUPAC Fellows. During the IYC, it would be good if IUPAC developed a smarter strategy for IUPAC Fellows. This could be very attractive as a means of supporting large gifts to a division or the overall organization.

Christopher K. Ober

March 2010