

The Project Place

that lead to their formation. Terms like mass-independent fractionation, nonmass dependent fractionation, isotope anomaly, and isotope excess, have been used in the historic and recent literature, but are often not carefully distinguished.

The realization that MDF comprises a range of possible relationships between the isotopes of one element led to further complications because it meant that apparent isotope anomalies could be created by a combination of different MDF processes. At the moment, at least four different definitions to quantify isotope anomalies are being used. Furthermore, coefficients used in these definitions vary, which makes the comparison of data from different sources very difficult. A consistent set of recommendations on how to express and quantify the isotope distribution in elements with more than two stable isotopes is highly warranted. From our experience as academic teachers, we are woefully aware how impenetrable the field is for young researchers at the moment because of the lack of consistency and the lack of understanding between different groups. This project seeks to alleviate this situation.

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 www.iupac.org/web/ins/2009-046-2-200

Postgraduate Course in Polymer Science

The Institute of Macromolecular Chemistry of the Academy of Sciences of the Czech Republic in Prague, Czech Republic, with its more than 100 scientists and a total staff of about 250, is among the largest laboratories devoted to basic research in polymer science worldwide. For 50 years, the Institute has offered postgraduate studies. In the mid-1990s, the Institute launched the Postgraduate Course in Polymer Science with the mission to enable young university graduates and Ph.D.s from countries with limited research facilities to acquire knowledge on recent advances in polymer science and professional skills needed for promotion of polymer science in their home countries. The course was granted UNESCO sponsorship from the beginning, with IUPAC adding its sponsorship soon afterwards. The course has gained international recognition as a most commendable educational activity in the IUPAC Polymer Division and was awarded the IUPAC-Samsung Education Prize for 2005 (see www.iupac.org/publications/ci/2005/2706/iw1_samsung.html).

So far, 13 iterations of the course have been completed, with the 14th in progress and the 15th starting in October 2010. Each course lasts 10 months and comprises about 50 hours of lectures in modern polymer science and experimental work on research projects under the supervision of senior scientists of the Institute. The results of the research are published in international technical journals and presented at meetings. As of 1 January 2010, the cumulative results of the Course held so far are as follows: 116 graduates, 152 papers published in international journals, and 201 communications at international meetings. The papers co-authored by the course graduates have been cited more than 2000 times. For a list of papers, see <www.imc.cas.cz/unesco/papersUI.html>.

The graduates of the 13 completed courses, students in the current course, and those admitted to the 15th course have been from the following 22 countries: Algeria, Bangladesh, Brazil, Bulgaria, China, Hungary, India, Iran, Kazakhstan, Macedonia, Mexico, Poland, Romania, Russia, Serbia, South Africa, Spain, Ukraine, Uruguay, Uzbekistan, Venezuela, and Vietnam.

Follow-up with graduates has shown that the Course has been very helpful for professional promotion of the graduates in their home countries. Cooperation with a number of alumni continues through joint projects with their home laboratories.

The 15th Postgraduate Course in Polymer Science will be one of the contributions of the Czech Republic to the International Year of Chemistry 2011.

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 www.iupac.org/web/ins/2010-015-1-400

Toward Higher Quality of Chemistry Teacher In-Service Training in Croatia

The primary objective of this project is to organize the first Croatian Workshop on Chemical Education (1stC-WCE), scheduled for 10-14 November 2010 in Split, Croatia. The workshops is intended to improve the process of in-service training of chemistry teachers in Croatia and the region and catalyze the dissemination process of in-service experiences between neighboring countries.

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The project is planned as a continuing series of workshops on chemical education that will be held in Croatia. The short- and long-term goals of the project may be best described as follows:

- provide international support to the ongoing modernization of chemistry teaching/learning strategies at the primary and secondary education level in Croatia
- promote incorporation of inquiry learning, particularly the discovery-based small-group learning method, into the new Croatian Chemistry Curriculum and thus enhance the opportunities for students to learn chemistry in a meaningful way
- promote the needed awareness of research into the teaching-learning process in one's own classroom (this is defined as a basis for change and encouragement of this process (although with very modest expectations), which should be seen as a continuing activity
- give needed support to the institutionalization process of the graduate study Ph.D. in Science Education at the Faculty of Science of the University of Split
- create a dynamic and challenging atmosphere that will encourage career development of young chemistry teachers
- enhance social-networking of chemistry teachers

in Croatia as well as in the geopolitical region and correspondingly enable further dissemination of good teaching practices, classroom activities, and teaching experiences

- help national chemical societies in the region to coordinate exchange of information and to reduce the differences in chemistry teaching caused by different social and political environments
- enlarge the number of experts acquainted with the inquiry learning strategy who are capable of training others

For all of this to happen, the support of IUPAC's Flying Chemist Program is vital because its assistance will certainly compel further enhancement of the existing collaboration between the neighboring countries National Chemical Societies and will enable the organizers to introduce participants to experts in the field. The Flying Chemists Program is an initiative of IUPAC's Committee on Chemistry Education; <<http://media.iupac.org/standing/cce/FCP.html>>.



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 www.iupac.org/web/ins/2009-055-1-050

Provisional Recommendations

Provisional Recommendations are drafts of IUPAC recommendations on terminology, nomenclature, and symbols made widely available to allow interested parties to comment before the recommendations are finally revised and published in Pure and Applied Chemistry. Full text is available online.

Terminology of Polymers and Polymerization Processes in Dispersed Systems

A large group of industrially important polymerization processes is carried out in dispersed systems. These processes differ with respect to their physical nature, mechanism of particle formation, particle morphology, size, charge, types of interparticle interactions and many other aspects. Polymer dispersions, and polymers derived from polymerization in disperse media, are used in diverse areas such as paints, adhesives, microelectronics, medicine, cosmetics, biotechnology and others. Frequently, the same names are used for different processes and products or different names

are used for the same processes and products. The present list of recommended terms and definitions is necessary for the unambiguous description of processes, products, parameters and characteristic features relevant to polymers in dispersed systems.

Comments by 30 November 2010

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 www.iupac.org/web/ins/2002-017-1-400