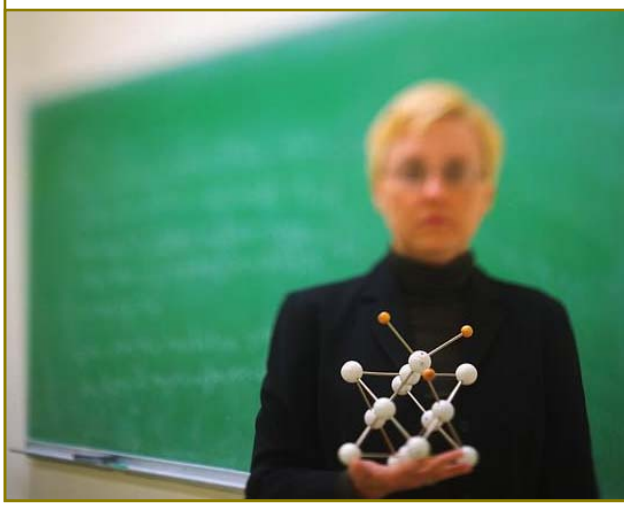
Public Understanding of Science: Identifying IUPAC's Niche

Enhancing the public understanding of science means different things to different stakeholders, and has different meaning in the diverse global contexts represented by the IUPAC community. Yet, enhancing the public understanding of chemistry is a key element of IUPAC's mission. Because a large number of other organizations are already active in the field, determining the particular role that IUPAC can and should play, without reinventing the wheel, requires careful analysis. The Committee on Chemistry Education (CCE) approved a project that aims to help identify appropriate involvement for IUPAC in this area, as well as to give direction to the CCE, which is charged with fostering public understanding through its work to improve chemistry education.

The project will have four stages:

1. A workshop for the task group members to prepare a preliminary report, with recommendations, on effective public understanding of science initiatives based upon a review of the literature. The workshop will be held over three days in Edmonton, Canada, in May 2005.
2. A special workshop within the Beijing IUPAC General Assembly in August 2005 to consider the report from (1) above and to produce a draft report to the IUPAC Bureau on the role for IUPAC in promoting public understanding of science. Participants would be the Task Group; CCE—including the Associate Members representing the scientific divisions of IUPAC; representative(s) of the Committee on Chemistry and Industry (COCI); CHEMRAWN; and others that the IUPAC Executive Committee may nominate. The report will identify what further work, if any, needs to be undertaken to develop an IUPAC consensus on the role and strategy of IUPAC in the public understanding of science. Following the creation of that draft report, there would be consultation within IUPAC on those findings, with feedback to the Task Group.
3. A symposium within, and other contributions to, the 19th ICCE on Chemistry and Chemical Education for Humanity in Korea in August 2006. The workshops in (1) & (2) will inform the development of the program which will stimulate further advice on IUPAC's role and strategy.
4. Task group members will attend the 19th ICCE and produce a final report based upon the feedback from consultations. The report will be to the IUPAC Bureau enabling it to determine its role and strategy on public understanding of science and to engage with other scientific unions, ICSU, and other stakeholders to agree on overarching strategy and associated activities.



All task group members are members of the CCE subcommittee on the Public Understanding of Chemistry, and include Peter Mahaffy, Bob Bucat, Tony Ashmore, and Choon Do. The group welcomes your comments and suggestions on "best practices" and appropriate roles for IUPAC in building public understanding of chemistry. Contact Peter Mahaffy <peter.mahaffy@kingsu.ca> with your suggestions.

www.iupac.org/projects/2004/2004-047-1-050.html

Uncertainty Estimation and Figures of Merit for Multivariate Calibration

With the ever-increasing sophistication of analytical instruments, multivariate calibration methods are continually evolving, each with its own underlying assumptions and statistical properties. The main purpose of these methods is to produce valid predictions from highly unselective data (e.g., the quantification from near-infrared spectra). A wide variety of multivariate methods have been developed, broadly classified in terms of the tensorial order of the instrumental data. Important conceptual differences exist between first-order methods employing vector data, and second-order methods using matrix data, particularly since the latter make possible the quantification in the presence of unknown interferents. This is also reflected in the approaches followed for the estimation of figures of merit.

While univariate calibration leads to relatively sim-