

## Preface

For IUPAC, the global, scientific organization that cares about chemistry and the chemical sciences in all senses of the word, it is a duty, but also a pleasure to follow the development in chemical research closely with the aim of spotting pioneering work and new trends as early as possible. In doing so, it became abundantly clear that the young chemists were about to become more important for the future of our science than they were just a decade or so ago. For chemistry, it is therefore important to encourage our young colleagues in their work, and IUPAC does so through the IUPAC Prize for Young Chemists. This prestigious annual prize honors 4–5 chemists with a fresh Ph.D. for exceptional work during their Ph.D. studies. The work is mainly judged on the basis of a 1000-word essay which is supported by recommendations from the senior scientist(s) with whom the candidate collaborated.

As immediate Past President of IUPAC, I had the pleasure of chairing an international prize selection committee of eminent chemists with a wide range of expertise in chemistry that adjudicated essays from 49 applicants from 19 countries. To pick the winners was not an easy task, because there were many outstanding candidates, but at the end the committee arrived at a unanimous decision and awarded the 2006 IUPAC Prize to the following young chemists:

- **Michelle Nena Chrétien**, University of Ottawa, Ontario, Canada, with a thesis entitled “Photochemical, photophysical, and photobiological studies of zeolite guest–host complexes”
- **Valentina Domenici**, University of Pisa, Italy, with a thesis entitled “Structure, orientational order and dynamics of rod-like and banana-shaped liquid crystals by means of  $^2\text{H}$  NMR: New developments”
- **Matt Law**, University of California, Berkeley, CA, USA, with a thesis entitled “Oxide nanowires for sensing, photonics and photovoltaics”
- **Emilio M. Pérez**, University of Edinburgh, UK, with a thesis entitled “Hydrogen-bonded synthetic molecular machines”
- **Dunwei Wang**, Stanford University, CA, USA, with a thesis entitled “Synthesis and properties of germanium nanowires”

Each of the winners will receive both a cash prize of USD 1000 and a free trip to the 41<sup>st</sup> IUPAC World Chemistry Congress, which will take place in Turin, Italy, 5–11 August 2007. Here the winners will have the opportunity to present their work, which is an important stage of any research project. But to reach an even wider audience, the prizewinners have been invited to submit manuscripts on aspects of their research for publication in *Pure and Applied Chemistry*. It is therefore a pleasure to see that four refereed papers, containing critical reviews of high quality, appear in this issue of *PAC*.

It is a great pleasure to congratulate each of the winners (and their supervisors) with the 2006 IUPAC Prize. It is IUPAC’s hope that each winner is encouraged to continue to do exciting research that will contribute to a bright future for the molecular-based sciences, which are so important for our common future.

**Leiv K. Sydnes**  
IUPAC Immediate Past President and  
Chairman of the IUPAC Prize Selection Committee