

Preface

Among many global responsibilities, IUPAC recognizes in particular the importance of encouraging, supporting, and fostering the career development of young scientists throughout the world. The imminent International Year of Chemistry 2011 (IYC 2011) is a very special period not only for IUPAC but also for the whole world chemistry community. IYC 2011 was declared by the UN General Assembly in December 2008, to celebrate the achievements of chemistry and its contributions to the well-being of humankind. Under the theme “Chemistry—our life, our future”, IYC 2011 will offer a wide range of interactive activities across the globe. IUPAC feels strongly that encouragement of young research scientists is critical to the future of chemistry. Therefore, one of the most important aims of IYC 2011 is to increase the interest of young people in chemistry.

Since 2000, IUPAC has sought to encourage outstanding young research chemists at the beginning of their careers by making annual awards of the IUPAC Prize for Young Chemists. The prizes are given for the most outstanding Ph.D. theses in the area of the chemical sciences, as described in 1000-word essays. For details, please refer to <www.iupac.org/news/prize.html> (IUPAC Prizes for Young Chemists). IUPAC awards up to five prizes annually, each comprising USD 1000 and travel expenses to the next IUPAC Congress.

As immediate Past President of IUPAC, I was honored to chair the prize selection committee of eminent chemists, who enjoyed reading essays of 29 applicants from 15 countries. After critical evaluation of the originality and excellence of the essays, the committee decided unanimously to award 2010 Prizes to the following five chemists:

- **Guangbin Dong**, Stanford University, Palo Alto, CA, USA: “Synthetic efficiency: Using atom-economical and chemoselective approaches towards total syntheses of Agelas alkaloids, terpestacin, and bryostatins”
- **Viktorija Gessner**, Technical University Dortmund, Dortmund, Germany: “Lithium-organic compounds: From the structure–reactivity relationship to versatile synthetic building blocks and their application”
- **Rafal Klajn**, Northwestern University, Evanston, IL, USA: “Self-assembly of nanostructured materials”
- **Jason M. Spruell**, Northwestern University, Evanston, IL, USA: “Molecular recognition and switching via radical dimerization”
- **Guihua Yu**, Harvard University, Cambridge, MA, USA: “Assembly and integration of semiconductor nanowires for functional nanosystems”

The 43rd IUPAC World Chemistry Congress will take place in San Juan, Puerto Rico, 30 July–7 August 2011. Each awardee is invited to present a poster on his/her research and to participate in a plenary award session. The prize winners are also invited to offer review papers on their research topics for consideration as publications in *Pure and Applied Chemistry (PAC)*. Four of the five winners have taken advantage of this offer, and their refereed articles appear in this issue of *PAC*.

Finally, it is an honor and a pleasure to congratulate each of the winners and their supervisors for winning the 2010 IUPAC Prize for Young Chemists. It is hoped that each of them will continue to contribute to a bright future for chemical sciences and technologies.

Jung-Il Jin

IUPAC Immediate Past President and
Chair of the IUPAC Prize Selection Committee