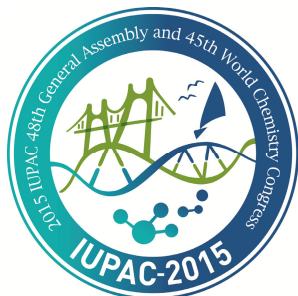


WORLD CHEMISTRY LEADERSHIP MEETING— Message to Young Observers

Sponsored by
International Union of Pure and Applied Chemistry
at the 48th IUPAC General Assembly, August 9-14, 2015
Busan, Korea



World Chemistry Leadership Meeting Theme: IUPAC's role in achieving United Nations Sustainable Development Goals

IUPAC serves to advance the worldwide aspects of the chemical sciences and to contribute to the application of chemistry in the service of Mankind.

As part of Rio +20, the UN has identified 17 people-centered goals and associated targets to achieve a sustainable future.

The WCLM is an integral part of the IUPAC General Assembly. It offers a platform for representatives from National Adhering Organizations (NAOs) to meet and discuss emerging and pressing issues of global concern.

Pressures of population growth and climate change throughout the world, as well as the opportunities offered by the development of the new era of global interaction have led to the understanding of the need to redefine the role of the scientific and industrial professional communities in addressing and partaking in the debate on sustainable development and offer suitable solutions relevant to all walks of life.

As a result the next WCLM will aim to address the relevant Environmental/socio-economic issues raised in the UN sustainable development goals and examine the contribution that the Chemistry community can make to realize them in a sustainable way.

This year WCLM aims to facilitate the specific involvement of Young Observers (YOs). It will be an exciting forum for exchange of ideas and views about the way chemistry-based scientists can assist in fulfilling the UN Sustainable Development Goals.

The YOs and invited leaders will have the opportunity to discuss and identify gaps in existing knowledge and practice of chemical science and how to address these goals.

We call on YOs to participate in the WCLM programme which will be as follows:

Contact

Fabienne Meyers, Associate Director IUPAC
fabienne@iupac.org

Pre-Meeting

Review UN SDGs and suggested reading materials prior to General Assembly. See links on Page 2.

Monday 10 August 16:00–18:00, Rm. 217

Reception and briefing for YOs to introduce the WCLM activities.

Tuesday 11 August 09:00 to 12:00, Rm. 218

YO teams to work together to develop their ideas into a presentation for the WCLM.

Wednesday 12 August 09:00 to 12:00 (followed by lunch), Rm. 201

WCLM Meeting Leader Presentations:

- Yuan-Tseh Lee, Nobel Laureate, Taiwan
- Hubert Mandery, Director General, European Chemical Industry Council
- Javier Garcia Martinez, Chief Scientist, Rive Technology, University of Alicante, Spain

* **Presentation from YO Teams**

- Group Discussion and identification of highest priority tasks led by Natalia Tarasova, IUPAC Vice President.

Post-GA Activities

Outcomes from the WCLM will be used to drive the actions of a newly formed IUPAC-UN SDG Working Group as a means to develop interdisciplinary projects. YOs will be encouraged to participate in this working group and in newly formed project teams.

WORLD CHEMISTRY LEADERSHIP MEETING— Message to Young Observers

Sponsored by
International Union of Pure and Applied Chemistry
at the 48th IUPAC General Assembly, August 9-14, 2015
Busan, Korea



IUPAC

www.iupac.org

WCLM Plenary Speakers



Education of Girls in Developing Countries and Population Explosion and Resource Consumption

Prof. Lee Yuan T., Nobel Laureate, Institute of Atomic and Molecular Sciences, Academia Sinica, Taipei, Taiwan

For attaining the Sustainable Development Goals of the UN, it is most important to tackle population and resource consumption issues. For curbing the explosive growth in the developing world, Professor Joel Cohen of Rockefeller University suggested that "Putting girls in developing countries through secondary school is one of the single most important factors that causes them to have fewer babies in later life. Education promotes a shift from the quantity of children in favor of quality of children. This transition reduces the future number of people using environmental resources to cope with environmental change.", and I cannot agree more.

On consumption, I share the belief of many experts, that we must Shrink and Share. Current discussions around the Sustainable Development Goals declare "energy for all!", "food for all!", and so on. But, how much energy is enough per person? How much food? If the number of humans, and the resources each consumes, keep growing forever, we will never be sustainable. So it is critical that we work to slow population growth & consumption.

Developed countries should take the lead in shrinking their consumption and impact, but Asia, Africa and other emerging regions should also commit to alternative pathways that achieve development without making the planet more crowded, more materialistic and more wasteful.

The Sustainability Journey of the European Chemical Industry

Dr. Hubert Mandery
Director General, European Chemical Industry Council (Cefic)

Ensuring that by 2050 over 9 billion people live well, within the resources of the planet is a vision which is shared by the European chemical industry. As an industry supplying virtually all manufacturing sectors, the chemical industry has a key role to play in helping to enable a future where people have access to the necessity of a healthy life, to economic prosperity and to societal progress. More growth with less resource consumption requires quantum leaps in



innovation. Currently, sustainable and affordable energy is one of the biggest challenges. Our industry has a strong innovation agenda with regard to the energy challenge covering energy generation, storage, energy efficiency of processes and the development of materials and technologies enabling energy efficiency improvements in customer value chains. Other topics covered in the presentation are circular economy needs and the respective roles of chemistry and the chemical industry to address them.



The Chemical Element: How Chemistry Is Key to Solving our Global Challenges

Prof. Javier Garcia Martinez,
Dept. Inorganic Chemistry,
University of Alicante, Alicante,
Spain

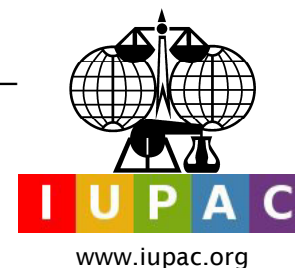
Chemistry is a global endeavor that has greatly contributed to improving our quality of life by protecting us against illness and by putting food and clean water on our table. But now, our global challenges are so big that only if we focus all our efforts in solving our most pressing problems we can create a sustainable and better future for all. From climate change to our dependence on finite natural resources, many of our most global challenges require a technical solution, than only better science and technology in general and chemistry in particular can provide. During its almost 100 years of existence, IUPAC has created an universally accepted chemistry nomenclature and terminology and a global platform to discuss and advance some of the most relevant topics on pure and applied chemistry.

Chemistry education is of particular importance to train, engage, and inspire the new generation of young chemists able and committed to build a more sustainable future. In order to get there, science education, from primary school to college, needs to be reinvented to put the student at the center of the learning process and provide him or her with the skills needed to become a more complete and creative scientist.

There is still a significant gap between academia and industry that needs to be bridged by bold entrepreneurs able to connect these two worlds and successfully commercialize the new and exciting research carried out in universities. Entrepreneurship is another important part of the equation, as taking the discoveries made in the lab to the market place is essential to implement the solutions we need, and scientists have a key role to play here.

WORLD CHEMISTRY LEADERSHIP MEETING— Message to Young Observers

Sponsored by
International Union of Pure and Applied Chemistry
at the
48th IUPAC General Assembly, August 9-14, 2015

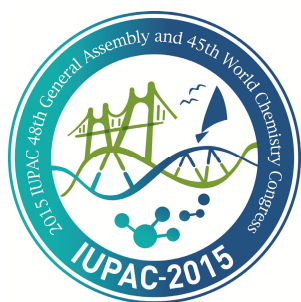


Charge to Young Observers

The task we want to set to the Young Observers is to formulate projects that IUPAC can carry out to aid in the fulfillment of these goals. In order to do so we ask the Young Observers to work in groups to:

- **Identify and formulate sustainable development goals in which IUPAC as an organization can play an active role**
- **Formulate proposals for at least three projects that define and formulate the role IUPAC can play**

In order to do so we have identified some basic literature for review prior to the GA, that may serve as a starting point.



Click on Titles to access Links

Tarasova, N. (2015) Chemistry meeting the world's needs, *Chemistry International*, vol.37,no.1, pp 4-7.

United Nations Millennium Development Goals

Millennium Development Goals: 2014 Progress Chart

United Nations (2014) The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet

The United Nations Secretary General's Advisory Board on Water and Sanitation

United Nations Sustainable Development Goals

UN Sustainable Development Knowledge Platform

UN (2015) Global Sustainable Development Report

Nature (2014) Special Issue: Sustainability

Nature comment paper : Lu et al (2015) Policy: Five priorities for the UN Sustainable Development Goals

Copenhagen Consensus Center
What are the smartest targets for the post 2015 development agenda?

UNICEF statement on child mortality

UNICEF and WHO (2015) Progress on Sanitation and Drinking Water—2015 update and MDG assessment.

UN International Decade for Action "Water for Life" 2005-2015

Sutcliffe, H. (2011). A report on responsible research and innovation. Brussels: Matter.