

THE CHEMICAL ELEMENT: HOW CHEMISTRY IS KEY TO SOLVING OUR GLOBAL CHALLENGES

Martínez G.J.

*University of Alicante,
Carretera San Vicente s/n. Alicante, 03690, Spain
j.garcia@ua.es*

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.¹ 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.² From climate change to our dependence on finite natural resources, many of our most global challenges require a technical solution that only better science and technology in general and chemistry in particular can provide.³ During its almost 100 years of existence, IUPAC has created universally accepted chemistry nomenclature and terminology as well as a global platform to discuss and advance some of the most relevant topics on pure and applied chemistry.

Chemistry education is of particular importance. We must train, engage, and inspire the new generation of young chemists able and committed to building a more sustainable future.^{4,5} 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, taking the discoveries made in the lab to the market place is essential to implementing the solutions we need, and scientists have a key role to play here.⁶

During the presentation some examples and various ideas will be shared to accelerate the discovery and application of chemistry breakthroughs that, hopefully, will ignite a thriving and constructive discussion.

References

1. Serrano Torregrosa, E.; Garcia Martinez J. *The Chemical Element: Chemistry's Contributions to our Global Challenges*, WILEY-VCH, 2011
2. Garcia Martinez J. This is how we save the planet, *The Washington Post*, February 14, 2013
3. Garcia Martinez J. The four elements of modern chemistry, *The Washington Post*, November 25, 2011
4. Serrano Torregrosa, E.; Garcia Martinez J. *Chemistry Education: Best Practices, Opportunities and Trends*, WILEY-VCH, 2014
5. Atkins, P.; Garcia Martinez J. A Perspective on Chemistry Education, *Chemistry International*, 8-14, July-August, 2015
6. Garcia Martinez J., The Third Way: Becoming an Academic Entrepreneur, *Science Careers*, March 20, 2014