

Interview with Prof. Roger A. Sheldon at the “International IUPAC Conference on Green Chemistry”, held in 24-29 August 2012, in Foz do Iguaçu, Brazil

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Prof. Sheldon was born in Stapleford, near Nottingham on June 24, 1942.¹ He is currently Emeritus Professor of Biocatalysis and Organic Chemistry at Delft University of Technology in the Netherlands. He is also CEO of the spin-off company CLEA Technologies, which he founded in 2002. Prof. Sheldon's research focuses mainly on catalytic oxidation, biocatalysis and green chemistry. He introduced the E-factor concept² that has played an important role worldwide in the development of the pharmaceutical and chemical industries, which are becoming increasingly aware of the problems of waste generation in chemicals manufacture. Since then, as a *green knight*, he has been publicizing around the world the importance of Green Chemistry.

He presented a plenary lecture at the 4th ICGC (International IUPAC Conference on Green Chemistry) held at the end of

August, 2012 in Foz do Iguaçu - Brazil. He kindly gave *Revista Virtual de Química* an interview.

RVq: *Do you believe that biomass can substitute oil for the generation of fine chemicals?*



RAS: *Yes but, more importantly, I believe that biomass will substitute oil for the production of bulk chemicals in the near future.*

RVq: *Organic synthesis has advanced tremendously in its methodologies. Are the most important organic chemists thinking their multi-step syntheses with the green philosophy?*

RAS: *Some are but not all. We need to get all of the*

most important organic chemists (and also the less important ones) thinking in this way.

RVq: *As you said in your conference, some undergraduate books still teach “old version of several reactions”. How could we change this situation?*

RAS: *By paying more attention to Green Chemistry in education. It is important to get the principles and examples of GC into undergraduate textbooks.*

RVq: *Could you please give us some of your insights about the future of organic chemistry?*

RAS: *As I noted above, I believe that advances in the various sub-disciplines of catalysis - homogeneous, heterogeneous, organocatalysis and enzyme catalysis - will play an important role in bringing organic synthesis up to a new level of sophistication and sustainability. In particular, advances in synthetic biology will enable new advances in organic synthesis.*

Interdisciplinary approaches, e.g. the development of chemoenzymatic processes will also be important. The widespread use of flow chemistry in organic synthesis, on both a laboratory and an industrial scale will afford greener, more efficient processes.

Referências bibliográficas

- ¹ A profile of Roger A. Sheldon, *Green Chem.*, **2004**, 6, G55. [[CrossRef](#)]
- ² Sheldon, R. A. *Chem. Ind. (London)*, **1992**, 903.

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