

# Progress in Green Chemistry

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Chemistry is perceived by the society as the chemical industry. This wrong position leads to identify this fundamental science, which has the mission to produce benefits to mankind, as a pollutant tout court. To reduce pollution, however, it is not necessary to decrease the production of chemicals, but to alter it – which is precisely the aim of Green Chemistry.

Green Chemistry attempts to design new, environmentally more benign ways to manufacture products. Chemists reduce or eliminate the use and generation of hazardous substances throughout the production process. For instance, in synthesising a chemical, sometimes a toxic organic solvent can be replaced by water or other less dangerous solvents. Or a production process can be altered to use less energy; or green, sustainable energy sources can be drawn upon.

Green chemistry was established in the early 1990s and has now gained a strong foothold in both industry and academia. Today one finds journals, graduate programs and summer schools on Green Chemistry; there are Green Chemistry committees or programs in all major associations of chemists, Green Chemistry Institutes and conference series.

Specifically, just a few months ago in Victoria, Canada, the G8 Ministers of Research and Education founded the **“International Green Network”**, which aims to improve the coordination and research in all fields of Green Chemistry. In fact, different parts of the World ask chemistry to get involved in their problems - differently, but all relating to green chemistry - which range from the utilization of the natural resources, to fight drought, to the decontamination, to improve the competitiveness through a cleaner production, to intervene in Climate Change.

The **European Technology Platform for Sustainable Chemistry** seeks to boost the competitiveness of the European Industry by strengthening chemistry, biotechnology and chemical engineering research and development in Europe. It is a joint initiative of Cefic, EuropaBio and the European Commission's DG Research. Furthermore, the relation between Green Chemistry and the new EU regulatory framework for chemicals (REACH) will be reported. Green Chemistry in fact is the natural answer to health and environment demands.

The collaborations between scientific and industrial research, and the dissemination of the principles of Green Chemistry in developing Countries are the topics also of the recently established Mediterranean Green Chemistry Network (**MEGREC**).

International cooperation is in fact of central importance: there are worldwide demands for the expertise of Green Chemistry, concerning issues such as cleaner production, the use of the natural resources, the fight against droughts, decontamination, or intervention in climate changes.