



Title 405

Professor Roald Hoffmann, Nobel Laureate 1981, is a Member of the ISR Editorial Board and now the most interdisciplinary chemist I know. Born in Poland, he went to the USA in 1949, and since 1965 has been Professor at Cornell, holding the two chairs of Humane Letters and 'Applied Theoretical Chemistry' as he likes to call it. His published poems and his books like *Chemistry Imagined* and *The Same and Not the Same* are full of the Scientific Temper and in praise of chemistry. *Photograph by Courtesy of Eva B. Hoffmann.*

Like many other chemists of my generation, I deeply regretted that my own academic subject, Chemistry, had been unjustifiably denigrated. I therefore decided that my last major contribution—before retiring from the Editorship which I had enjoyed for 20 years—should be devoted to a vindication of Chemistry. I published it in June 1996, my last ISR article as Editor.

Chemistry began when men and women learnt to master fire, a dangerous agent unless carefully controlled. But ever since then, a continuous improvement of our life on Earth can be traced, in which chemistry has been rightly considered the chief agent for this progress. Although the cry “return to the good old days before pollution” is still heard, no one wishes to go back to the smoke—filled cave and live without anaesthetics, without pharmaceutical drugs to remove pain, and without birth control pills, without cheap fuel to drive cars, without soap and detergents, without the safe preservation of food, without central heating and air conditioning—such a life is today unthinkable for the affluent West. ‘The good new days of the West’ remains the most desirable progress for thousands of millions who cannot as yet benefit from these fruits of chemical discovery.

I discussed ‘evil chemistry’ in my ISR review, the use of poison gas by Germany in World War I and in 1983 by Iraq [Title 159], the use of chemical defoliants by the USA in the Vietnam War and the shocking use by Japanese terrorists in 1995 of the nerve gas sarin in the Tokyo underground system. Equally ‘evil’ is to my mind the use of chemical knowledge to extract, prepare and refine hallucinogens, narcotics and synthetic drugs, which I called *Religion’s chemical Surrogates*. [See ISR Vol 15 (2), p.97, 1990 and Title 373]. The only possible chemical answer to the worldwide drug menace, is the synthesis of a ‘Soma’, as Aldous Huxley called it in *Brave New World*, an ideal stimulant without undesirable after-effects, a ‘socially-sanctionable drug’ as Matthew Huxley, son of Aldous, proposed. [See ISR Vol 1 (1), p. 176, 1976 and Title 264]

I also discussed ‘disaster chemistry’, the explosions which have—and will—occur when basic precautions are not applied, when a chemical production plant is not in perfect condition, and when operatives are not highly trained. When an accident has occurred, a highly efficient and fully trained rescue service must be instantly available, if a minor incident is not to become a major accident. [Title 292]. I called these conditions the sequence of the ‘Implacable Law’ [see Title 343] of all high-technology disasters and I gave a table of recent chemical disasters. [See ISR Vol. 21, No 2, p. 133] The worst of all was the escape of methyl isocyanate gas from a Union Carbide plant at Bhopal in 1984, killing 2500 people and injuring a quarter of a million. In comparison the other chemical disasters killed perhaps ‘only’ a few hundred. [Title 343].