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## EDITORIAL

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### 6. Freiburg Symposium, September 2003



As many children, I was fascinated by explosions, smoke and fireworks and I played somewhat dangerously with chemicals. This certainly influenced the choice of chemistry as a profession for many of us. I realized quickly that extensive knowledge is essential to run the expected reaction safely and we all have to work daily to avoid or mitigate any unexpected reaction. For some people, these dangerous characteristics of chemistry contribute to the reputation of our industry, which is seen only as causing fire, toxic releases or environmental pollution, ignoring the many benefits that chemistry and its technical applications have brought to mankind. Although it is generally recognized that zero risk doesn't exist, today's society requests a very high standard of safety. The accident in 2001 in Toulouse, with its extensive damage and deaths, justifies the public concern about chemistry. In most companies HS&E commitments are part of the fundamentals and the corresponding performance is carefully followed by the board. Being chemists and engineers, it is our responsibility to reach a very high safety level in our production units. To accomplish this task, a great number of techniques on how to improve our understanding of chemistry, product characteristics, side reactions, and decomposition rates are available, along with sophisticated equipment and risk assessment methods. Additional knowledge results from incident and near-miss in-depth investigations which should be promoted in our factories (see F. Roessler on hydrogenation). Interpretation of these data requires team work, including safety experts or organizations like the Swiss Safety Institute as partners.

For the Swiss chemical industry, the injury accident rate is near to that of bank services, *i.e.* far below other industries (SUVA statistics). However, we must still strive for further performance enhancements in line with our Sustainable Development and Responsible Care commitments to continuous improvement and zero incident target.

As you will read in this CHIMIA issue, safe process management requires strong involvement of many partners who must work as a team. Below are some new challenges discussed during the symposium:

- Merger, acquisition, toll-manufacturing, organization changes constitute threats: experienced individuals leave the position or the company, taking their know-how with them. Documents and memory are often lost and accidents could reoccur (typical case: tanks are often damaged during emptying or cooling, the vent is too small or closed).
- Some industries call for more and more complex molecules which require dangerous reactants, liquid oxygen, hydrogen, special toxic catalysts, high pressures or temperatures. In all cases, careful design of the process, strict organizational measures, protection of the people and the environment are of course essential (see the papers by J.P. Hagenbuch and I. Obermüller).
- Instructions like basic procedures for inertization, grounding, locked out during maintenance work, working in underground tunnels, have to be repeated again and again and enforced.

I would like to convey my thanks to Prof. Kurt Käser, the main organizer of these valuable multi-lingual Freiburg Symposiums and to the Division Industrial Chemical (DIC) Committee of the Swiss Chemical Society (SCS) for their enthusiasm in preparing such an event: we must learn from the experience of others and sharing Health, Safety & Environmental practices is a total benefit for all of us.

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