

EDITORIAL

The Academic Polymer Scene in Switzerland

Towards the beginning of the last century, the concept of giant molecules evolved [1–5] created by Pickles [1] and very decisively and convincingly promoted by Staudinger [3] (then at ETH Zürich) who also gave these strange objects their now common name, 'macromolecules' [6]. These events stimulated an enormous scientific growth in the area of Chemistry and Physics of macromolecules and polymers, albeit for quite some time without considerable contributions from Switzerland since Staudinger had accepted a position in Freiburg i. Brg. in 1926. It took several decades until strong academic interest in macromolecular substances returned to Switzerland.

Swiss industry has been active in the production and the processing of polymers almost from the beginning. Today, the materials features of polymers have pervaded every aspect of daily life; we live in and with polymers, they make up a large part of the materials with which we work, and our leisure time is often spent with activities that have only become practical for the general public because of polymers. Consequently, industrial activities are significant (the Swiss plastics industry is estimated [7] to comprise about 800 firms with approximately 25000 employees who generate more than 10^{10} Swiss Francs per year).

Also academic interest is substantial today. Biology has joined Chemistry and Physics in macromolecular pursuits, as it has done in many areas of science, and a significant fraction of molecularly oriented biological endeavor is nowadays on macromolecules.

Medicine has entered the arena early by employing polymeric materials as surgical aids and as implants; now biological and bio-emulated macromolecules are used as therapeutic agents and polymeric materials are applied as active principles or in controlled-release therapy. Consequently, even in a country as small as Switzerland, one will find today an astonishing number of academic research groups involved in macromolecular and polymer research.

It is the aim of this special issue of CHIMIA to give an overview of the academic polymer scene in Switzerland. To list all researchers who use polymers in their daily life would lead to too large a catalogue; we focus our attention instead on researchers who have the macromolecule and its structure and behavior, or the polymer and its properties at the center of their activities. The resulting collection of 25 contributions nevertheless spans a very wide range of interests. No attempt at classifying or structuring the collection has been made but the sequence is such that (in my view) adjacent papers share considerable overlap in point of view, methods, or field of study.

This collection is an outgrowth of a meeting organized by the Polymer Group of Switzerland (PGS) and held on October 20, 2000 at ETH Zürich. I would like to thank all contributors for their willingness to provide a manuscript at such short notice and CHIMIA for publishing them in one issue.



Ulrich W. Suter
Department of Materials
ETH Zürich

- [1] S.S. Pickles, *J. Chem. Soc. (London)* **1910**, 97, 1085.
[2] H. Staudinger, 'Die Ketene', Ed. F. Enke, Stuttgart, **1912**, p 46.
[3] H. Staudinger, *Schweiz. Chemiker Ztg.* **1919**, 1–5; 28–33; 60–64.
[4] H. Staudinger, *Ber. Dtsch. Chem. Ges.* **1920**, 53, 1073.
[5] H. Staudinger, J. Fritsch, *Helv. Chim. Acta* **1922**, 5, 785.
[6] H. Staudinger, *Ber. Dtsch. Chem. Ges.* **1924**, 57, 1203.
[7] *Neue Zürcher Zeitung*, Ressort Wirtschaft, **2001**, 7 (10. Januar), 21

The Editorial Board of CHIMIA expresses its warmest thanks to the coordinating guest editor Prof. Dr. Ulrich W. Suter for his efforts in planning and efficient realization of the present overview on 'The Academic Polymer Scene in Switzerland'.