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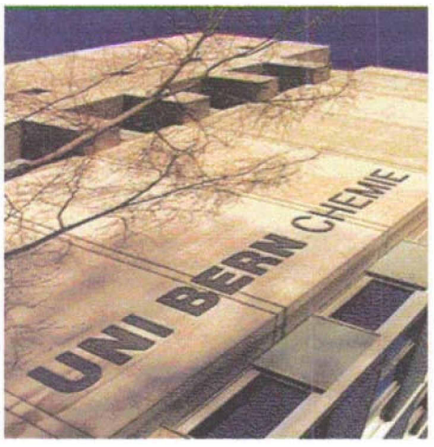
EDITORIAL

The Department of Chemistry and Biochemistry of the University of Bern

'Chemistry in Bern' was the headline on the cover of the first issue of CHIMIA for 1991. This issue was dedicated to research in chemistry, mainly at the university, on the occasion of the 100th anniversary of our local chemical society, the *Berner Chemische Gesellschaft*. It was at the same time a tribute to a more than 120-year-old tradition as a place for chemical education and research. While I was browsing through this issue of CHIMIA I realized how many of the faculty's research groups and how much of the research areas, of the educational curricula, and at the organizational level have changed within this short period of only ten years. It is therefore with pleasure that the *Department of Chemistry and Biochemistry* takes this opportunity to update the readers of CHIMIA, portraying our newly evolved institution and latest research *Made in Bern*.



Our Mission

Modern society depends critically on new developments in the natural and life sciences. On one hand our rapidly evolving technologies need new and advanced materials, from optical and electronic devices in communication technology to efficient catalysts employed in large-scale chemical processes, in order to comply with the requirements of tomorrow's society, and with respect to a sustainable development and care of our natural environment. On the other hand there exists an open challenge to secure and improve human and animal health and food supplies. Chemistry with all its facets, from its basic capabilities of resolving and modeling complex biological phenomena on the molecular level, its unique creativity in the synthesis of drugs and materials, and with its analytical power, plays a pivotal role at the interface between physics, biology, and medicine. All faculty members of this department are joining forces to maintain, strengthen and evolve the high scientific quality of research and education in Bern to meet these challenges. The Department will rigorously follow a policy to promote research on an internationally competitive level.

Our Organization

Teaching and research emphasize the importance of a unified approach supported by an appropriate organizational structure. Thus the traditional separation into the institute of biochemistry, institute of inorganic, analytical and physical chemistry, and the institute of organic chemistry as an organizational form seemed inappropriate. Consequently the three institutes merged in 1996 into one Department of Chemistry and Biochemistry. This reorganization, which was elaborated by the chemistry faculty under its own initiative, received enthusiastic support from an external reviewing committee assessing the scientific quality and the proposed strategy.

Today the Department of Chemistry and Biochemistry hosts 21 senior and junior research groups and is home to *ca.* 200 undergraduate, graduate and post-graduate students and *ca.* 20 staff members in science and administration. The research groups constitute the heart of the institution. Analytical services such as NMR, MS, protein sequencing, electron microscopy *etc.* were reorganized and are constantly upgraded with respect to instrumentation to meet the high standards of today's research. They are grouped under the name ARS (Analytical Research and Services), and are also available to a wider public. This infrastructure is essential for the research groups to successfully compete for research grants. Scientific cooperation is not only important within the department. Most of our group leaders are actively engaged in programs collaborating with foreign universities or other research institutions. Students from other universities are most welcome as PhD candidates. Our research greatly benefits from postdoctoral fellows from abroad and from research colleagues spending some time as sabbatical guests in our department.

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Our Research

Half a decade ago the three chemical institutes in Bern were facing the situation that, due to retirements, almost 50% of the faculty positions would become vacant within a period of five years. This unique situation was taken as an opportunity to reorganize its research profile. The chemistry faculty decided to follow a coherent policy in the appointment of new group leaders as to strengthen activities on the two principal topics:

- Chemistry of New Materials
- Chemical Biology

These two main areas of research are supplemented by fundamental topics of physical chemistry, thus offering a comprehensive and up-to-date curriculum. In addition, we are the only chemistry department in Switzerland where research and training in nuclear chemistry is carried out. This important branch of chemistry is pursued in close collaboration with the Paul Scherrer Institute.

Our Education

On the educational level, the chemistry curriculum has been reorganized and adapted to European Standards (ECTS Standards) allowing for increased national and international mobility. All major disciplines in chemistry (including biochemistry and cell biology) are taught on the undergraduate and graduate level. As part of the curriculum the students are trained in peripheral fields as *e.g.* in the economic and law sciences. Our curriculum is under constant adaptation to account for new developments as *e.g.* the implementation of the *Bologna Declaration* (introduction of the masters degree to synchronize our curricula with that of the Anglo-Saxon countries). Many of our group leaders are also involved in post-graduate education programs. The activities of the 3ème cycle, to which Bern is linked, are an integral part of this program. Furthermore a new course in biochemistry was created to meet the demand of our high-school graduates. With the start of this winter semester (2001) students in Bern can not only major in chemistry but also in biochemistry.

The following pages containing communications from our department will give you an overview on specific research topics actively pursued in our department. More information on organization, research, teaching and related activities are available on our homepage at *http://dcbwww.unibe.ch*

Enjoy reading!

Prof. Christian J. Leumann