

Biotechnology for Industrial Production of Fine Chemicals

EDITORIAL

As a key technology of the future, biotechnology is expected to increasingly replace some of today's manufacturing procedures and to provide new useful products. The fine chemicals market, especially the pharmaceuticals and agrichemicals market, asks for specifically functionalized organic chemicals and for optically active products. In such a market, biotechnology has a lot to offer since biotechnical processes are highly specific with respect to the substrates they accept, the reactions they catalyze and the products they form. This is due to the characteristic properties of enzyme mediated reactions such as substrate specificity, reaction specificity and stereospecificity. Also with respect to environmental protection which is a serious concern in the manufacture of fine chemicals, biotechnological processes compare favourably with chemical processes thanks to the mild reaction conditions under which they occur.

Nevertheless, comparing estimated business opportunities with actual sales generated by biotechnical processes, one arrives at the conclusion that biotechnology is still far from exhausting its full potential.

In order to improve this situation, a critical assessment of the achievements, the potential and the limits of biotechnical production processes is needed. It is the aim of the 'International Conference on Biotechnology for Industrial Production of Fine Chemicals' (Zermatt, September 29–October 2, 1996) to contribute to such an assessment for the life science industries. Unlike the last conference organized in Zermatt 1990 entitled 'International Conference of Continuous Bioprocesses for Proteins and Fine Chemicals', the focus of this conference is on low molecular weight biotechnology products and thus excludes proteins, peptides and monoclonal antibodies.

The program of this Conference is organized in four sessions entitled 'New Industrial Applications', 'Novel Process Technologies', 'Search for New Biocatalytic Activities and Compounds' and 'Commercial and Regulatory Aspects of Fine Chemicals and Biotechnology'. Experts from academia and industry have been invited to present practical aspects of new bioprocesses such as screening for novel biocatalysts and metabolites; metabolic pathway engineering for economic production of fine chemicals; design, control and development of biotechnical processes as well as economic and regulatory considerations of bioprocesses.

Sponsors of this Conference are the Swiss Coordination Committee for Biotechnology, the New Swiss Chemical Society, the Swiss Association of Engineers and Architects, the Swiss Chemical Industries of Basel and the Swiss National Science Foundation.

The present issue of CHIMIA contains the extended abstracts of the oral presentations given during this Conference. The organizing committee would like to thank all the authors and Prof. C. Ganter, Editor of CHIMIA, for the pleasant collaboration and for their efforts to realize this special issue and acknowledges gratefully the support obtained from the sponsors.

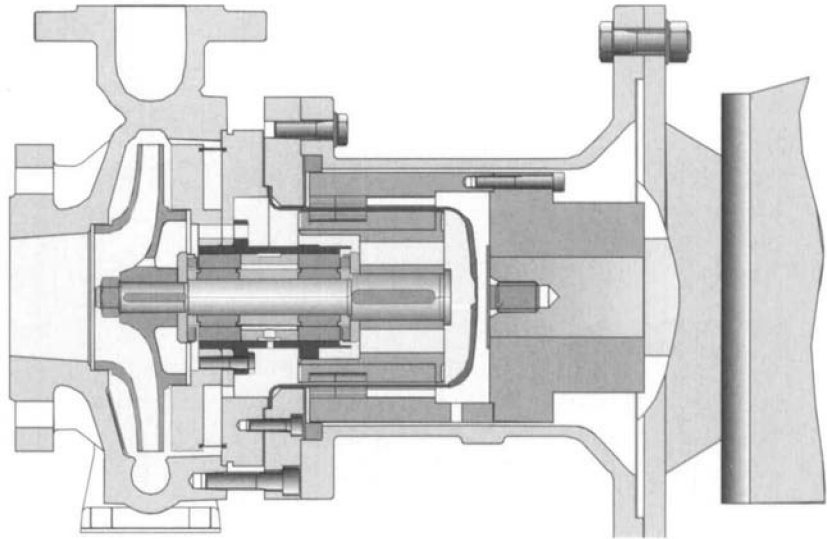
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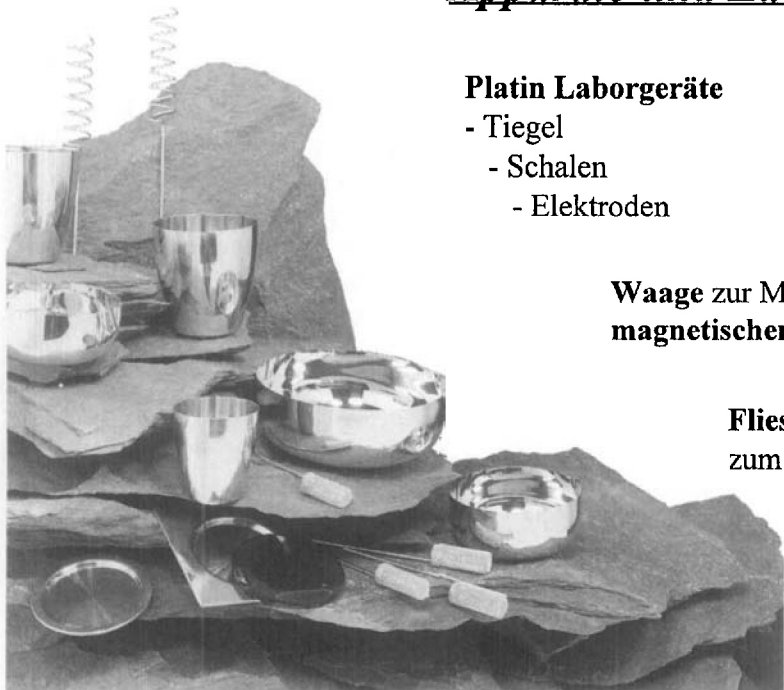
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