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Progress in Analytical Ultracentrifugation

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Preface

Since the first symposium, which was organized by D. Riesner at the Technische Hochschule Darmstadt in 1978 six further meetings have taken place in Germany. Up to now the aim was to join different teams working in various fields of analytical ultracentrifugation. The field includes general theory, applications for basic research problems in biochemistry, biophysical chemistry, macromolecular chemistry and colloid chemistry.

As a modern analytical instrument has to be equipped with on-line registration techniques concerning all measurable quantities like for instance optical properties in the visible, IR- and UV-range this development has been advanced mainly by different groups in the last years. This includes also the possibilities to work with multichannel rotors to broaden the use of this important analytical method especially in the industrial application. Although there is a need for analytics of macromolecules since long time an universal modern analytical ultracentrifuge is not yet on the market. The conference at Duisburg was characterized by the opening of a mainly European conference to all users in the world thus enabling informative and stimulating discussions and the enhancement of contacts between different groups of various countries. Thanks to the efforts of the organizers the

number of about 20 participants in the last years could be increased up to 60 despite the travel restrictions due to the Gulf War.

The contributions from the recent conference are opened by a historical paper of one of the pioneers in ultracentrifugation and close up with an outlook for future analytical requirements. At this meeting the emphasis of applications of ultracentrifugational techniques is in the field of biochemistry. Therefore we are glad that Prof. Dr. D. Schubert agreed to write a survey article concerning this area which is the first contribution of the biochemical section. A second section is devoted to technical developments of detection systems and progress in the analytical application to synthetic polymers. The last section concerns ultracentrifugation of gels and emulsions.

The 7th symposium was kindly sponsored by Bayer AG (Leverkusen), Henkel KG aA (Düsseldorf), Hüls AG (Marl) and especially by Beckman Instruments GmbH (München) by which the newest analytical ultracentrifuge was presented at Duisburg. The forthcoming of this issue was made possible by the enduring assistance of Dipl.-Chem. Helmut Cölfen.

W. Borchard (Duisburg)

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