

Schalkhammer, T.G.M. (ed.): **Analytical Biotechnology**. – Birkhäuser Verlag, Basel – Boston – Berlin 2002. ISBN 3-7643-6589-7. 331 pp., €125.23, sFr 194.00.

This book focuses on modern analytical biotechnology that provides contemporary tools for genomics, proteomics, metabolomics, screening, and analysis of natural products. It is designed to cover all areas of bioanalysis and to support and teach the fundamental principles and practical uses of major instrumental techniques. Fundamentals in analytical biotechnology include basic and practical aspects of characterizing and analyzing DNA, proteins, and small metabolites. The book provides a clear sense of where each technology is used and how to implement most effectively each technology for characterizing and analyzing biomolecules.

The book is divided into nine chapters. It starts with familiar techniques providing the chemical basis and understanding of how to bind molecules to surfaces and how to analyze chemical surface groups (Immobilized biomolecules in bioanalysis). Basis, principles and examples of fluorescence techniques are described in the second chapter. This is also the only chapter where

among selected applications a direct use in photosynthesis research is mentioned (chlorophyll measurements and algae monitoring). Immunoanalytical methods and immunological strip tests are the main topic of following chapters starting with basic principles and immunoassays. Biosensors, Biochips, Nano-clusters and colloids, and Atomic Force Microscopy are the chapters introducing novel techniques, which may be used for the identification and characterization of cells and biomolecules.

Each chapter consists of contents, basic principles, and references. The practical information at the application stage is outlined in numerous and very useful protocols, associated with helpful information. The book is for better orientation supplied by an Index and also by Guide to solutions and protocols.

In summary, the book is of most interest to researchers, from PD students upwards, who are interested in study of plant cell biology. They can find here useful protocols for their own research.

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