



Book Review

Near-infrared applications in biotechnology

R. Raghavachari (Ed.); Marcel Dekker Inc, New York, USA, 2001, xvi + 382 pages, ISBN 0-8247-0009-0, US\$ 165.00

The near-infrared region interfaces the visible and infrared portion of the electromagnetic spectrum. The importance of this region is becoming more recognised in biotechnology and is still in its early stages of development. This practical series compiled by experts in the field examines the recent information on current near-infrared applications (NIR) diagnostic techniques.

This volume is split up into two parts: part A consists of the applications based on near-infrared fluorescence and part B covering the applications based on near-infrared absorbance. The opening chapters give an introduction and some fundamental aspects of fluorescence which is relevant in the many applications in the proceeding chapters. Chapter three highlights the sensitivity of NIR dyes. Further chapters four to seven examine the applications based on NIR in bioanalysis of immunoassays, DNA sequencing, medicine and single-molecule detection and using fluores-

cence lifetime. Although the latter two may seem theoretical, in fact they also have much potential in biotechnological applications. More recently progress has developed for NIR application in polymers (chapter nine). The final chapter of part A goes beyond biotechnology and into popular technology. Chapter eleven of the second part examines the fundamentals of NIR spectroscopy. Chapters eleven to thirteen discuss the biomedical and pharmaceutical applications of NIR.

This informative publication contains references at the end of each chapter and questions and answers to important fundamental questions. It is an essential reference tool for spectroscopists; analytical, organic, medicinal, and pharmaceutical chemists and biochemists; biotechnologists.

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