beam analysis techniques and equipment. The activities of the Society should promote this branch of science and stimulate technical and scientific developments on a European scale. In order to achieve these goals the Society will be active in the development and operation of technical and scientific education programs. Further the Society will stimulate communication and cooperation between scientists and will try to act as a counselling agent for its members whenever there is a general interest to promote. The Society is operated on a non-profit basis and is run by an Executive Board which is assisted by an international Advisory Board.

The Secretary is Professor Dr R. Gijbels, Department of Chemistry, University of Antwerp (UIA), B-2610 Wilrijk-Antwerp, Belgium, to whom requests to join the Society and receive its newsletter, or inquiries about the Society, should be directed.

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Nobel Prize for Chemistry

Dr J. Deisenhofer, Howard Hughes Medical Institute, Dallas, Texas, USA, Professor R. Huber, Max-Planck-Institut für Biochemie, Martinsried, Federal Republic of Germany, and Dr H. Michel, Max-Planck-Institut für Biophysik, Frankfurt/Main, Federal Republic of Germany, have jointly been awarded the 1988 Nobel Prize for Chemistry by The Royal Swedish Academy of Sciences for their work on the determination of the three-dimensional structure of a photosynthetic reaction centre.

They were the first to succeed in unravelling the full details of how a membrane-bound protein is built up, revealing the structure of the molecule atom by atom. The protein is taken from a bacterium which, like green plants and algae, uses light energy from the sun to build organic substances. All our nourishment has its origin in this process, which is called photosynthesis and which is a condition for all life on earth.

The organic substances serve as nourishment for both plants and animals. Using the oxygen in the air, they consume these nutrients through what is termed cellular respiration. The conversion of energy in photosynthesis and cellular respiration takes place through transport of electrons *via* a series of proteins, which are bound in special membranes. These membrane-bound proteins are difficult to obtain in a crystalline form that makes it possible to determine their structure, but in 1982 Hartmut Michel succeeded in doing this. Determination of the structure was then carried out in collaboration with Johann Deisenhofer and Robert Huber between 1982 and 1985.

Photosynthesis in bacteria is simpler than in algae and higher plants, but the work now rewarded has led to increased understanding of photosynthesis in these organisms as well. Broader insights have also been achieved into the problem of how electrons can, at enormously high speed, be transferred in biological systems.

Book Reviews

Works intended for notice in this column should be sent direct to the Book-Review Editor (R. O. Gould, Department of Chemistry, University of Edinburgh, West Mains Road, Edinburgh EH9 3JJ, Scotland). As far as practicable books will be reviewed in a country different from that of publication.

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Morphology of crystals: Part A (Series in materials science of minerals and rocks). Edited by I. SUNAGAWA. Pp. xxii+365. Dordrecht: Kluwer Academic Publishers, 1988. Price Dfl 220.00, US$ 99.00, £74.00.

Crystal morphology is a relatively easy property to observe and describe, but it is much more difficult to understand and explain, since it results from an interplay of structure, thermodynamics and kinetics. In this book, the first of a series of three, a group of outstanding scientists, well known to most people interested in crystal growth, have each written a chapter on a particular morphological topic. They are: P. Bennema and J. P. van der Eerden (Crystal graphs, connected nets, roughening transition and the morphology of crystals); R. Kern (The equilibrium form of a crystal); A. A. Chernov and T. Nishinaga (Growth shapes and their stability under anisotropic interface kinetics and theoretical topics for solution growth); P. Hartman (Modern PBC theory); and I. Sunagawa (Surface microtopography of crystal faces).

These chapters cover the fundamentals of crystal morphology quite well. When several authors make individual contributions to a book, there is a risk of inhomogeneity and overspecialized treatments. The former is more evident in this book than the latter. Kern's chapter on equilibrium forms is very important, since the subject has not often been treated in recent literature. However, the chapter is significantly longer than the others and is in some places rather difficult reading; in particular, I feel a little uneasy about some of the thermodynamic considerations. Hartman's chapter on PBC theory is closely related to that of Bennema and van der Eerden, and I would have found it more logical if it had come first. The chapter by Chernov and Nishinaga on growth shape stability, unlike the others, contains no experimental illustrations; these have to be looked up in the literature cited. Otherwise, the treatment is clear and logical, and the theory should prove useful in practice. Finally, Sunagawa's chapter on surface microtopography is the shortest one and is more of the character of a survey than are the others. The subject is, however, crucial to the understanding of crystal growth and dissolution kinetics.

The reader of this book should be familiar with the principles of crystallography (geometrical, structural and physical) and crystal growth theory, and should possess some basic knowledge of graph theory and differential geometry.