

Growing crystals

Crystal Growth: Theory and Techniques, vol. 1. Edited by C. H. L. Goodman. Pp. ix+300. (Plenum: New York and London, 1974.) \$33.60.

A FEW years ago essentially only one textbook on crystal growth existed. Today we have a wide choice, particularly as the assembly of a few miscellaneous articles between hard covers frequently masquerades as a textbook. An addition to both categories might be expected to cause only a slight shudder; in fact I found the present volume to be interesting and rewarding.

The articles, ably selected and edited, cover two subjects that have received little previous attention, and two that are both topical and important. The rapid development in crystal growth in recent years has forced redundancy on some of the earlier books on the subject and the appearance of comprehensive reviews aimed at a suitably high level is not only desirable, but perhaps essential if a new generation of crystal growers is to evolve.

The first section, dealing with 'Mechanisms in Vapor Epitaxy of Semiconductors' is adequate but pedestrian. This is compensated for by the excellent content and range of the section entitled 'Principles of Vapour Growth', by E. Kaldis. His *tour-de-force* includes recent work on transport theory, practical techniques and growth data. Kaldis has assembled

much useful and interesting information which makes the purchase of the book worthwhile for this section alone.

Travelling solvent techniques are dealt with by two workers who have pioneered these processes and who have achieved some remarkable successes. Although many of the materials dealt with can be grown by other methods, the preparation of large crystals of calcite has demonstrated the possibilities of the technique for a production process. Its wide applicability makes it useful as a research tool for both bulk and thin layer single crystals.

The final article deals with refractory metal crystals. Although specialised, useful information is given on techniques which are possibly not familiar to many crystal growers; the section is worth reading by all.

The book has restored my faith in current publications. I await the appearance of further volumes in this series without trepidation.

E. A. D. White

Reproductive aspects

Physiology and Genetics of Reproduction. Parts A and B. (Basic Life Sciences, vol. 4.) Edited by Elsimar M. Coutinho and Fritz Fuchs. Part A: Pp. xxi+417. Part B: Pp. ix+454. (Plenum: New York and London, 1974.) \$38.50 each.

THESE volumes report the proceedings of an International Symposium on

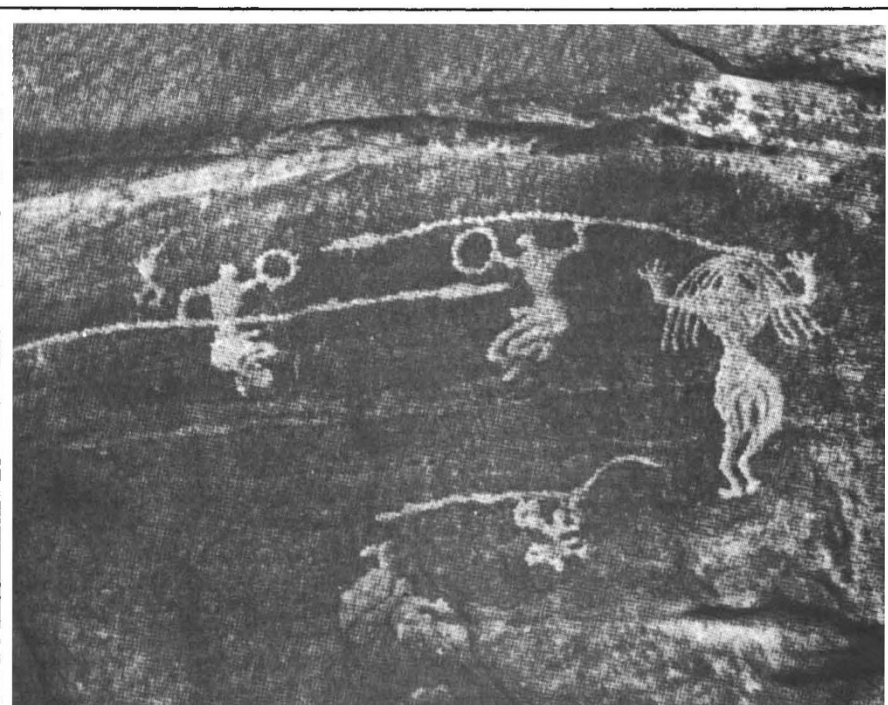
"Physiological and Genetic Aspects of Reproduction", held during December 1973 in Salvador, Brazil, to integrate knowledge of genetics and reproductive biology.

The books contain more than 50 articles covering a wide range of topics. Part A begins with a review on changes in reproductive life-span, the relationship between parity and breast cancer, and the thought-provoking concept that women in 'primitive' societies would normally have been pregnant or lactating and that, therefore, menstruation may be a 'disease' of modern society. The remainder of this volume is subdivided into four sections. The first deals with chromosomal structure and function, sex chromosome activity in germ cells, and chromosomal errors related to gonadal dysgenesis. The second section is concerned with the molecular basis of hormone action, and the third section reviews the control and inhibition of spermatogenesis, the effects of γ rays, and sperm structure and biochemistry. Finally, there are considerations of the role of the central nervous system; releasing hormones; protein synthesis in the egg; follicular growth, ovulation induction, luteinisation and steroidogenesis; and control of the menstrual cycle.

The second volume also contains four sections, the first of which examines structural and biochemical changes in spermatozoa, eggs and oviducts; species specificity in egg-sperm interaction; and inhibition of fertilisation with specific antibodies. Section 2 considers control of contractility in male and female reproductive ducts (ejaculation, tubal transport, uterine movements, and so on), and Section 3 reviews implantation, decidualisation, embryonic development, and chromosomal abnormalities in human abortions. The final section discusses the control of luteal function, foetal and maternal hormones in pregnancy, uterine activity, and parturition.

The broad scope of these books ensures that they will be of interest to a wide audience, especially as a high proportion of the chapters consist of reviews. The main criticisms apply generally to conference proceedings: some topics are omitted or inadequately covered (oogenesis; contraception) whereas others are repeated in various sections (such as uterine activity). Furthermore, some of the contributions are remarkably similar to others by the same authors published elsewhere. By far the most serious criticism is that the discussions which followed each paper at the symposium have been omitted from the proceedings: such comments are sometimes more useful and thought-provoking than the articles themselves. In spite of these criticisms, however, the books provide a clear insight into a wide variety of fields.

T. G. Baker



Hunters engraved in rock. From *Rock-Art in Central Arabia*. Vol. 4: *Corpus of the Rock Engravings*, Parts III and IV. Pp. 262. (Institut Orientaliste de l'Université Catholique de Louvain: Louvain-la-Neuve, 1974.) n.p.