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DYES and PIGMENTS

Book review

***Color for Science, Art and Technology*, Nassau (Ed.); Elsevier Science BV, Amsterdam, 1998, 491 pp, ISBN 0444 89846 8, US$132.00**

Of the numerous textbooks which have appeared on the market in recent years on various topics in colour science and technology, this book stands out in the way that it adopts a refreshingly different approach to the subject material. It has the aim to assemble a series of chapters written by experts in their respective fields covering the basics of colour, but it is unusual, and in a sense rather ambitious, in that it encompasses a breadth of topics not normally encountered in texts of this type. There is a clear objective to provide the reader in a single textbook with information not only of relevance to his own specialist interest in colour, but also in aspects of colour outside his field of expertise, utilising colour as a bridge between science and technology and the arts. As might be expected from a multi-author text of this type, there is a diversity of styles adopted by authors from different disciplines, but in most cases the topics are treated at a conceptual level beyond simple coverage of the fundamental principles. In this way, the specialist and the non-specialist, from whatever discipline, should find information of value in each chapter. No doubt the dilemma for each author would have been striking a balance between providing a depth of treatment of the concepts which is desired by the specialist, yet at the same time is acceptable to the non-specialist.

The book comprises 15 chapters divided into three sections. The first of these sections is concerned with the science of colour, and deals with the essential physical, mathematical and biological concepts. The section contains chapters on the fundamentals of colour science, the measurement of colour, colour vision and concludes with a chapter entitled the "Fifteen causes of colour", which provides an excellent overview of the different ways in which colour can originate. The second section is concerned with colour in art, culture and life, and comprises five chapters which address colour in abstract painting, colour in anthropology and folklore, the philosophy of colour, colour in plants, animals and man and the biological and therapeutic effects of light. The final section deals with colorants, the preservation and reproduction of colour. This section includes chapters on the basic chemical principals of organic and inorganic pigments and dyes, on colour preservation, and three chapters on aspects of the modern technology used in colour reproduction including colour imaging, colour encoding in the Photo CD system and colour displays.

This textbook provides an admirable multi-disciplinary approach to the basis of colour, demonstrating how it pervades all aspects of our life. It is, by necessity, selective in terms of the topics covered and there are numerous colour applications, both traditional and modern, which are either excluded or addressed only peripherally, but the editor produces a reasoned argument for his selection of topics. The reader will discover the answers to many questions on colour which he could find elsewhere, but probably not in a single text of this type. The book is extensively referenced and well-illustrated throughout, including a reasonable number of excellent colour illustrations.

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