Book Reviews

Drops and Bubbles in Contact with Solid Surfaces. Edited by Michele Ferrari, Luberi Liggieri and Reinhard Miller. CRC Press; 2013. 340 p. US $24.95 (Hardcover). ISBN: 978-1466575455.

Drops and Bubbles in Contact with Solid Surfaces is intended to give an overview of the science of wetting. It addresses a variety of current research topics, ranging from electrowetting to nanobubbles and complex fluids. Most of the covered topics are highly relevant to many fields, either because they are active research areas (e.g., nanobubbles, wetting of soft surfaces) or because they address useful techniques and materials that are widely used (e.g., superhydrophobicity and complex fluids).

The book is structured as a series of review articles, with each chapter written by a different group of authors on separate topics. While probably not an undergraduate text, this is a good reference book for an interested researcher with some knowledge about the field. For a complete newcomer to the field of wetting, a suggested prerequisite might be an undergraduate course or a book such as the excellent Capillarity and Wetting Phenomena by de Gennes, Brochard-Wyart and Quere. However, this is not strictly necessary.

For the most part, the book is appropriate to a wide audience. In general, the authors have succeeded in condensing their complex fields into short, readable chapters and providing extensive literature reviews for the interested reader to explore. Chapters typically are structured as an overview of the relevant theory followed by a short review of up-to-date experimental work, making them accessible to authors from a variety of backgrounds. However, one notable exception is the chapter on hydrodynamic interactions between particles at an interface — this is rather mathematical.

One negative point is that the writing in one or two chapters does not appear to have been reviewed by a native English speaker. At times, this made it hard to discern the author’s meaning. This occurs most noticeably in the opening chapter, which is unfortunate, as it is the natural starting point for a browsing reader. Hopefully, this will not put off too many potential readers from delving deeper.

Robert W. Style
Yale University

Color Atlas of Genetics. 4th Edition. By Eberhard Passarge. New York: Thieme; 2013. 475 p. US $54.99 (Paperback). ISBN 978-3131003645.

Color Atlas of Genetics is a handy, pocket-sized companion for any biology or medical student. It aims to provide a coherent overview of the field of genetics, complete with excellent illustrations and concise summaries. Color Atlas of Genetics begins with an introduction section that contains the history of genetics and DNA research accompanied by a detailed chronology of groundbreaking discoveries. While this background is interesting to review, the strong points of the book are in the pages that follow. In particular, the section that comes immediately after the introduction, “Fundamentals,” is a great reference for any student. The subject matter ranges from broad overviews of cellular organelles, composition of proteins, and DNA structure to more specific topics such as parallel DNA sequencing and apoptosis. Each focus topic has a one-page summary (on the left) and a page of diagrams and pictures (on the
Color Atlas of Genetics has many strengths that make it an appealing addition to a student’s bookshelf, whether the student may be in medical school, graduate school, or even an undergraduate. First, the diagrams and colored pictures are well drawn and easy to understand. Some of the best diagrams are those of signaling pathways, which are complete yet not overwhelming, as can be the case with similar drawings found within review journals. The subtopics under “Genetics and Medicine” contain photos of patients to explain phenotypes and detailed maps of the genomic abnormalities underlying the various diseases. In addition, the text of the book is incredibly succinct for the amount of material it aims to cover, without sacrificing the quality of the descriptions. While a professional in genetics may find the information lacking depth, the book serves as a great tool for an individual who only needs a quick reference but may want a little more information than he or she may be able to gain from Wikipedia.

Barbara Schmidt
Department of Molecular, Cellular, and Developmental Biology
Yale University

Reproductive Donation: Practice, Policy, and Bioethics. Edited by Martin Richards, Guido Pennings, and John B. Appleby. Cambridge, UK: Cambridge University Press; 2012. 336 p. US $34.99 (Paperback). ISBN: 978-0521189934.

Since the founding of bioethics, considerable discourse has revolved around human life at some of its most fragile states, namely the beginning and end. Questions about what constitutes personhood and the roles and consequences of technology in these states have been posed and re-examined in light of the startling and impressive scientific developments that resulted in assisted reproduction. On July 25, 1978, Louise Brown was born — the first baby created using in vitro fertilization. Her birth sparked heated debate over a wide range of issues: cloning, separation of sexuality from reproduction, commodification of gametes and embryos, disposal of embryos, embryo ownership, rightful claims of parenthood, and pre-implantation research.

While these issues are being discussed, advances in reproductive technologies enable assisted reproduction to be a feasible option for infertility. This collection of essays delves into some of the issues that surround assisted reproduction, concentrating on reproductive donation involving various permutations of third parties. In reproductive donation, conception of a child “is likely to take place in a clinic with others involved in providing the eggs, sperm, embryo or sometimes the uterus in which the fetus grows” (p. 1). Thus, biological parenthood becomes separated from social parenthood, with the latter commonly recognized as the child’s “actual” parents. The opening chapters lay out the practice of reproductive donation, introducing ethical issues that are detailed in later chapters. The work as a whole is grounded in the U.K.’s policies, and the discussions of how countries regulate reproductive donation are often compared against the U.K. perspective. The last half of the work tackles the social, ethical, and policy issues that reproductive donation raise, including transnational donation, recruitment of donors, intra-family donation, single parents, gay and lesbian couples, disclosure, and identifiable donors.

Overall, the book is well laid out, exploring the topics with sufficient detail and depth for an interested lay reader. Despite the many contributors, the tone is consistently engaging and straightforward, with each chapter neatly presenting the various perspectives and arguments for its selected topic. In crafting their arguments, most of the contributors rely upon empirical studies instead of grounding their claims in philosophical discussion. Using a philosophical framework could bolster their discussions of the issues, allowing