of a one-dimensional monatomic lattice, once the dispersion relation is obtained, the students think that is the end of the game. Questions such as 'Why does the dispersion curve start deviating from linearity at a certain point?' or 'In what manner does the dispersion curve intersect the zone boundary?', do not arise in the minds of the students. Such being the 'reality' in our institutes of higher education, the author is well justified in exhorting the students to 'spend time *thinking about physics* rather than simply *doing* it' which will enable them to delve into the deeper issues and their implications.

Although the book is addressed to students with good undergraduate training in physics, I strongly recommend that our postgraduate and doctoral students and young as well as senior faculty members in colleges and universities go through this book thoroughly.

T. P. SRINIVASAN

Department of Physics,
Madurai Kamaraj University,
Madurai 625 021, India
e-mail: tensor@eth.net

Electron Microscopy in Medicine and Biology. P. D. Gupta and H. Yamamoto (eds). Oxford & IBH Publishing Co Pvt Ltd, 66, Janpath, New Delhi 110 001, India. 2000. 204 pp. Price: Rs 950. ISBN 81-204-1374-1.

Science has always been driven by technology and instrumentation. The electron microscope, for the last four decades, has been a popular and powerful tool to study the subcellular and macromolecular structure and has contributed to substantial advances in biology and medicine. Its versatility is evident from the fact that it has been possible to combine its use with immunohistochemistry as well as molecular biology and molecular genetics, besides advances in its own technology for study of elements and 3D visualization of subcellular structures. It is, therefore, probably not inappropriate to have a book on electron microscopy in medicine and biology in the present times.

The book, based on a conference and an Indo-Japanese symposium at Hyderabad in 1998, has a varied collection of chapters that span a wide range of topics dealing with basic and applied sciences. The volume covers technological advancements, plant and animal cell biology, membranology, chromosomes and nuclear organization, pathology of diseased tissues and cancer biology. The chapters on nuclear spatial organization, stereoscopic ultrastructure of cell nucleus and chromosome, as well as organization of gut-associated lymphatic tissue have some very remarkable photographic illustrations. The chapter on development of non-carbon support films for observing carbon images of biological materials is useful. The chapters in medicine and pathology which discuss mechanism of graft healing, primary epithelial amyloid keratopathy, neuropathy in tuberculoid and lepromatous leprosy as well as inherited metabolic neurologic disorders, make interesting reading. Ultrastructural features to clinch accuracy in diagnosis of mesotheliomas and changes in sarcoma cells following mitomycin and gamma radiation have also been discussed. Terpenoid secreting cells of neem and actinorhizal nodulation in *Casuarina equestifolia* form the topics of discussion in plant science.

Through a wide coverage of topics, the role of electron microscopy in interdisciplinary science along with other microscopical and technical approaches has been brought out. To this extent the book has been successful.

However, like most multiauthor books, the standards of this one are also variable. The book might interest those working in the very specific areas dealt with in the book.

SHASHI WADHWA

Department of Anatomy,
All India Institute of Medical Sciences,
Ansari Nagar,
New Delhi 110 029, India
e-mail: shashiwadhwa@hotmail.com

Should We Risk It? Exploring Environmental, Health, and Technological Problem Solving. Daniel M. Kammen and David M. Hassenzahl. Princeton University Press, 41, William Street, Princeton, NJ 08540, USA. 1999. 404 pp. Price: US $ 39.50.

Risk has been a part of human life ever since it appeared on this earth. It was exposed to hostile environment as well as to wild animals, reptiles and insects like mosquitoes and beetles. People had to risk their life to get food. But this did not deter them and humanity progressed to the present status taking a risk all along. We learnt the most important lesson: 'No Risk, No Benefit'. But the question started coming up in one's mind: 'How much risk?' Can we find out the extent of risk? Is it temporary or permanent? Will the effects continue over the generations to come?

With advances in science and technology, people thought that they have conquered nature and that they can get more out of it. But soon they realized that they could not play a 'Non Zero Sum' game with nature. The new technologies of power generation, transportation and chemicals have made human life enjoyable, but the delayed effects of air, water and soil pollution have started taking their toll of human life. The advancements in atomic and nuclear sciences made people proud of their intelligence. They were seeing only the brighter side of the coin, but soon they started seeing the darker side of it, namely cancer and genetic defects.

Can we totally avoid events whose effects are bad, and if not, can we at least limit the extent of bad effects? This thinking gave rise to the science of safety and risk modelling, measurement and analysis. The bad effects are not same for all and everyone is also not exposed to the same extent. This introduced statistics in the subject and resulted in the development of statistical tools for risk analysis.

The authors of the book under review start with the definition of risk, namely 'the probability that an outcome will occur times the consequence, or level of impact, should that occur.' Outcome and consequence are referred to as dose and response, respectively, by the authors. Linear, concave, convex as well as