

Book Review

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Modern multidisciplinary applied microbiology: exploiting microbes and their interactions

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82 pp; price £120.00/€180.00

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Modern applied microbiology is highly interdisciplinary by nature and, consequently, the range of studies that this field encompasses is extraordinarily diverse. This book is testament to such diversity. It contains selected papers that were presented in short during the *1st International Conference on Environmental, Industrial and Applied Microbiology* (Badajoz, Spain, 2005). The conference called for papers that related microbiology with other scientific and engineering disciplines, such as environmental sciences, physical/chemical sciences, pharmacology, nanosciences, microscopy/imaging sciences, etc. With over 750 participants from more than 60 countries attending, the conference was well placed to 'test the pulse' of modern applied microbiology; the stated intention of the book was to give an overview of the current state-of-the-art of the field.

The book comprises 148 research papers, typically 4–6 pages in length and catalogued into 11 sections (number of paper per section): environmental microbiology, marine microbiology, water/aquatic microbiology, geomicrobiology (31); industrial microbiology—future bioindustries (14); food microbiology (17); agriculture, soil, forest microbiology (19); bioremediation (18); microbial biotechnology (8); microfactories—microbial production of chemicals

and pharmaceuticals, biopolymers (4); microbial physiology, metabolism and gene expression (10); medical microbiology (6); analytical techniques, imaging techniques, microscopy (17); methods in basic and applied microbiology, and microbial education (4). Readers of *Applied Organometallic Chemistry* may be particularly interested in the nine papers on the interaction of microbes with metals, which mainly concern the microbial toxicity, remediation and (biosensor) detection of heavy metals.

The usefulness of books that bring together a large number of disparate papers is often determined by the overall organization of the material and its ease of accessibility to the reader. The present text has some limitations in this regard. Although a subject index is provided, this is nothing more than a compilation of the few 'keywords' provided by the authors of the individual papers and, consequently, distribution of subject index terms across the book is poorly represented. There are also problems with the section titles. In the final section, for example, despite a thorough search I found no justification whatsoever for inclusion of 'microbial education' in the title.

The individual research papers are organized in the traditional manner, each with a brief abstract, introduction, etc. As characteristic of multidisciplinary fields, the approaches to study are varied and often innovative. Whilst *in toto* they constitute a wealth of diverse research findings, perhaps inevitably for a book based on a conference, many of the findings are evidently preliminary. There are

many disappointments in the editorial control, for example some illustrations are illegible; names of microbes are not always written in the conventional scientific style; font type/size is inconsistent; and there are numerous errors in the index cross-referencing. This is unusually shoddy for a Wiley-VCH text. Furthermore, bizarrely, some papers have nothing to do with applied microbiology, e.g. those entitled 'improved cytocompatibility of titanium alloy by coating with pure titanium films using sputter-deposition' and 'scanning electron microscope study of fish and rice flour coextrudates'. These limitations, quite naturally, raise concern regarding the process for acceptance of manuscripts.

Whilst *Modern Multidisciplinary Applied Microbiology* goes some way to illustrate the diversity and interdisciplinary nature of the field, its value is diminished in today's world of on-line database journal searching. The compilation of recently published and fully peer-reviewed papers on particular aspects of applied microbiology has never been easier, even for those not affiliated to any research or educational institution. Since the book is intending to represent the current state-of-the-art, it is axiomatic that it has a very limited lifespan, and perhaps nothing emphasizes this more than the scheduling of the 2nd International Conference on this field towards the end of 2007.

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