

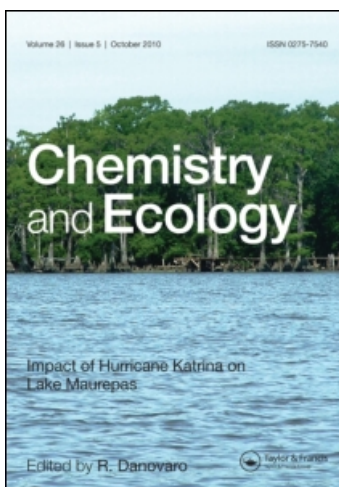
This article was downloaded by:

On: 15 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Chemistry and Ecology

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713455114>

### Book Reviews

**To cite this Article** (1986) 'Book Reviews', *Chemistry and Ecology*, 2: 2, 171 – 174

**To link to this Article:** DOI: 10.1080/02757548608070830

**URL:** <http://dx.doi.org/10.1080/02757548608070830>

## PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

## Book Reviews

**HUMIC SUBSTANCES** by G.G. Choudhry. 185 pp. University of Amsterdam Gordon & Breach Science Publishers: New York, London, Paris. \$44. ISBN 0-677-06440-3

In every manual of chemical analytical methods intended for use in fresh, estuarine and inshore waters there should be a warning that if samples contain humic substances interpretation of results will present difficulties. This warning is seldom emphasized so that a book intended to consider the environmental fate of pollutants in the presence of humic substances is very timely.

This book is divided into four parts, the first being concerned with the structural aspects and origin of humic substances. The second section looks at the photophysical, photochemical and free radical characteristics of these substances and this is followed by a chapter on sorption phenomena. The final part deals with interactions between man-made environmental chemicals such as fatty acids, herbicides, pesticides and oils with humic substances.

The book is written in a most stimulating style and should certainly be read by all environmental chemical analysts. The author has aimed it at a wide range of occupations including soil scientists, sanitary engineers, geochemists and legislative bodies concerned with environmental pollution problems. It does need however, a good knowledge of chemistry at about graduate level. Obviously with such a complex varied subject such as humic substances the book does not give answers to any problem in a specific environment. What it does do is to suggest experimental methods of studying the effect of their presence. It will probably prove to be most valuable to those engaged in environmental research, although at the present rate of exchange with the pound, a book with 185 pages priced at \$44 might be thought to be rather expensive.

E. I. BUTLER

**ENERGY AND CHEMISTRY** Edited by R. Thompson.  
Royal Society of Chemistry, 1981. Special Publication No. 41, 359pp.,  
£11.50, Soft Cover  
ISBN 0-85186-845-2.

The book embodies the proceedings of a Symposium organised by the Industrial Division of the Royal Society of Chemistry, as part of the 1981 Annual Chemical Congress, and contains fourteen papers illustrating the diverse role of chemistry in the exploitation, control and manipulation of energy resources.

In a keynote address, by the Rt. Hon. David Howell, P.C., M.P. the then Secretary of State for Energy, the Government's policy and thinking into the next century is outlined together with current key influences on the chemical industry. The changes that these will bring are then reflected in the remaining papers.

A. Spinks, "Alternatives to Fossil Petrol", supports the House of Lords Committee conclusion that "the battery car was a serious option for the next century", while E. J. Cairns "Electrochemical Energy Storage", considered, in a broad industrial and national electricity utility network context, that an opportunity to decrease our dependance on petroleum existed. Both authors draw attention to the economic and social problems involved leaving the clear impression that there are no easy options to change and that much research is needed.

The electricity supply industry is represented with papers by D. J. Littler "Chemistry in the Service of Electricity Generation" and by A. B. Hart "The Chemistry of Power Station Emissions". Both of these papers enlighten one to the complexity of day to day and longer term problems involving, boiler fireside and waterside corrosion, the interactions of coolant gas in nuclear reactors, combustion products, flue gas dispersion and acid rain. Students of the latter will find Dr. Hart's paper stimulating and useful as a background to formulating any remedial action.

In E. A. Robinson's paper "Reduction of Environmental Hazards Associated with Different Sources of Energy", renewable forms of energy, like fossil fuels, are shown not to be without economic and social problems. Although Robinson favours the development of Nuclear Energy he is not without respect for its nature and the part that chemists must play in its safe use. This is further emphasised by W. C. Wilkinson, "Chemistry of the Nuclear Fuel Cycle" who covers manufacture, irradiation and reprocessing of the fuel in a technical but

easily read manner, while J. A. C. Marples, "Chemistry in the Development of Nuclear Power", gives further attention to the properties, preparation and fabrication of oxide fuels and to the vitrification of wastes. His concluding sentence that "vitrified wastes seem unlikely to give our descendants any unexpected problems" will have no doubt raised a few eyebrows in the environmental lobby.

W. O. Alexander, "Energy Materials and Mankind", is concerned with the total energy concept and sees recycling as vital to optimum exploitation and to the avoidance of shortfall, in key materials. The need for the conservation of energy is emphasised by I. Dunstand and L. H. Everett, "Thermal Insulation of Buildings" and although basically a physical, rather than chemical, approach it compliments W. O. Alexander's paper in completing the cycle of economic energy management.

The importance of coal as a primary fuel and a feedstock source is described by A. D. Dainton and P. F. Paul in, "Coal and Energy: Utilization and Conversion" and its anticipated progressive replacement of fuel oil, around the turn of the century, is discussed by A. J. Groszek in, "Stable Coal-Oil Dispersions: A Substitute for Liquid Fuels". In these papers the complexity of new technical skills that will continue to be sought in order to keep pace with the energy crisis, are highlighted. Between the lines, however, a message that is more effectively stated at the end of a paper by J. A. Gray and F. E. Shephard, "Technology and Chemistry in British Gas: Evolution and Revolution", comes across. Entitled "Challenge for the Chemist" its theme can be felt throughout most of the papers presented but perhaps most of all in P. G. Caudle's paper "The Chemical Industry: Future Energy and Feedstock Requirements". Here it is made clear that for a Chemist to function effectively and to thwart the threatened decline in the petrochemical industry of western Europe, a sympathy for economics and management, a capability of adapting to change and the wisdom to communicate the benefit of his skills to others is essential. But then, it always has been!

All in all "Energy and Chemistry" is an excellent tome. It is handbook sized but, heavy with information and reasonably priced. It is a collection of papers, the diversity of which makes it a book to dip into and to reflect upon. It does much to support the key role of Chemistry in industry and will undoubtedly guide many aspiring chemists in their chosen careers.

JOHN F. SPENCER

**SALT MARSH ECOLOGY** Tertiary Level Biology Series by Steven P. Long and Christopher F. Mason. 160 pp.  
Blackie: Glasgow, 1983. Limp £7.95, Cased £16.95.  
ISBN 0-216-91439-6  
ISBN 0-216-91438-8 Pbk.

In a book of seven chapters the authors give a balanced account of salt marshes and consider the factors controlling their formation, their interesting and important biology and conservation. After an introduction, the chapters deal successively with salt marsh formation, physiography and soils, flora, fauna, primary production, the saltmarsh ecosystem and conservation. The 160 pages offered give a compact, readable view of this most interesting part of the marine environment and having packed in so much of value, it would be an ungenerous person who complained of the inevitable omissions.

As the authors correctly point out salt marshes are a scarce, dwindling threatened resource and while it is too much to hope that politicians, developers and others so keen on "reclaiming" them will spend much time in ploughing through the large literature that they might understand the implications of their activities, it is not unreasonable to expect that they should be prepared to read this brief, but comprehensive account. These potential readers apart Salt Marsh Ecology ought to be of interest and value to a wide range of readers interested in the coastal environment.

E. J. PERKINS