

invaluable research tools to individuals involved in all aspects of carbohydrate chemistry.

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***Food Emulsions and Foams; Interfaces, Interactions and Stability*; by E. Dickinson, J.M. Rodriguez Patino; The Royal Society of Chemistry, Cambridge, 1999, 390 pages, ISBN 0-85404-753-0, £85.00**

Food emulsions and foams are areas that have always been of great interest in the scientific world of food chemistry. Due to ever increasing interest, a conference was established in the mid 1980s with the sole purpose of furthering the studies and knowledge of food colloids. Since 1986 the conference has been held every two years, with the latest held in March 1998 covering interfaces, interactions and stability within food emulsions and foams.

The primary objective of the text currently under review is to chart the progress in specific fields related to food emulsions and foams, as well as describing the physical chemistry underlying the stabilisation of foams and emulsions. The text also aids the fundamental understanding of the stability and rheological properties of food dispersions containing particles, droplets and bubbles.

Food Emulsions and Foams contains several review articles, describes experimental and theoretical developments and covers key topics ranging from colloid rheology and stabilisation by polymers to protein surfactant and protein polysaccharide interactions. Contained within are several essential tables and charts which assist the clarification, comprehension and general understanding of the text.

Over all, this book is well presented, a good length (having 390 pages), thorough and a very readable text. Another fine publication from the Royal Society of Chemistry range on food colloids.

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***Mass Spectrometry; Second Ed.*, by J. Barker; Analytical Chemistry by Open Learning; John Wiley & Sons, Chichester, 1999, xxii + 509 pages, ISBN 0471-967-629, £37.50**

Mass spectrometry is still a fairly empirical subject. There is still some way to go to understand and fully predict the fragmentation patterns of many complex organic and biological molecules. However, from knowledge of the basic concepts of organic chemistry and with the help of computer database searches, it may be possible to characterise and formulate structures for many organic molecules. Together with complementary spectroscopic techniques such as infrared, ultraviolet/visible and nuclear magnetic resonance, mass spectrometry holds the key to qualitative and quantitative chemical analysis.

This second edition has been expanded: the earlier material has been reorganised in order to bring it completely up-to-date. In addition to the basic theory of ion formation and behaviour, instrumentation and the interpretation of the spectrum of simple organic compounds, this new edition reflects a number of the important developments that have taken place in this field since the first publication of the book in 1987. These include the rapidly growing area of hyphenated mass spectral techniques, including gas chromatography-mass spectrometry (GC-MS), liquid chromatography-gas chromatography (LC-GC) and tandem mass spectrometry (MS-MS). Associated newer methods of interfacing, such as electrospray and ionspray, particle beam and continuous flow coupling and atmospheric pressure-chemical ionisation are also covered. The current widespread use of computing techniques in structure elucidation is also considered, along with the important area of inorganic mass spectrometry for analysing surfaces, bulk solids and solutions.

The goal of this second edition of 'Mass Spectrometry', to provide the analyst with an excellent introduction to mass spectrometry by the adoption of a practical approach in which the theoretical and operational aspects of this major analytical technique are combined, has been achieved. The learning objectives of each chapter are clearly identified and the student's understanding of the material is constantly challenged by self-assessment questions with reinforcing or remedial responses. It is therefore a valuable text reference for analytical chemists, those studying for the Licentiate of the Royal Society of Chemistry (LRSC) qualification, or its equivalent, and by those who wish to obtain a more detailed knowledge of mass spectrometry, beyond that required for LRSC.

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