types in which sugar component is not central to the structure have been omitted. The total number of carbohydrate compounds in the present edition is now 24,000.

The volume covers parent monosaccharides and their important derivatives, modified monosaccharides, disaccharides, tri-, oligo-, polysaccharides, alditols, cyclitols, nucleosides, glycoside antibiotics and related compounds, and other glycosides. The dictionary is arranged alphabetically by entry name and every entry is numbered to assist ready location. The use of indexes enables the rapid location of all the compounds in the dictionary by name or compound type. In most cases the stereoisomeric and ring-form variants of a given carbohydrate are included in the same entry. The dictionary also provides information on CAS registry numbers, structural formulae, molecular formula, molecular weight, and physical data. The toxicity and hazard information is highlighted by the symbol.

The CD-ROM contains searchable indexes on 33 fields such as accurate mass, biological source, CAS registry number, chemical name, density, melting point, partition coefficient, type of compound, and UV maxima, etc. In addition to searching the above text fields, it is possible to search on structure and substructure. In conclusion, this volume constitutes a major reference book for which Peter Collins and his team are to be highly congratulated. It is an excellent source of information and is highly recommended to all the persons working in carbohydrate research, development or use.

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P. Coussot, Rheometry of Pastes, Suspensions, and Granular Materials: Applications in Industry and Environment, John Wiley & Sons Inc., Hoboken, NJ, USA, 2005 (xviii+291 pp., £48.95, ISBN 0-471-65369-1)

Developments in rheological science have mainly involved polymers, with many techniques routinely utilised for characterisation of polymer internal structure to determine physicochemical origins of mechanical behaviour. Natural and synthetic complex polymeric materials in liquid suspension, such as emulsions, foams and solid particle suspensions, are utilised in many applications. When the suspended element concentration is low, system behaviour is qualitatively similar to that the interstitial liquid; however at sufficiently high concentrations, suspended elements develop specific mutual interactions, which often leads to a 'paste-like' material incapable of flow when the exerted force is below a critical value. Such common products include shaving foam, mayonnaise, peanut butter, paint, concrete and also granular materials such as sand.

In contrast to polymers, these materials have extremely different internal structures, with a wide range of elements of various sizes and interaction patterns. Focussing on specific substituent components within such complex materials does not promote the development of a unifying approach for definition of the relationship between internal structure and mechanical properties. Thus, the primary objective of this book was to propose a synthetic and general approach to define the mechanical behaviour of pastes and granular materials. It is essential to apply reliable rheometrical techniques for relevant materials' characterisation. For pastes and granular materials this still constitutes a challenge, since they may exhibit strongly non-linear behaviour (behaving as either solids or liquids depending on flow conditions), several experimental problems may occur (wall slip, fracture, drying, etc.), and for some granular materials there may exist no constitutive equation intrinsic to the material. Thus, each industrial field has developed its own techniques. In this context, the second major objective of this book was to review experimental problems encountered with such materials and to examine the techniques utilised in different fields, in order to propose theoretical analyses that would enable one to extract relevant rheological parameters from such tests.

Specific chapters cover material mechanics, rheophysics of pastes and granular materials, experimental procedures and problems in paste viscometry, local rheometry, nonviscometric flows of yield stress fluids, granular flows in frictional regime, and practical rheometrical techniques. This book addresses both the foundations and theoretical principles of rheology and practical aspects and applications, including specific examples of foods, cosmetics, pharmaceutics, paper coatings, paints and inks, ceramics and sewage sludges, making it extremely useful to both students, academics and professionals (rheologists, engineers and researchers) for the development of industrial and consumer products.

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