

PREFACE

The last in a series of five conferences held under the auspices of The Royal Society-Unilever INDO/UK Forum on Materials Science and Engineering, the meeting in Mysore covered biomaterials and biosubstrates, areas of vital importance in technologies concerning food and personal care products. This volume constitutes the proceedings of the meeting, containing both invited and contributed papers.

The programme for the meeting has dwelt mainly on two foci: *i.* measurement of the molecular, supramolecular and colloidal structures of biomaterials and biosubstrates using state-of-the-art techniques, and *ii.* elucidation of the relationship of such structures to the physicochemical, biophysical and mechanical properties through experimentation, theory and simulation. Food materials, skin and hair have featured prominently in the programme.

Nearly half of the 30 papers published in this volume are invited contributions from leading scientists representing major centres of biomaterials research in the UK, the Netherlands, Sweden, Australia and India. They include, among others, Prof E D T Atkins, Prof P Balaram, Prof P Walstra, Prof S B Ross-Murphy, Dr N Chandrakumar, Sir Sam Edwards, FRS, Dr V Prakash, Dr V J Morris, Prof A-M Hermansson and Prof N Appaji Rao. Papers pertaining to focus (*i*) present applications of experimental techniques like x-ray diffraction (XRD), magnetic resonance imaging (MRI), confocal laser scanning microscopy (CLCM), environmental scanning electron microscopy (ESEM), atomic force microscopy (AFM), fluorescence lifetime imaging (FLIM) and fluorescence recovery after photobleaching (FRAP) for measuring interactions and identifying structure at various length scales. Papers corresponding with focus (*ii*) deal with the various phenomena involved in the development, processing, delivery and application/consumption of personal care and food products, *e. g.*, friction and lubrication, rheology, mechanical strength, gelation, colloidal aggregation/dispersion and film rupture.

The significance of this proceedings volume derives from the high scientific quality of both invited and solicited papers which collectively present a valuable account of up-to-date advances in the field. We believe that the two foci unite in the book in a complementary way, producing a coherent and clear picture of the current level of understanding of how the structure is related to the properties of interest in food and personal care technologies. We are confident that the book will prove to be of appreciable value to most scientists active in the field.

In common with its predecessors, the meeting has fully achieved its essential objective laid down by the Forum, namely, promotion of close contacts between materials research communities working primarily (but not exclusively) in India, UK and European countries by providing suitable platforms in the form of world class conferences, ensuring participation by the UK and the Indian scientists in roughly

equal proportion. It is hoped that the contacts thus forged will be enduring and will prove worthwhile in respect of rapid exchange of new results, seeking reliable sounding boards for new ideas and, possibly, development of new collaborative programmes.

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M Lal, *Unilever Research Port Sunlight and Centre for Nano-scale Science,
Liverpool University*

P J Lillford, *Unilever Research Colworth*

V M Naik, *Unilever Research India, Bangalore*

V Prakash, *Central Food Technological Research Institute, Mysore*