

# Contents

## Biosynthesis

- Biochemical Mechanisms of Synthesis of (1→3),(1→4) $\beta$ -D-Glucans:  
Cellulose Synthase with an added Twist? 3  
*B.R. Urbanowicz, C.J. Rayon, N.C. Carpita, M.A. Tiné and M.S. Buckeridge*
- The Future Prospects for Broadening Soybean Utilization by Altering  
Glycinin 13  
*N.C. Nielsen and E. Herman*
- Heterogeneity of Genes Encoding the Low Molecular Weight Glutenin  
Subunits of Bread Wheat 24  
*T. Chardot, T. Do, L. Perret and M. Laurière*
- Identification, Cloning and Expression of a Ferulic Acid Esterase from  
*Neurospora crassa* 31  
*V.F. Crepin, C.B. Faulds and I.F. Connerton*

## Biopolymer Design

- Influence of Polysaccharide Composition on the Structure and  
Properties of Cellulose-based Composites 39  
*M.J. Gidley, E. Chanliaud and S. Whitney*
- Attempt to Produce Caffeoylated Arabinoxylans from Feryloylated  
Arabinoxylans by Microbial Demethylation 48  
*V. Micard, T. Landazuri, A. Surget, S. Moukha, M. Labat and X. Rouau*
- Enzymatically and Chemically De-esterified Lime Pectins: Physico-  
chemical Characterisation, Polyelectrolyte Behaviour and Calcium  
Binding Properties 55  
*M.-C. Ralet, V. Dronnet and J.-F. Thibault*

<i>Contents</i>	ix
Incorporation of Unsaturated Isoleucine Analogues into Proteins <i>In Vivo</i> <i>T. Michon, F. Barbot and D. Tirrell</i>	63
Binding of Two Lipid Monomers by Plant Lipid Transfer Proteins, LTP1 <i>J.-P. Douliez and D. Marion</i>	73
Topographical Comparisons of Family 13 $\alpha$ -Amylases using Molecular Modelling Techniques <i>G. Paës, G. André and V. Tran</i>	79
<b>Biopolymer Assemblies</b>	
Glutenin Macropolymer: A Gel Formed by Glutenin Particles <i>C. Don, W. Lichtendonk, J. Plijter and R. Hamer</i>	91
Swelling and Hydration of the Pectin Network of the Tomato Cell Wall <i>A.J. MacDougall and S.G. Ring</i>	98
Self-assembly of Acacia Gum and $\beta$ -Lactoglobulin in Aqueous Dispersion <i>C. Sanchez, C. Schmitt, G. Mekhloufi, J. Hardy, D. Renard and P. Robert</i>	111
Creation of Biopolymeric Colloidal Carriers Dedicated to Controlled Release Applications <i>D. Renard, P. Robert, L. Lavenant, D. Melcion, Y. Popineau, J. Guéguen, C. Duclairoir, E. Nakache, C. Sanchez and C. Schmitt</i>	119
<b>Interfaces, Interphases</b>	
Polyelectrolyte–Surfactant Complexes at the Air–Water Interface: Influence of the Polymer Backbone Rigidity <i>D. Langevin</i>	127
Adsorption Layers of $\beta$ -Casein at the Air/Water Interface: Effect of Guanidine Hydrochloride <i>A. Aschi, A. Gharbi, P. Calmettes, M. Daoud, V. Aguié-Béghin and R. Douillard</i>	145
Adsorption and Rheological Behaviour of Biopolymers at Liquid Interfaces <i>R. Miller, V. Fainerman, M. O'Neill, J. Krägel and A. Makievski</i>	153
Dynamic Surface Tension and Surface Dilational Properties of an Amphiphilic Polysaccharide <i>S. Guillot, D. Guibert and M.A.V. Axelos</i>	166

- Polymerization of Coniferyl Alcohol (Monomer of Lignins) at the Air/Water Interface 173  
*B. Cathala, V. Aguié-Béghin, R. Douillard and B. Monties*

### Multiphasic Systems

- Emulsion-stabilizing Properties of Depolymerised Pectin: Effects of pH, Oil Type and Calcium Ions 181  
*M. Akhtar, E. Dickinson, J. Mazoyer and V. Langendorff*
- Mixed Biopolymer Gels of  $\kappa$ -Carrageenan and Soy Protein 190  
*R.I. Baeza, D.J. Carp, P. Martelli and A.M.R. Pilosof*
- The Properties of  $\nu$ / $\iota$ -Carrageenan: Implications for the Gelling Mechanism of  $\iota$ -Carrageenan 201  
*F. van de Velde, H.S. Rollema and R.H. Tromp*
- Films and Foams of Sparkling Wines 212  
*M. Vignes-Adler and B. Robillard*
- Structure–Texture Relationships of Starch in Bread 226  
*S. Hug-Iten, F. Escher and B. Conde-Petit*
- Behaviour of Amylose and Amylopectin Films 235  
*P. Forssell, R. Partanen, A. Buleon, I. Farhat and P. Myllärinen*
- Gel Formation by Soy Glycinin in Bulk and at Interfaces 241  
*T. van Vliet, A. Martin, M. Renkema and M. Bos*
- Interactions between Cellulose and Plasticized Wheat Starch – Properties of Biodegradable Multiphase Systems 253  
*L. Avérous*
- Proteins Films: Microstructural Aspects and Interaction with Water 260  
*C. Mangavel, N. Rossignol, A. Gerbanowski, J. Barbot, Y. Popineau and J. Guéguen*
- Pea: An Interesting Crop for Packaging Applications 267  
*J.J.G. van Soest, D. Lewin, H. Dumont and F.H.J. Kappen*
- In Situ* Study of the Changes in Starch and Gluten during Heating of Dough using Attenuated-total-reflectance Fourier-transform-infrared (ATR-FTIR) 275  
*O. Sevenou, S.E. Hill, I.A. Farhat and J.R. Mitchell*

<i>Contents</i>	xi
Effect of D <sub>2</sub> O on the Rheological Behaviour of Wheat Gluten <i>J. Lefebvre, Y. Popineau and G. Deshayes</i>	284
The Influence of the Thickness on the Functional Properties of Cassava Starch Edible Films <i>N.M. Vicentini, P.J.A. Sobral and M.P. Cereda</i>	291
<b>Subject Index</b>	301

