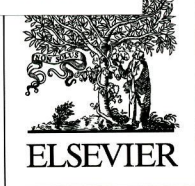


Flu
C21

Volume 96, issue 1, 1 July 2013

ISSN 0144-8617



Editors

J.F. Kennedy

J.R. Mitchell

Associate Editors

R.A.A. Muzzarelli

M.A. Coimbra

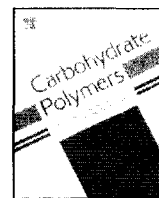
K.J. Edgar

Carbohydrate Polymers

SCIENTIFIC AND TECHNOLOGICAL ASPECTS OF
INDUSTRIALLY IMPORTANT POLYSACCHARIDES

Available online at www.sciencedirect.com

SciVerse ScienceDirect



Vol. 96, issue 1, 1 July 2013

CONTENTS

(Abstracted/indexed in: BIOSIS (Biological Abstracts); Chemical Abstracts; Current Contents/Agriculture, Biology, Environmental Sciences; Engineering Index; Food Science and Technology Abstracts; Polymer Contents; Process and Chemical Engineering; Science Citation Index; SciSearch; Theoretical Chemical Engineering). Also covered in the abstract and citation database SCOPUS®. Full text available on ScienceDirect®.

- 1 Development of flax/carbon fibre hybrid composites for enhanced properties
H.N. DHAKAL, Z.Y. ZHANG, R. GUTHRIE, J. MACMULLEN, N. BENNETT (UK)
- 9 Purification and characterization of D-Gal-6-sulfurylase from *Eucheuma striatum*
X. QIN, C. MA, Z. LOU, A. WANG, H. WANG (PR China)
- 15 Hydrothermal synthesis, characterization, and bactericidal activities of hybrid from cellulose and TiO₂
S.-M. LI, Y.-Y. DONG, M.-G. MA, L.-H. FU, R.-C. SUN, F. XU (PR China)
- 21 Ultrasound-assisted formation of the canthaxanthin emulsions stabilized by arabic and xanthan gums
S.M.T. GHARIBZAHEDI, S.H. RAZAVI, S.M. MOUSAVI (Iran)
- 31 Hydration and mechanical properties of arabinoxylans and β -D-glucans films
R. YING, C. RONDEAU-MOURO, C. BARRON, F. MABILLE, A. PERRONNET, L. SAULNIER (France)
- 39 Effect of glycerol concentration on edible film production from cress seed carbohydrate gum
M. JOUKI, N. KHAZAEI, M. GHASEMLOU, M. HADINEZHAD (Islamic Republic of Iran)
- 47 Synthesis and evaluation of novel water-soluble copolymers based on acrylamide and modular β -cyclodextrin
X. LIU, W. JIANG, S. GOU, Z. YE, M. FENG, N. LAI, L. LIANG (People's Republic of China)
- 57 Effect of clay concentration on morphology and properties of hydroxypropylmethylcellulose films
D. MONDAL, B. BHOWMICK, MD.M.R. MOLLICK, D. MAITY, A. MUKHOPADHYAY (India), D. RANA (Canada), D. CHATTOPADHYAY (India)
- 64 Amine salts-activated systems for one-step bleaching of cotton fabrics
E.S. ABDEL-HALIM (Saudi Arabia, Egypt)
- 71 Mechanical and water barrier properties of agar/ κ -carrageenan/konjac glucomannan ternary blend biohydrogel films
J.-W. RHIM, L.-F. WANG (Republic of Korea)
- 82 Oil-in-water emulsions stabilized by sodium phosphorylated chitosan
S. CHONGPRAKOBKIT, R. MANIRATANACHOTE, W. TACHABOONYAKIAT (Thailand)
- 91 Preparation and properties of blends composed of lignosulfonated layered double hydroxide/plasticized starch and thermoplastics
E. PRIVAS, F. LEROUX, P. NAVARD (France)
- 101 Extraction, antioxidant and antimicrobial activities of *Epimedium acuminatum* Franch. polysaccharide
H. CHENG, S. FENG, S. SHEN, L. ZHANG, R. YANG, Y. ZHOU, C. DING (China)
- 109 Thermo-molded biocomposite from cassava starch, natural fibers and lignin associated by laccase-mediator system
S. NARKCHAMNAN, C. SAKDARONNARONG (Thailand)
- 118 Effects of the order of addition of reagents and catalyst on modification of maize starches
Z. SUI, K.C. HUBER, J.N. BEMILLER (USA)
- 131 Bioactivity of selenium-enriched exopolysaccharides produced by *Enterobacter cloacae* Z0206 in broilers
Z. LU, M. JIN, M. HUANG, Y. WANG, Y. WANG (PR China)
- 137 The cold storage of green bananas affects the starch degradation during ripening at higher temperature
F.H.G. PERONI-OKITA, M.B. CARDOSO, R.G.D. AGOPIAN, R.P. LOURO, J.R.O. NASCIMENTO, E. PURGATTO, M.I.B. TAVARES, F.M. LAJOLO, B.R. CORDENUNSI (Brazil)
- 148 Extraction optimization of *Bruguiera gymnorrhiza* polysaccharides with radical scavenging activities
Q. LI, N. YU, Y. WANG, Y. SUN, K. LU, W. GUAN (China)
- 156 Preparation, characterization and in vitro release of microparticles based on dextran-rosuvastatin conjugate
C. ZHOU, W. GAO, G. LU, J. DING, X. WU, X. HUANG, J. CHEN, M. LIU, J. JIANG, H. WU (China)
- 163 Influence of the extraction process on the rheological and structural properties of agars
A.M.M. SOUSA, J. BORGES, A.F. SILVA, M.P. GONÇALVES (Portugal)
- 172 Development and characterization of cellulose-polymethacrylate mucoadhesive film for buccal delivery of carvedilol
J.G. MEHER, M. TARAI, N.P. YADAV, A. PATNAIK, P. MISHRA, K.S. YADAV (India)

- 181 Microencapsulated probiotics using emulsification technique coupled with internal or external gelation process
H. SONG, W. YU, M. GAO, X. LIU, X. MA (PR China)
- 190 Fabricating electroconductive cotton textiles using graphene
M. SHATERI-KHALILABAD, M.E. YAZDANSHENAS (Iran)
- 196 Inulinase production in a packed bed reactor by solid state fermentation
M. DILIPKUMAR (India), N. RAJAMOCHAN (Oman), M. RAJASIMMAN (India)
- 200 Smart options for simultaneous functionalization and pigment coloration of cellulosic/wool blends
N.A. IBRAHIM, H.M. KHALIL, E.M.R. EL-ZAIRY, W.A. ABDALLA (Egypt)
- 211 A thermosensitive carrageenan-based polymer: Synthesis, characterization and interactions with a cationic surfactant
K. GAWEŁ, A. KAREWICZ, D. BIELSKA, K. SZCZUBIAŁKA, K. RYSAK, P. BONAREK, M. NOWAKOWSKA (Poland, Norway)
- 218 Acetylation of rice straw for thermoplastic applications
G. ZHANG, K. HUANG, X. JIANG, D. HUANG (China), Y. YANG (China, USA)
- 227 Activity of chitin deacetylase from *Colletotrichum gloeosporioides* on chitinous substrates
N. PACHECO (Mexico), S. TROMBOTTO, L. DAVID (France), K. SHIRAI (Mexico)
- 233 Preparation and characterization of bionanocomposite films filled with nanorod-rich zinc oxide
A.M. NAFCHI, R. NASSIRI (Iran), S. SHEIBANI, F. ARIFFIN, A.A. KARIM (Malaysia)
- 240 Electrospun carboxymethyl cellulose acetate butyrate (CMCAB) nanofiber for high rate lithium-ion battery
L. QIU, Z. SHAO, M. YANG, W. WANG, F. WANG, L. XIE, S. LV, Y. ZHANG (PR China)
- 246 Comprehensive analysis of the substituent distribution in 3-O-ethyl/propyl cellulose derivatives
J. CUERS, Y. WANG, A. KOSCHELLA, T. HEINZE, P. MISCHNICK (Germany)
- 253 Isolation and partial characterization of delayed releasing starches of *Colocasia* species from Jharkhand, India
V. DEEPIKA, K. JAYARAM KUMAR, P. ANIMA (India)
- 259 Toward tunable amphiphilic copolymers via CuAAC click chemistry of oligocaprolactones onto starch backbone
A. ULINIUC (France, Romania), M. POPA (Romania), E. DROCKENMULLER, F. BOISSON, D. LEONARD, T. HAMAIDE (France)
- 270 Molecular structure of citric acid cross-linked starch films
C. MENZEL, E. OLSSON, T.S. PLIVELIC, R. ANDERSSON, C. JOHANSSON, R. KUKTAITE, L. JÄRNSTRÖM, K. KOCH (Sweden)
- 277 Use of pectin-thorium (IV) tungstomolybdate nanocomposite for photocatalytic degradation of methylene blue
V.K. GUPTA (India, Saudi Arabia), S. AGARWAL, D. PATHANIA, N.C. KOTHIYAL, G. SHARMA (India)
- 284 Characterization of water and alkali-soluble polysaccharides from *Pleurotus tuber-regium* sclerotia
G.-H. WU, T. HU, Z.-L. HUANG, J.-G. JIANG (China)
- 291 Process optimization for bioscouring of cotton and lycra cotton weft knits by Box and Behnken design
R. SHANTHI, G. KRISHNABAI (India)
- 296 Intrinsic intumescent-like flame retardant properties of DNA-treated cotton fabrics
J. ALONGI, R.A. CARLETTO, A. DI BLASIO, F. CUTTICA, F. CAROSIO, F. BOSCO, G. MALUCELLI (Italy)
- 305 Suitability of Confocal Raman microscopy for monitoring the penetration of PDMS compounds into cotton fibres
A.L. MOHAMED (Egypt), M. ER-RAFIK, M. MOLLER (Germany)
- 314 Biodegradation of (1→3)-β-polyglucuronate prepared by TEMPO-mediated oxidation
E. WATANABE, N. HABU, A. ISOGAI (Japan)
- 320 Synthesis and adsorption performance of dithiocarbamate-modified glycidyl methacrylate starch
X. CHENG, R. CHENG, S. OU, Y. LI (China)
- 326 Antibacterial property and characterization of cotton fabric treated with chitosan/AgCl-TiO₂ colloid
R.A. ARAIN (Pakistan), Z. KHATRI (Pakistan, Japan), M.H. MEMON (Pakistan), I.-S. KIM (Japan)
- 332 Levansucrase optimization using solid state fermentation and levan biological activities studies
M.A. ESAWY, A.M. ABDEL-FATTAH, M.M. ALI, W.A. HELMY, B.M. SALAMA, H.A.A. TAIE, A.M. HASHEM, G.E.A. AWAD (Egypt)
- 342 Rapidly *in situ* forming chitosan/ε-polylysine hydrogels for adhesive sealants and hemostatic materials
W. NIE, X. YUAN, J. ZHAO, Y. ZHOU, H. BAO (China)
- 349 Calcium pectinate-fenugreek seed mucilage mucoadhesive beads for controlled delivery of metformin HCl
A.K. NAYAK, D. PAL, S. DAS (India)
- 358 Influence of oxidized starch on the properties of thermoplastic starch
Y.-R. ZHANG, X.-L. WANG, G.-M. ZHAO, Y.-Z. WANG (China)
- 365 Studies on production of fructo-oligosaccharides (FOS) by gamma radiation processing of microbial levan
N. JALAN, L. VARSHNEY, N. MISRA, J. PAUL, D. MITRA, D.D. RAIRAKHWADA, Z. BHATHENA, V. KUMAR (India)