

# An interdisciplinary journal focused at the interface of polymer science and the biological sciences

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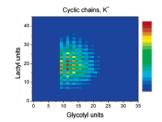
# **Communications**

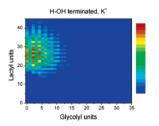
2465 Topology Characterization by

MALDI-ToF-MS of Enzymatically
Synthesized Poly(lactide-co-glycolide)

Saskia Huijser, Bastiaan B. P. Staal, Juan Huang, Robbert Duchateau,\* and

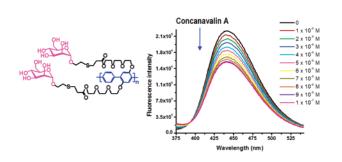
Cor E. Koning



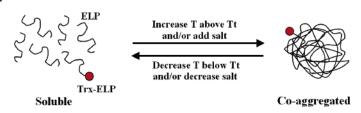


2470 Synthesis of Highly Water-Soluble Fluorescent Conjugated Glycopoly(p-phenylene)s for Lectin and Escherichia coli

Cuihua Xue, Sonali P. Jog, Pushpalatha Murthy, and Haiying Liu\*



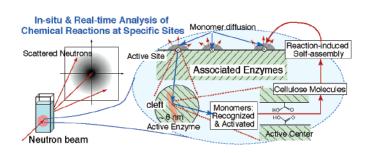
2475 Simultaneous Phase Transition of ELP Tagged Molecules and Free ELP:
An Efficient and Reversible Capture System



Xin Ge and Carlos D. M. Filipe\*

2479 Chemical Reaction at Specific Sites and Reaction-Induced Self-Assembly as Observed by in Situ and Real Time SANS: **Enzymatic Polymerization to Synthetic** Cellulose

> Takeji Hashimoto,\* Hirokazu Tanaka, Satoshi Koizumi, Kazuhiro Kurosaki, Masashi Ohmae, and Shiro Kobayashi

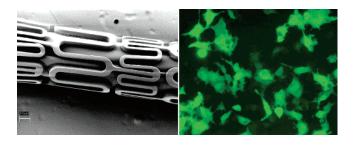


# **Articles**

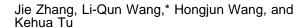
2483 Release of Plasmid DNA from Intravascular

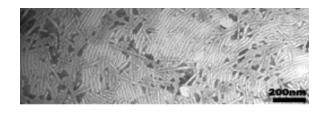
Stents Coated with Ultrathin Multilayered **Polyelectrolyte Films** 

Christopher M. Jewell, Jingtao Zhang, Nathaniel J. Fredin, Matthew R. Wolff, Timothy A. Hacker, and David M. Lynn\*



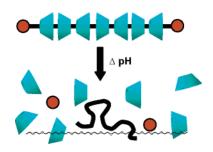
2492 Micellization Phenomena of Amphiphilic Block Copolymers Based on Methoxy Poly(ethylene glycol) and Either Crystalline or Amorphous Poly(caprolactone-b-lactide)





2501 Synthesis, Characterization, and ■ pH-Triggered Dethreading of α-Cyclodextrin-Poly(ethylene glycol) Polyrotaxanes Bearing Cleavable Endcaps

Scott Loethen, Tooru Ooya, Hak Soo Choi, Nobuhiko Yui,\* and David H. Thompson\*



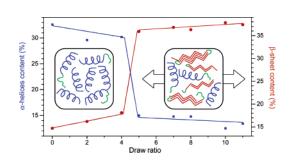
# 2507 Biological Impact of Polyacetal Particles on Loosening of Isoelastic Stems

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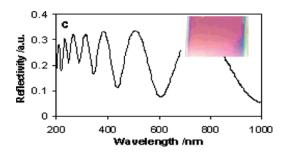
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2512 Characterization by Raman Microspectroscopy of the Strain-Induced Conformational Transition in Fibroin Fibers from the Silkworm *Samia cynthia ricini* 

> Marie-Eve Rousseau, Lilyane Beaulieu, Thierry Lefèvre, Joanie Paradis, Tetsuo Asakura, and Michel Pézolet\*



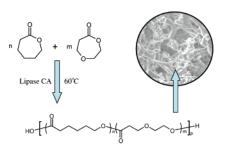
2522 Morphological and Optical Characterization of Polyelectrolyte Multilayers Incorporating Nanocrystalline Cellulose



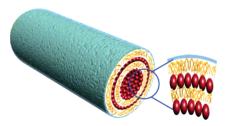
Emily D. Cranston and Derek G. Gray\*

2531 Porous Scaffolds from High Molecular Weight Polyesters Synthesized via Enzyme-Catalyzed Ring-Opening Polymerization

Rajiv K. Srivastava and Ann-Christine Albertsson\*



2539 Fabrication of Protein Nanotubes Based on Layer-by-Layer Assembly



Ying Tian, Qiang He, Yue Cui, and Junbai Li\*

# 2543 Designer Protein-Based Performance Materials

H<sub>2</sub>N<sup>+</sup> head | S<sub>2</sub> | E<sub>3</sub> | E<sub>K</sub> | E<sub>4</sub> | S<sub>2</sub> | Itali group COOH | 13

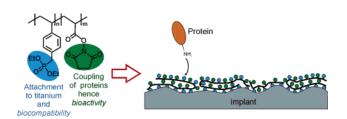
E = elastin protein sequence

Manoj Kumar,\* Karl J. Sanford, William P. Cuevas, Mai Du, Katharine D. Collier, and Nicole Chow

# 2552 Synthesis and Characterization of

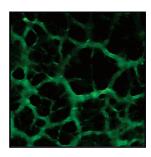
■ Biocompatible Polymer Interlayers on Titanium Implant Materials

Nina Adden, Lara J. Gamble, David G. Castner, Andrea Hoffmann, Gerhard Gross, and Henning Menzel\*



## 2560 Quantification and Confocal Imaging of Protein Specific Molecularly Imprinted Polymers

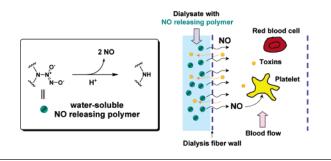
Daniel M. Hawkins, Andreea Trache, E. Ann Ellis, Derek Stevenson, Andreas Holzenburg, Gerald A. Meininger, and Subrayal M. Reddy\*



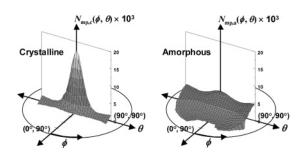
# 2565 Water-Soluble Poly(ethylenimine)-Based

 Nitric Oxide Donors: Preparation, Characterization, and Potential Application in Hemodialysis

Zhengrong Zhou, Gail M. Annich, Yiduo Wu, and Mark E. Meyerhoff\*



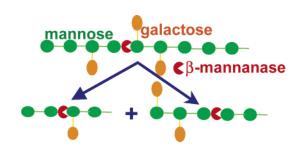
#### 2575 Molecular Orientation Distributions in a Biaxially oriented Poly(L-lactic Acid) Film Determined by Polarized Raman Spectroscopy



Masakazu Tanaka and Robert J. Young\*

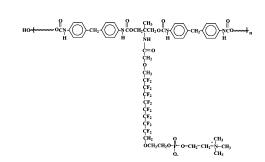
#### 2583 Kinetics of Enzymatic Depolymerization of **Guar Galactomannan**

Shamsheer Mahammad, Robert K. Prud'homme. George W. Roberts,\* and Saad A. Khan\*



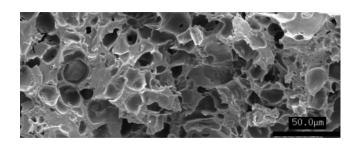
## 2591 Synthesis and Hemocompatibility of ■ Biomembrane Mimicing Poly(carbonate urethane)s Containing Fluorinated Alkyl Phosphatidylcholine Side Groups

Hong Tan, Jie Liu, Jiehua Li, Xia Jiang, Xingyi Xie, Yinping Zhong, and Qiang Fu\*



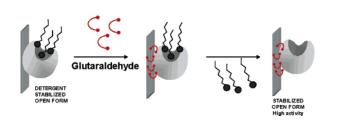
#### 2600 Incorporation of α-Amylase Enzyme and a Bioactive Filler into Hydrophilic, Partially Degradable, and Bioactive Cements (HDBCs) as a New Approach To Tailor Simultaneously Their Degradation and **Bioactive Behavior**

Luciano F. Boesel,\* Helena S. Azevedo, and Rui L. Reis



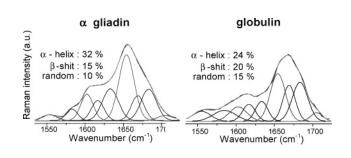
#### 2610 Glutaraldehyde Cross-Linking of Lipases Adsorbed on Aminated Supports in the Presence of Detergents Leads to Improved **Performance**

Gloria Fernández-Lorente, Jose M. Palomo, Cesar Mateo, Roberto Munilla, Claudia Ortiz, Zaida Cabrera, Jose M. Guisán,\* and Roberto Fernández-Lafuente\*



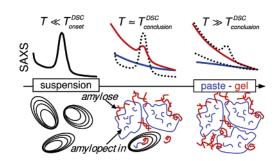
## 2616 Conformational Modifications of $\alpha$ Gliadin and Globulin Proteins upon Complex Coacervates Formation with Gum Arabic as Studied by Raman Microspectroscopy

Igor Chourpa,\* Virginie Ducel, Joël Richard, Pierre Dubois, and Frank Boury\*

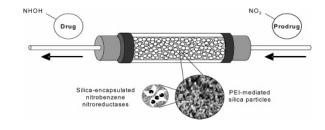


2624 Gelatinization of Starch in Excess Water: Beyond the Melting of Lamellar Crystallites. A Combined Wide- and Small-Angle X-ray **Scattering Study** 

> Rudi Vermeylen,\* Veerle Derycke, Jan A. Delcour, Bart Goderis, Harry Reynaers, and Michel H. J. Koch

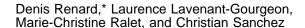


2631 Application of a Microfluidic Reactor for Screening Cancer Prodrug Activation Using Silica-Immobilized Nitrobenzene **Nitroreductase** 



Cécile Berne. Lorena Betancor. Heather R. Luckarift, and Jim C. Spain\*

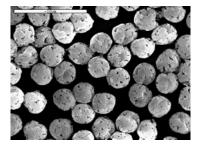
2637 Acacia senegal Gum: Continuum of Molecular Species Differing by Their Protein to Sugar Ratio, Molecular Weight, and Charges





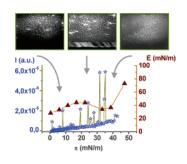
2650 Synthesis and Characterization of New Micrometer-Sized Radiopaque Polymeric Particles of Narrow Size Distribution by a Single-Step Swelling of Uniform Polystyrene Template Microspheres for X-ray Imaging **Applications** 

Anna Galperin and Shlomo Margel\*



2661 Self-Assembly of Monoglycerides in  $\beta$ -Lactoglobulin Adsorbed Films at the Air-Water Interface. Structural, Topographical, and Rheological Consequences

> Juan M. Rodríguez Patino,\* Marta Cejudo Fernández, Ma. Rosario Rodríguez Niño, and Cecilio Carrera Sánchez



Homogenization

Lars Nilsson,\* Mats Leeman, Karl-Gustav Wahlund, and Björn Bergenståhl

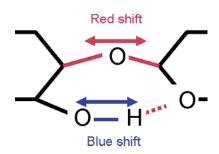
2680 Effects of Molecular Structure of the Resins on the Volumetric Shrinkage and the Mechanical Strength of Dental Restorative Composites

t-BP-M-GMA (45 wt%)

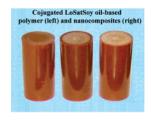
L. U. Kim, J. W. Kim, and C. K. Kim\*

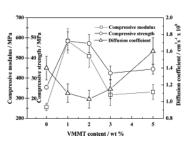
2688 Vibrational Spectroscopy of Biopolymers Under Mechanical Stress: Processing Cellulose Spectra Using Bandshift Difference Integrals

Adriana Šturcová, Stephen J. Eichhorn, and Michael C. Jarvis\*



2692 Novel Biobased Nanocomposites from Soybean Oil and Functionalized Organoclay





Yongshang Lu and Richard C. Larock\*

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\* In papers with more than one author, the asterisk indicates the name of the author to whom inquiries about the paper should be addressed.