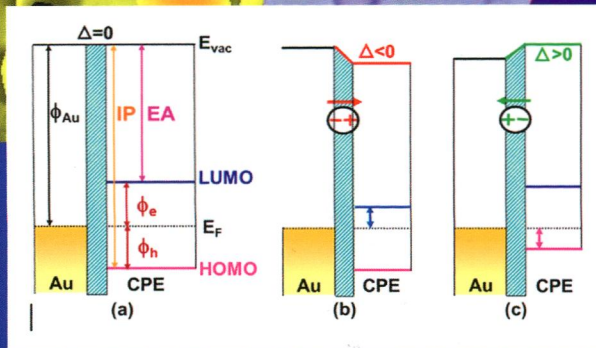
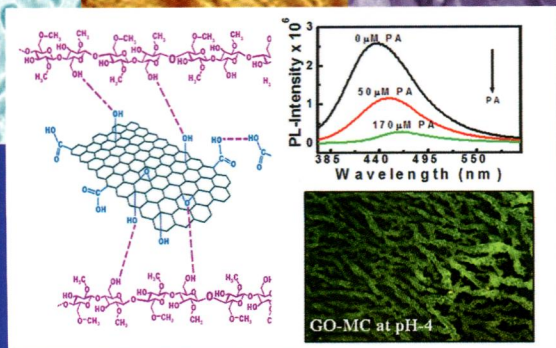
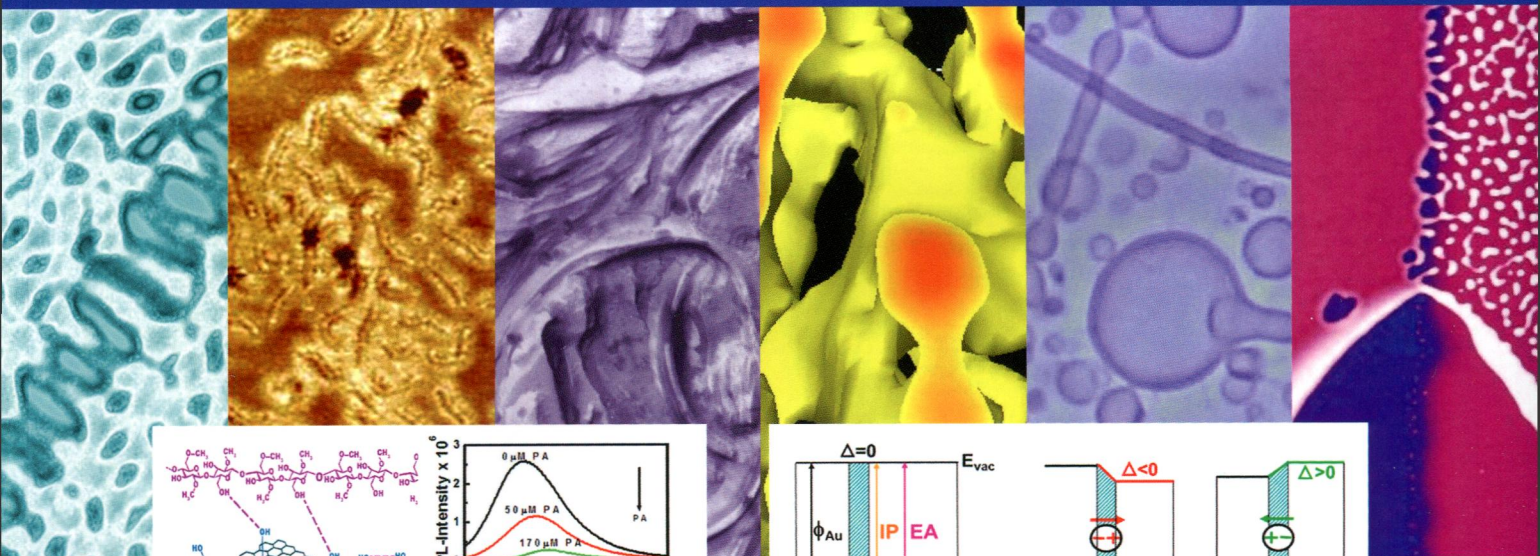
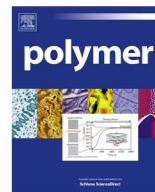


polymer





Polymer Vol. 54, No. 19, 23 August 2013

Contents

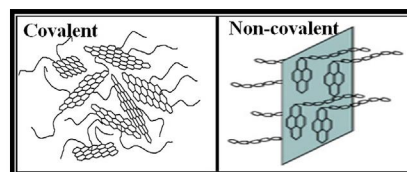
FEATURE ARTICLES

A review on synthesis and properties of polymer functionalized graphene

pp 5087–5103

Rama K. Layek, Arun K. Nandi*

Polymer Science Unit, Indian Association for the Cultivation of Science, Jadavpur, Kolkata 700 032, India



Conjugated polyelectrolytes: A new class of semiconducting material for organic electronic devices

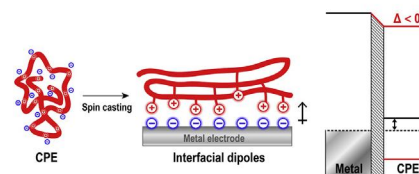
pp 5104–5121

Wonho Lee^{a,c}, Jung Hwa Seo^{b,**}, Han Young Woo^{a,c,*}

^a *Department of Nanofusion Engineering, Pusan National University, Miryang 627-706, Republic of Korea*

^b *Department of Materials Physics, Dong-A University, 604-714 Busan, Republic of Korea*

^c *Department of Cogno-Mechatronics Engineering (WCU), Pusan National University, Miryang 627-706, Republic of Korea*



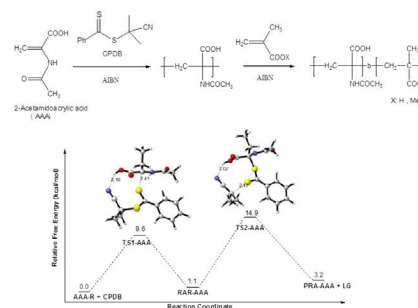
POLYMER PAPERS

First RAFT polymerization of captodative 2-acetamidoacrylic acid (AAA) monomer: An experimental and theoretical study

pp 5122–5132

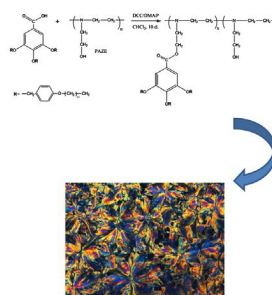
 Burcu Dedeoğlu^a, İlke Uğur^a, İsa Değirmenci^a, Viktorya Aviyente^a, Bilinç Barçın^b, Gökhan Çaylı^b, Havva Yagci Acar^{b,c,*}
^a Department of Chemistry, Bogazici University, Bebek, Istanbul 34342, Turkey

^b Graduate School of Materials Science and Engineering, Koc University, 34450 Sariyer, Istanbul, Turkey

^c Department of Chemistry, Koc University, 34450 Sariyer, Istanbul, Turkey

Liquid crystalline polyamines containing side dendrons: Toward the building of ion channels based on polyamines

pp 5133–5140

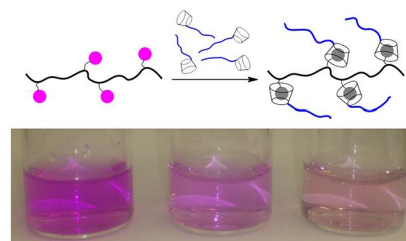
 Asta Šakalytė^a, José Antonio Reina^b, Marta Giamberini^{a,*}
^a Departament d'Enginyeria Química, Universitat Rovira i Virgili, Av. Països Catalans, 26, 43007 Tarragona, Spain

^b Departament de Química Analítica i Química Orgànica, Universitat Rovira i Virgili, Carrer Marcel·lí Domingo s/n, 43007 Tarragona, Spain

Visual recognition of supramolecular graft polymer formation via phenolphthalein–cyclodextrin association

pp 5141–5147

 Martin Hetzer^a, Carolin Fleischmann^a, Bernhard V.K.J. Schmidt^{b,c}, Christopher Barner-Kowollik^{b,c,**}, Helmut Ritter^{a,*}
^a Lehrstuhl für Präparative Polymerchemie, Institut für Organische Chemie und Makromolekulare Chemie, Heinrich-Heine Universität, Universitätsstraße 1, Geb. 26.33.00, 40225 Düsseldorf, Germany

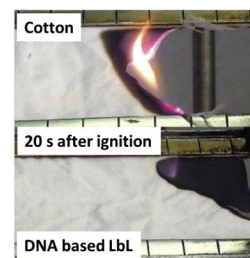
^b Preparative Macromolecular Chemistry, Institut für Technische Chemie und Polymerchemie, Karlsruhe Institute of Technology (KIT), Engesserstraße 18, 76128 Karlsruhe, Germany

^c Institut für Biologische Grenzflächen, Karlsruhe Institute of Technology (KIT), Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany

Green DNA-based flame retardant coatings assembled through Layer by Layer

pp 5148–5153

Federico Carosio, Alessandro Di Blasio, Jenny Alongi, Giulio Malucelli*

Dipartimento di Scienza Applicata e Tecnologia, Politecnico di Torino, Viale Teresa Michel 5, 15121 Alessandria, Italy

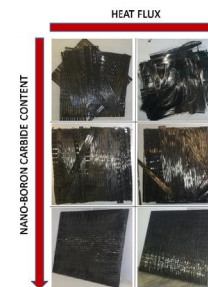


Effect of boron carbide nanoparticles on the fire reaction and fire resistance of carbon fiber/epoxy composites

pp 5154–5165

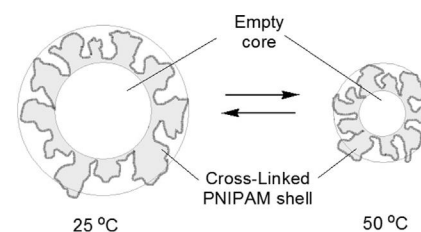
Marco Rallini, Maurizio Natali, José M. Kenny, Luigi Torre*

University of Perugia, Civil and Environmental Engineering Department, Strada di Pentima, 4, 05100 Terni, Italy



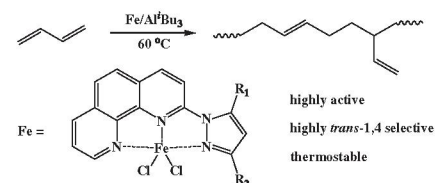
Hydroxyl end-functionalized poly(2-isopropyl oxazoline)s used as nano-sized colloidal templates for preparation of hollow polymeric nanocapsules

pp 5166–5173

N. Toncheva^a, Ch. Tsvetanov^a, S. Rangelov^{a,*}, B. Trzebicka^b, A. Dworak^b^a Institute of Polymers, Bulgarian Academy of Sciences, Acad. G. Bonchev 103-A, 1113 Sofia, Bulgaria^b Centre of Polymer and Carbon Materials, Polish Academy of Sciences, 34 M. Curie-Skłodowska, 41-819 Zabrze, Poland

Highly active and *trans*-1,4 specific polymerization of 1,3-butadiene catalyzed by 2-pyrazolyl substituted 1,10-phenanthroline ligated iron (II) complexes

pp 5174–5181

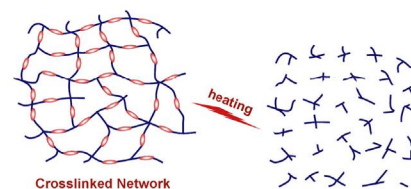
Baolin Wang^{a,b}, Jifu Bi^a, Chunyu Zhang^a, Quanquan Dai^a, Chenxi Bai^a, Xuequan Zhang^{a,*}, Yanming Hu^{c,**}, Liansheng Jiang^a^a Research Center of High Performance Synthetic Rubber, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, 5625 Renmin Street, Changchun 130022, PR China^b University of Chinese Academy of Sciences, Beijing 100049, PR China^c State Key Laboratory of Fine Chemicals, Department of Polymer Science and Engineering, School of Chemical Engineering, Dalian University of Technology, Dalian 116012, PR China

Synthesis of phosphite-type trifunctional cycloaliphatic epoxide and the decrosslinking behavior of its cured network

pp 5182–5187

Zhuo Chen, Linni Zhao, Zhonggang Wang*

State Key Laboratory of Fine Chemicals, Department of Polymer Science and Materials, School of Chemical Engineering, Dalian University of Technology, Zhongshan Road 158, Dalian 116012, PR China

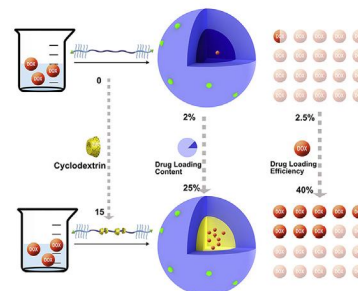


A tumor-targeting nano doxorubicin delivery system built from amphiphilic polyrotaxane-based block copolymers

pp 5188–5198

Lan Jiang, Ze-ming Gao, Lin Ye, Ai-ying Zhang, Zeng-guo Feng*

School of Materials Science and Engineering, Beijing Institute of Technology, Beijing 100081, China

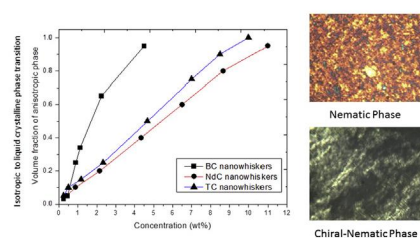


Self-assembly of bacterial and tunicate cellulose nanowhiskers

pp 5199–5206

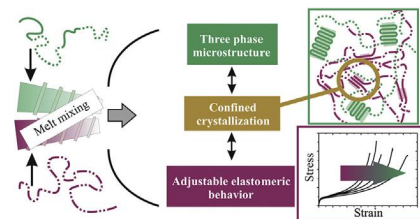
Mudrika Khandelwal, Alan H. Windle*

Department of Metallurgy and Materials Science, University of Cambridge, Cambridge, UK



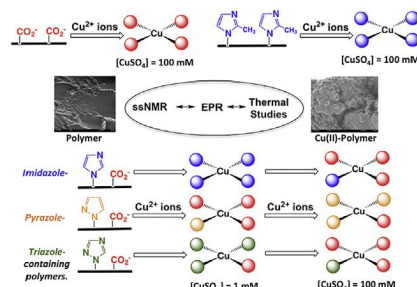
Blends of ethylene–octene copolymers with different chain architectures – Morphology, thermal and mechanical behavior

pp 5207–5213

Stefan Hölzer^{a,b}, Matthias Menzel^a, Qamer Zia^a, Ulrich Sigmar Schubert^b, Mario Beiner^{a,c,*}, Roland Weidisch^{a,c}^aFraunhofer-Institut für Werkstoffmechanik IWM, Walter-Hülse-Str. 1, 06120 Halle (Saale), Germany^bLaboratory of Organic and Macromolecular Chemistry (IOMC), and Jena Center for Soft Matter (JCSM), Friedrich-Schiller-Universität Jena, 07743 Jena, Germany^cInstitut für Chemie, Martin-Luther-Universität Halle-Wittenberg, 06099 Halle (Saale), Germany

Insights into the coordination sphere of copper ion in polymers containing carboxylic acid and azole groups

pp 5214–5221

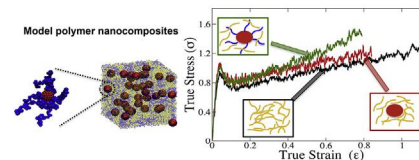
Juan M. Lázaro-Martínez^{a,b}, Gustavo A. Monti^a, Ana K. Chattah^{a,*}^aFaMAF-Universidad Nacional de Córdoba & IFEG-CONICET, Medina Allende s/n, X5000HUA Córdoba, Argentina^bDepartamento de Química Orgánica, Facultad de Farmacia y Bioquímica, Universidad de Buenos Aires, Junín 956, C1113AAD Ciudad Autónoma de Buenos Aires, Argentina

Effect of particle size and grafting density on the mechanical properties of polymer nanocomposites

pp 5222–5229

Huikuan Chao, Robert A. Riggleman*

Department of Chemical and Biomolecular Engineering, University of Pennsylvania, Philadelphia, PA 19104, USA



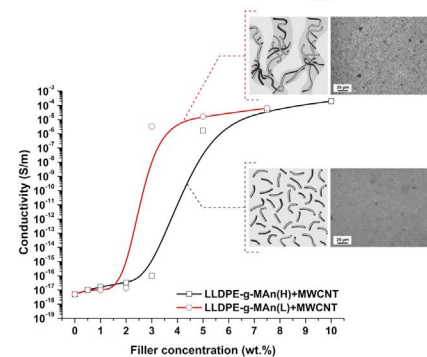
The role of non-covalent interactions and matrix viscosity on the dispersion and properties of LLDPE/MWCNT nanocomposites

pp 5230–5240

Alexandros A. Vasileiou^a, Aristides Docoslis^a, Marianna Kontopoulou^{a,*}, Peng Xiang^b, Zhibin Ye^b

^a Department of Chemical Engineering, Queen's University, Kingston, Ontario K7L 3N6, Canada

^b Bharti School of Engineering, Laurentian University, Sudbury, Ontario P3E 2C6, Canada

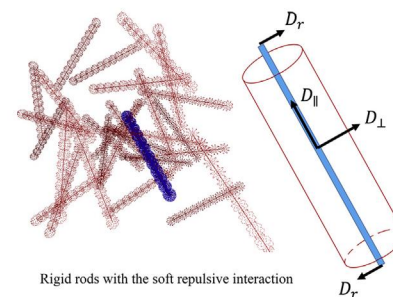


Diffusion of rigid rodlike polymer in isotropic solutions studied by dissipative particle dynamics simulation

pp 5241–5249

Tongyang Zhao, Xiaogong Wang*

Department of Chemical Engineering, Laboratory of Advanced Materials (MOE), Tsinghua University, Beijing 100084, PR China



Effects of hard and soft components on the structure formation, crystallization behavior and mechanical properties of electrospun poly(L-lactic acid) nanofibers

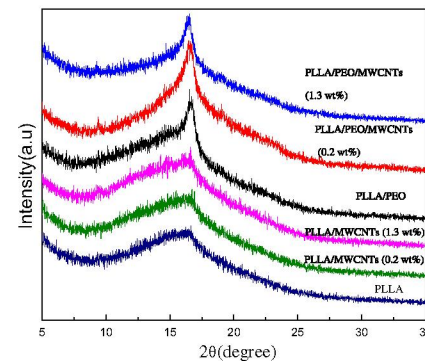
pp 5250–5256

Li Liu^a, Yanyan Ren^c, Yu Li^c, Yongri Liang^{b,*}

^a State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, China

^b State Key Laboratory of Polymer Physics and Chemistry, Institute of Chemistry Chinese Academy of Sciences, Beijing 100190, China

^c Key Laboratory of Beijing City on Preparation and Processing of Novel Polymer Materials, Beijing University of Chemical Technology, Beijing 100029, China

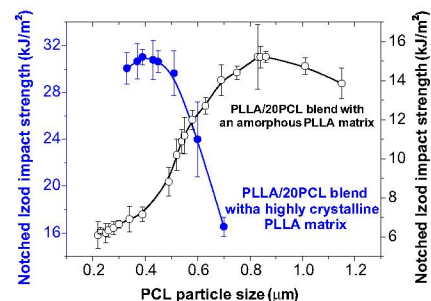


Toughening of poly(L-lactide) with poly(ϵ -caprolactone): Combined effects of matrix crystallization and impact modifier particle size

pp 5257–5266

Hongwei Bai, Chunmei Huang, Hao Xiu, Yao Gao, Qin Zhang, Qiang Fu*

College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu 610065, PR China

**OTHER CONTENT****Calendar**

*Corresponding author

Available online at www.sciencedirect.com**ScienceDirect**Full text of this journal is available, on-line from **ScienceDirect**. Visit www.sciencedirect.com for more information.Abstracted/indexed in: AGRICOLA, Beilstein, BIOSIS Previews, CAB Abstracts, Chemical Abstracts, Current Contents: Life Sciences, Current Contents: Physical, Chemical and Earth Sciences, Current Contents Search, Derwent Drug File, Ei compendex, EMBASE/Excerpta Medica, Medline, PASCAL, Research Alert, Science Citation Index, SciSearch. Also covered in the abstract and citation database SCOPUS[®]. Full text available on ScienceDirect[®]

ELSEVIER

ISSN 0032-3861

Author Index

- Acar, H. Y. 5122
 Alongi, J. 5148
 Aviyente, V. 5122
- Bai, C. 5174
 Bai, H. 5257
 Barçın, B. 5122
 Barner-Kowollik, C. 5141
 Beiner, M. 5207
 Bi, J. 5174
- Carosio, F. 5148
 Çaylı, G. 5122
 Chao, H. 5222
 Chattah, A. K. 5214
 Chen, Z. 5182
- Dai, Q. 5174
 Dedeoğlu, B. 5122
 Değirmenci, İ. 5122
 Di Blasio, A. 5148
 Docoslis, A. 5230
 Dworak, A. 5166
- Feng, Z.-g. 5188
 Fleischmann, C. 5141
 Fu, Q. 5257
- Gao, Y. 5257
 Gao, Z.-m. 5188
 Giamberini, M. 5133
- Hetzer, M. 5141
 Hölzer, S. 5207
- Hu, Y. 5174
 Huang, C. 5257
- Jiang, L. 5174, 5188
- Kenny, J. M. 5154
 Khandelwal, M. 5199
 Kontopoulou, M. 5230
- Layek, R. K. 5087
 Lázaro-Martínez, J. M. 5214
 Lee, W. 5104
 Li, Y. 5250
 Liang, Y. 5250
 Liu, L. 5250
- Malucelli, G. 5148
 Menzel, M. 5207
 Monti, G. A. 5214
- Nandi, A. K. 5087
 Natali, M. 5154
- Rallini, M. 5154
 Rangelov, S. 5166
 Reina, J. A. 5133
 Ren, Y. 5250
 Riggleman, R. A. 5222
 Ritter, H. 5141
- Šakalytė, A. 5133
 Schmidt, B. V. K. J. 5141
 Schubert, U. S. 5207
 Seo, J. H. 5104
- Toncheva, N. 5166
 Torre, L. 5154
 Trzebicka, B. 5166
 Tsvetanov, C. 5166
- Uğur, İ. 5122
- Vasileiou, A. A. 5230
- Wang, B. 5174
 Wang, X. 5241
 Wang, Z. 5182
 Weidisch, R. 5207
 Windle, A. H. 5199
 Woo, H. Y. 5104
- Xiang, P. 5230
 Xiu, H. 5257
- Ye, L. 5188
 Ye, Z. 5230
- Zhang, A.-y. 5188
 Zhang, C. 5174
 Zhang, Q. 5257
 Zhang, X. 5174
 Zhao, L. 5182
 Zhao, T. 5241
 Zia, Q. 5207