



## Graphical Abstracts/Eur Polym J 49 (2013) 3747–3760

## MACROMOLECULAR NANOTECHNOLOGY

**Tailoring the morphology and properties of waterborne polyurethanes by the procedure of cellulose nanocrystal incorporation**

Eur Polym J 49 (2013) 3761

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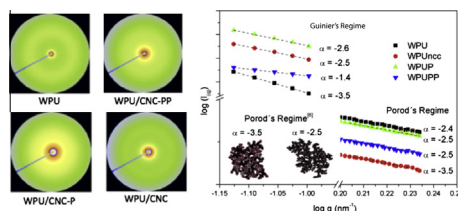
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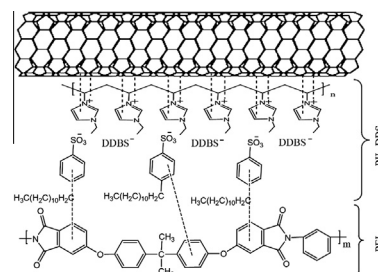
**Polymerized ionic liquid functionalized multi-walled carbon nanotubes/polyetherimide composites**

Eur Polym J 49 (2013) 3770

Meltem Tunckol<sup>a</sup>, Ester Zuza Hernandez<sup>b</sup>, Jose-Ramon Sarasua<sup>b</sup>, Jérôme Durand<sup>a</sup>, Philippe Serp<sup>a</sup>

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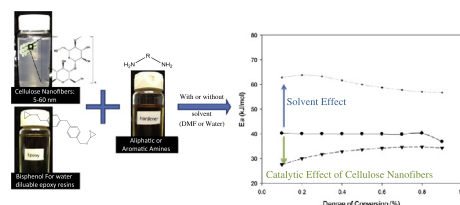
<sup>b</sup>Department of Mining-Metallurgy Engineering and Materials Science, Basque Excellence Research Center for Macromolecular Design and Engineering POLYMAT, School of Engineering, University of the Basque Country (UPV/EHU), Alameda de Urquijo s/n, 48013 Bilbao, Spain

**Influence of cellulose nanofibers on the curing behavior of epoxy/amine systems**

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Pei-Yu Kuo, Ning Yan, Mohini Sain

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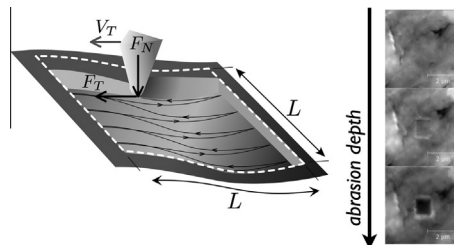
### Nano-mechanical properties of starch and gluten biopolymers from atomic force microscopy

Emna Chichti<sup>a,c</sup>, Matthieu George<sup>b</sup>, Jean-Yves Delenne<sup>a</sup>, Farhang Radjai<sup>c</sup>, Valérie Lullien-Pellerin<sup>a</sup>

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### Controlled assembly of superparamagnetic iron oxide nanoparticles on electrospun PU nanofibrous membrane: A novel heat-generating substrate for magnetic hyperthermia application

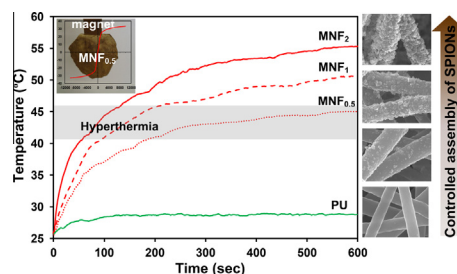
Altangerel Amarjargal<sup>a,b</sup>, Leonard D. Tijjing<sup>c,d</sup>, Chan-Hee Park<sup>a</sup>, Ik-Tae Im<sup>c</sup>, Cheol Sang Kim<sup>a,c</sup>

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<sup>b</sup>Power Engineering School, Mongolian University of Science and Technology, Ulaanbaatar, Mongolia

<sup>c</sup>Division of Mechanical Design Engineering, Chonbuk National University, Jeonju, Jeonbuk 561-756, Republic of Korea

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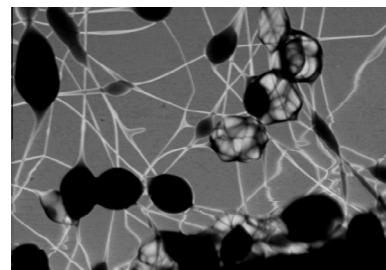
Eur Polym J 49 (2013) 3796

### Fragrance encapsulation in polymeric matrices by emulsion electrospinning

Agathe Camerlo<sup>a,b</sup>, Corinne Vebert-Nardin<sup>b</sup>, René M. Rossi<sup>a</sup>, Ana.-M. Popa<sup>a</sup>

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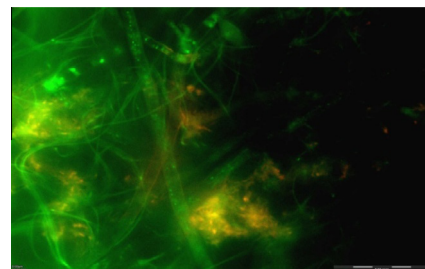


Eur Polym J 49 (2013) 3806

### Modified electrospun polymer nanofibers as affinity membranes: The effect of pre-spinning modification versus post-spinning modification

Lizl Cronje, Bert Klumperman

Department of Chemistry and Polymer Science, Stellenbosch University, Private Bag X1, Stellenbosch, Matieland 7602, South Africa



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### Preparation and thermal properties of graphene oxide/main chain benzoxazine polymer

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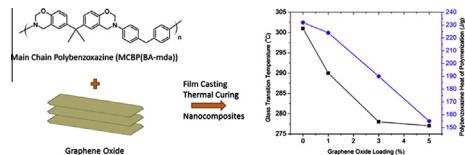
Saeed M. Alhassan<sup>a</sup>, Syed Qutubuddin<sup>b</sup>, David A. Schiraldi<sup>c</sup>, Tarek Agag<sup>d</sup>, Hatsuo Ishida<sup>c</sup>

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<sup>c</sup>Department of Macromolecular Science and Engineering, Case Western Reserve University, Cleveland, OH 44106, United States

<sup>d</sup>Lord Corporation, Erie, PA, United States

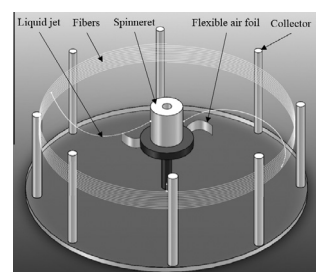


### Parameter study and characterization for polyacrylonitrile nanofibers fabricated via centrifugal spinning process

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Yao Lu, Ying Li, Shu Zhang, Guanjie Xu, Kun Fu, Hun Lee, Xiangwu Zhang

Fiber and Polymer Science Program, Department of Textiles Engineering, Chemistry and Science, North Carolina State University, Raleigh, NC 27695-8301, USA

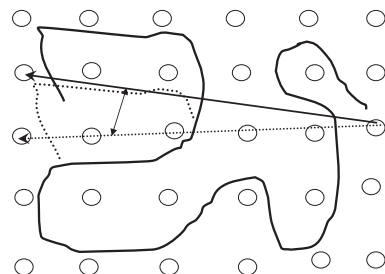


### Bottom-up self-organizing dissipative polymer nanostructures

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A.N. Yakunin

Karpov Institute of Physical Chemistry, per. Obukha 3-1/12, Str. 6, Moscow 105064, Russia



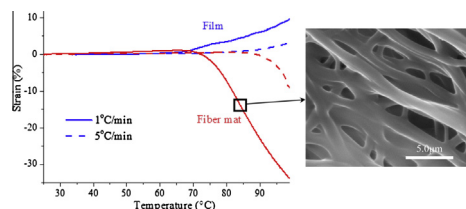
### Thermo-mechanical behavior of electrospun thermoplastic polyurethane nanofibers

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Dmitriy Alhazov<sup>a</sup>, Arkadiusz Gradyś<sup>a,b</sup>, Pawel Sajkiewicz<sup>b</sup>, Arkadii Arinstein<sup>a</sup>, Eyal Zussman<sup>a</sup>

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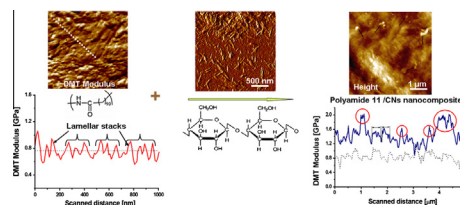


### Micro- and nano-mechanical characterization of polyamide 11 and its composites containing cellulose nanofibers

Denis Mihaela Panaitescu, Adriana Nicoleta Frone, Cristian Nicolae

National Institute for Research and Development in Chemistry and Petrochemistry, Polymer Department, 202 Spl. Independentei, 060021 Bucharest, Romania

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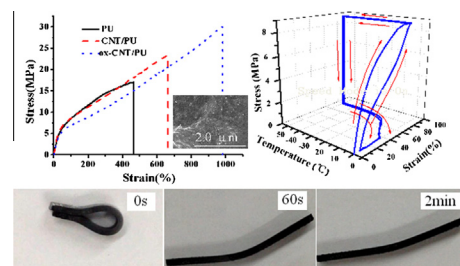
### Carbon nanotube–polyurethane shape memory nanocomposites with low trigger temperature

Shuying Gu<sup>a,b</sup>, Beibei Yan<sup>a</sup>, Lingling Liu<sup>a</sup>, Jie Ren<sup>a,b</sup>

<sup>a</sup>School of Materials Science and Engineering, Tongji University, Shanghai 201804, PR China

<sup>b</sup>Key Laboratory of Advanced Civil Engineering Materials, Ministry of Education, School of Materials Science and Engineering, Tongji University, Shanghai 201804, PR China

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### Preparation and characterization of graphite nano-platelet (GNP)/epoxy nano-composite: Mechanical, electrical and thermal properties

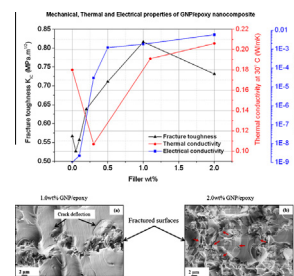
Swetha Chandrasekaran<sup>a</sup>, Christian Seidel<sup>c</sup>, Karl Schulte<sup>a,b</sup>

<sup>a</sup>Institut für Kunststoffe und Verbundwerkstoffe, Technische Universität Hamburg-Harburg, Denickestrasse, 15, D-21073 Hamburg, Germany

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### Synthesis and properties of near IR induced self-healable polyurethane/graphene nanocomposites

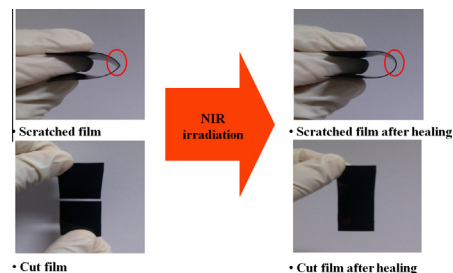
Jin Tae Kim<sup>a</sup>, Byung Kyu Kim<sup>a</sup>, Eun Young Kim<sup>a</sup>, Sun Hong Kwon<sup>b</sup>, Han Mo Jeong<sup>c</sup>

<sup>a</sup>Department of Polymer Science and Engineering, Pusan National University, Busan 609-737, Republic of Korea

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<sup>c</sup>Department of Chemistry, University of Ulsan, Ulsan 680-749, Republic of Korea

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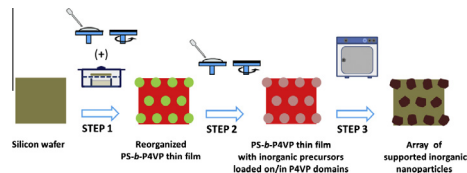


## A simple route to ordered metal oxide nanoparticle arrays using block copolymer thin films

Marjorie Roulet, Marylène Vayer, Christophe Sinturel

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1b rue de la Fêrrollerie, 45071 Orléans cedex 2, France

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## REGULAR ARTICLES

## Effects of the polymerization temperature on the structure, morphology and conductivity of polyaniline prepared with ammonium peroxodisulfate

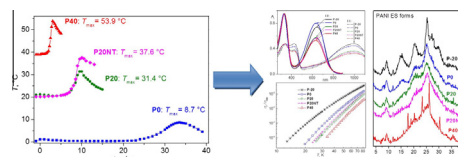
Michal Bláha<sup>a</sup>, Martin Varga<sup>b</sup>, Jan Prokeš<sup>b</sup>, Alexander Zhigunov<sup>a</sup>, Jiří Vohlídal<sup>c</sup>

<sup>a</sup>Institute of Macromolecular Chemistry, Academy of Sciences of the Czech Republic, Heyrovského sq. 2, CZ-162 06 Prague 6, Czech Republic

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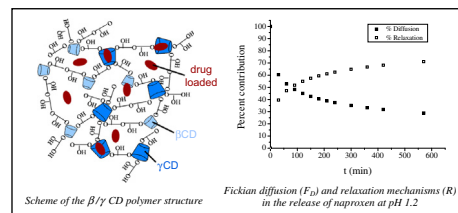


## Hydrogel matrices containing single and mixed natural cyclodextrins. Mechanisms of drug release

Rubén Machín, José Ramón Isasi, Itziar Vélaz

Department of Chemistry and Soil Science, Faculty of Sciences, University of Navarra, C/Iruñlarrea s/n. Pamplona, 31080 Navarra, Spain

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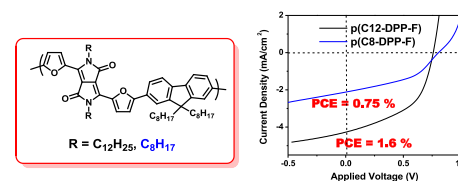
## Synthesis and photovoltaic properties of a furan-diketopyrrolopyrrole-fluorene terpolymer

Ganapathy Balaji<sup>a</sup>, Mehran Samiee Esfahani<sup>a</sup>, Pranav Joshi<sup>a</sup>, Joydeep Bhattacharaya<sup>a</sup>, Malika Jeffries-EL<sup>b</sup>, Vikram Dalal<sup>a</sup>

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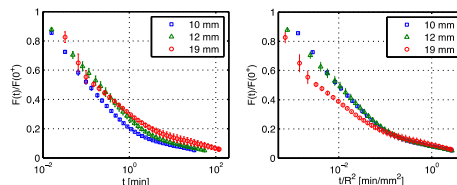
<sup>b</sup>Department of Chemistry, Iowa State University, Ames 50011, USA

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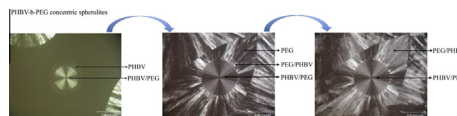
### Stress-relaxation behavior of a physical gel: Evidence of co-occurrence of structural relaxation and water diffusion in ionic alginate gels

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Giancarmine Gentile<sup>a,b</sup>, Francesco Greco<sup>c</sup>, Domenico Larobina<sup>a,b</sup><sup>a</sup>Institute of Composite and Biomedical Materials – National Research Council of Italy, CNR – P.le E. Fermi 1, 80055 Portici, Naples, Italy<sup>b</sup>National Institute of Material Science and Technology INSTM Udr of Naples, Italy<sup>c</sup>Institute for Research on Combustion – National Research Council of Italy, CNR – P.le V. Tecchio 80, 80125 Naples, Italy

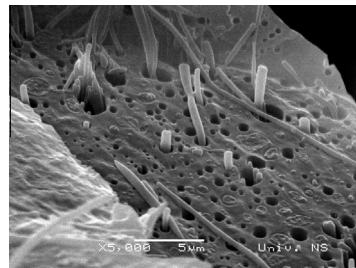
### Evolution of concentric spherulites in crystalline-crystalline poly(3-hydroxybutyrate-co-3-hydroxyvalerate)-b-poly(ethylene glycol) copolymers

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Qingsheng Liu<sup>a,b</sup>, Meifang Zhu<sup>a</sup>, Bingyao Deng<sup>b</sup>, Chia-Hsin Tung<sup>c</sup>, Tien-Wei Shyr<sup>c</sup><sup>a</sup>State Key Laboratory for Modification of Chemical Fibers and Polymer Materials, Donghua University, Shanghai 201620, PR China<sup>b</sup>Key Laboratory of Eco-textiles (Ministry of Education), Jiangnan University, Wuxi 214122, PR China<sup>c</sup>Department of Fiber and Composite Materials, Feng Chia University, Taichung 40724, Taiwan

### Novel elastomeric polyurethane fibers modified with polypropylene microfibers

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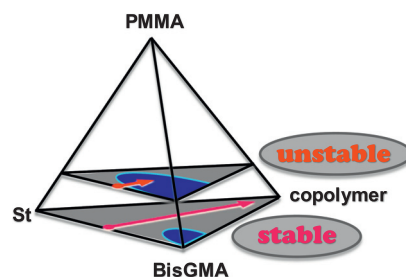
Vladislav Jašo<sup>a</sup>, Jelena Milić<sup>b</sup>, Vladimir Divjaković<sup>c</sup>, Zoran S. Petrović<sup>b</sup><sup>a</sup>Faculty of Technology, University of Novi Sad, Bulevar cara Lazara 1, 21000 Novi Sad, Serbia<sup>b</sup>Pittsburg State University, Kansas Polymer Research Center, 1701 South Broadway, Pittsburg, KS 66762, USA<sup>c</sup>Faculty of Sciences, University of Novi Sad, Trg Dositeja Obradovića 4, 21000 Novi Sad, Serbia

### Free-radical polymerization induced macrophase separation in poly(methyl methacrylate)/dimethacrylate blends: Experiment and modeling

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Walter F. Schroeder, Mirta I. Aranguren, Guillermo E. Elicabe, Julio Borrajo

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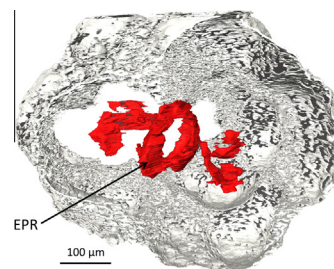


### Morphological analysis of high-impact polypropylene using X-ray microCT and AFM

Klára Smolná<sup>a</sup>, Tomáš Gregor<sup>b</sup>, Juraj Kosek<sup>a</sup>

<sup>a</sup>Department of Chemical Engineering, Institute of Chemical Technology Prague, Department of Chemical Technology, Technická 5, 166 28 Prague 6, Czech Republic  
<sup>b</sup>Research Centre New Technologies, University of West Bohemia, Univerzitní 8, 306 14 Pilsen, Czech Republic

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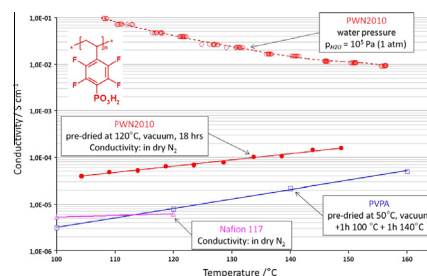


### Highly phosphonated polypentafluorostyrene: Characterization and blends with polybenzimidazole

Vladimir Atanasov<sup>a</sup>, Dietrich Gudat<sup>b</sup>, Bastian Ruffmann<sup>c</sup>, Jochen Kerres<sup>a,d</sup>

<sup>a</sup>Institute of Chemical Process Engineering, University of Stuttgart, Germany  
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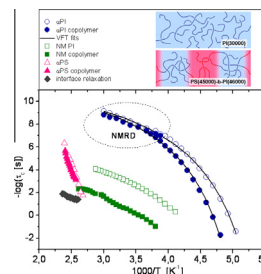


### The segmental and global dynamics in lamellar microphase-separated poly(styrene-*b*-isoprene) diblock copolymer studied by <sup>1</sup>H NMR and dielectric spectroscopy

Jacek Jenczyk<sup>a</sup>, Maria Dobies<sup>b</sup>, Monika Makrocka-Rydzik<sup>b</sup>, Aleksandra Wypych<sup>c</sup>, Stefan Jurga<sup>a,b</sup>

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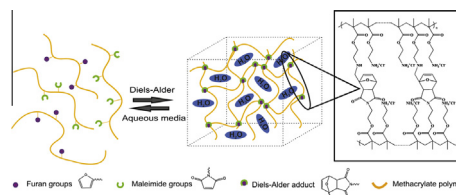
### Green chemistry for the synthesis of methacrylate-based hydrogels crosslinked through Diels-Alder reaction

C. García-Astrain<sup>a</sup>, A. Gandini<sup>b</sup>, D. Coelho<sup>a</sup>, I. Mondragon<sup>a</sup>, A. Retegi<sup>a</sup>, A. Eceiza<sup>a</sup>, M.A. Corcuera<sup>a</sup>, N. Gabilondo<sup>a</sup>

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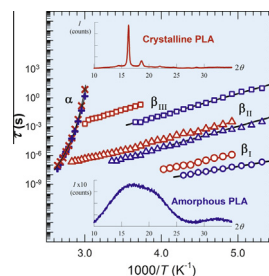
<sup>b</sup>São Carlos Materials Engineering Department and Institute of Chemistry, University of São Paulo, 13566-590 São Carlos, Brazil

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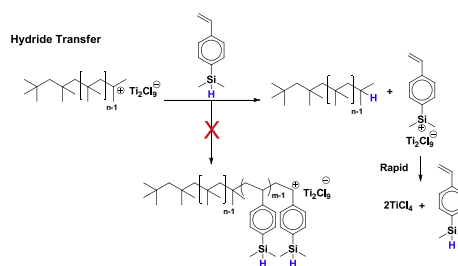
### Molecular dynamics and crystallization precursors in polylactide and poly(lactide)/CNT biocomposites in the insulating state

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Estrella Laredo<sup>a</sup>, Mario Grimau<sup>b</sup>, Alfredo Bello<sup>a</sup>, Defeng Wu<sup>c</sup><sup>a</sup>Departamento de Física, Universidad Simón Bolívar, Apartado 89000, Caracas 1090, Venezuela<sup>b</sup>Departamento de Ciencia de los Materiales, Universidad Simón Bolívar, Apartado 89000, Caracas 1090, Venezuela<sup>c</sup>School of Chemistry and Chemical Engineering, Yangzhou University, Yangzhou, Jiangsu 225002, PR China

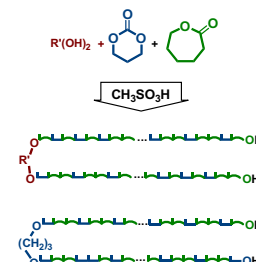
### Functionalization of living polyisobutylene: Preference for reduction over electrophilic addition

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Vijay Chavan<sup>a</sup>, Judit E. Puskas<sup>a,b</sup>, Roderic P. Quirk<sup>a</sup>, Kwang Su Seo<sup>b</sup><sup>a</sup>Department of Polymer Science, The University of Akron, Akron, OH 44325, United States<sup>b</sup>Department of Chemical and Biomolecular Engineering, The University of Akron, Akron, OH 44325, United States

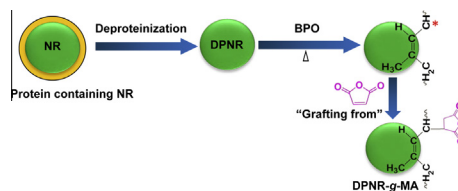
### Copolymerisation of ε-caprolactone and trimethylene carbonate catalysed by methanesulfonic acid

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João M. Campos<sup>a</sup>, M. Rosário Ribeiro<sup>a</sup>, M. Filipa Ribeiro<sup>a</sup>, Alain Deffieux<sup>b,c</sup>, Frédéric Peruch<sup>b,c</sup><sup>a</sup>Instituto de Biotecnologia e Bioengenharia, Departamento de Engenharia Química, Instituto Superior Técnico, Universidade Técnica de Lisboa, Av. Rovisco Pais 1, 1049-001 Lisboa, Portugal<sup>b</sup>Univ. Bordeaux, LCPO, UMR 5629, F-33600 Pessac, France<sup>c</sup>CNRS, LCPO, UMR 5629, F-33600 Pessac, France

### Modification of deproteinized natural rubber via grafting polymerization with maleic anhydride

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Pinyo Wongthong<sup>a</sup>, Charoen Nakason<sup>b</sup>, Qinmin Pan<sup>c</sup>, Garry L. Rempel<sup>d</sup>, Suda Kiatkamjornwong<sup>a,e</sup><sup>a</sup>Program of Petrochemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand<sup>b</sup>Department of Rubber Technology and Polymer Science, Faculty of Science and Technology, Prince of Songkla University, Pattani 94000, Thailand<sup>c</sup>Green Polymer and Catalysis Technology Laboratory, Soochow University, Suzhou 215123, People's Republic of China<sup>d</sup>Department of Chemical Engineering, Faculty of Engineering, University of Waterloo, Ontario N2L3G1, Canada<sup>e</sup>Academy of Science, the Royal Institute of Thailand, Sanam Sueapa, Dusit, Bangkok 10300, Thailand



### Depth-sensing indentation applied to polymers: A comparison between standard methods of analysis in relation to the nature of the materials

J. Giró-Paloma<sup>a</sup>, J.J. Roa<sup>b</sup>, A.M. Díez-Pascual<sup>c</sup>, E. Rayón<sup>d</sup>, A. Flores<sup>e</sup>, M. Martínez<sup>a</sup>, J.M. Chimenos<sup>a</sup>, A.I. Fernández<sup>a</sup>

<sup>a</sup>Universitat de Barcelona, Departament de Ciència dels Materials i Eng. Metal·lúrgica, Barcelona, Spain

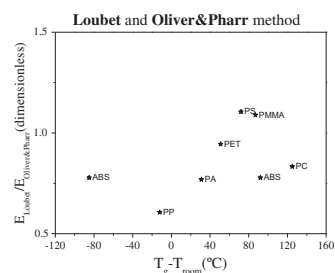
<sup>b</sup>CIEFMA-Universitat Politècnica de Catalunya, Departament de Ciència dels Materials i Eng. Metal·lúrgica, Barcelona, Spain

<sup>c</sup>Institute of Polymer Science and Technology (ICTP-CSIC), Madrid, Spain

<sup>d</sup>Universitat Politècnica de València, Instituto de Ciencia de los Materiales, Valencia, Spain

<sup>e</sup>Department of Macromolecular Physics, Institute for Structure of Matter (IEM-CSIC), Madrid, Spain

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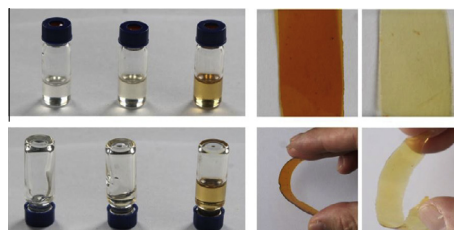
### Film-forming characteristics and thermal stability of low viscosity benzoxazines derived from melamine

Junli Shi<sup>a</sup>, Xinsheng Zheng<sup>a</sup>, Liping Xie<sup>a</sup>, Feifei Cao<sup>a</sup>, Ying Wu<sup>a</sup>, Wenbin Liu<sup>b</sup>

<sup>a</sup>Institute of Chemical Biology, Department of Chemistry, Huazhong Agricultural University, Wuhan 430070, PR China

<sup>b</sup>College of Materials Science and Chemical Engineering, Harbin Engineering University, Harbin 150001, PR China

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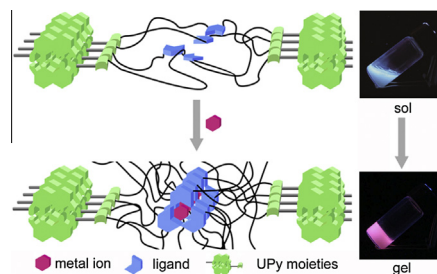


### Multiresponsive supramolecular gels constructed by orthogonal metal–ligand coordination and hydrogen bonding

Wengui Weng, Xiuli Fang, Huan Zhang, Huiying Peng, Yangju Lin, Yinjun Chen

Department of Chemistry, College of Chemistry and Chemical Engineering, Xiamen University, 422 South Siming Road, Xiamen, Fujian 361005, PR China

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### Allylic monomers as reactive plasticizers of polyphenylene oxide. Part III – Rheological and mechanical properties

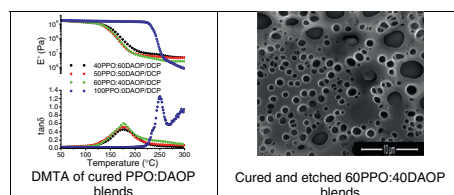
Arjulizan Rusli<sup>a,b</sup>, Wayne D. Cook<sup>a</sup>, Kei Saito<sup>c</sup>

<sup>a</sup>Department of Materials Engineering, Monash University, Clayton, Victoria 3800, Australia

<sup>b</sup>School of Materials & Mineral Resources Engineering, Universiti Sains Malaysia, 14300 Nibong Tebal, Pulau Pinang, Malaysia

<sup>c</sup>School of Chemistry, Monash University, Clayton, Victoria 3800, Australia

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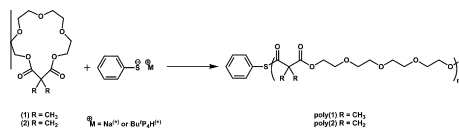
### Synthesis and anionic ring-opening polymerization of crown-ether-like macrocyclic dilactones: An alternative route to PEG-containing polyesters and related networks

Nicolas Illy<sup>a</sup>, Ediz Taylan<sup>b</sup>, Blandine Brissault<sup>a</sup>, Justyna Wojno<sup>a</sup>, Sylvie Boileau<sup>a</sup>, Valessa Barbier<sup>a</sup>, Jacques Penelle<sup>a</sup>

<sup>a</sup>Institut de Chimie et des Matériaux Paris-Est – East Paris Institute of Chemistry & Materials Science, CNRS and Université Paris-Est, 2-8 rue H. Dunant, F 94320 Thiais, France

<sup>b</sup>Department of Chemistry and Polymer Research Center, Boğaziçi University, Bebek, Istanbul 34342, Turkey

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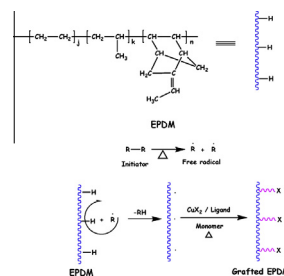
### Poly(meth)acrylate grafted EPDM via reverse atom transfer radical polymerization: A single pot process

Dhruba J. Haloi<sup>a,b</sup>, Kinsuk Naskar<sup>a</sup>, Nikhil K. Singha<sup>a</sup>

<sup>a</sup>Rubber Technology Centre, Indian Institute of Technology Kharagpur, Kharagpur 721302, India

<sup>b</sup>Zydex Industries, 25-A Gandhi Oil Mill Compound, Gorwa, Vadodara 390016, India

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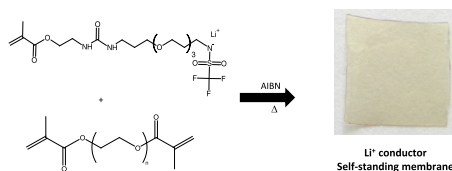
### Self-standing single lithium ion conductor polymer network with pendant trifluoromethanesulfonylimide groups: Li<sup>+</sup> diffusion coefficients from PFGSTE NMR

G.T.M. Nguyen<sup>a</sup>, A.L. Michan<sup>b</sup>, A. Fannir<sup>a</sup>, M. Viallon<sup>a</sup>, C. Vancaeyzeele<sup>a</sup>, C.A. Michal<sup>b</sup>, F. Vidal<sup>a</sup>

<sup>a</sup>Laboratoire de Physicochimie des Polymères et des Interfaces (LPPI, I-MAT), University of Cergy-Pontoise, 95000 Cergy-Pontoise, France

<sup>b</sup>Physics and Astronomy, University of British Columbia, Vancouver, BC V6T 1Z1, Canada

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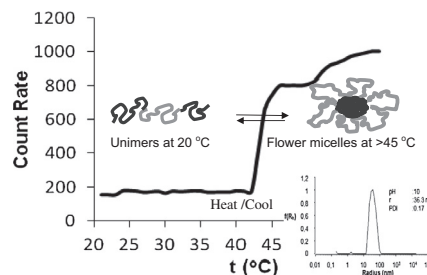
### The synthesis and solution behaviors of novel amphiphilic block copolymers based on D-galactopyranose and 2-(dimethylamino)ethyl methacrylate

Hülya Arslan<sup>a</sup>, Orçun Zırtıl<sup>a</sup>, Vural Bütün<sup>b</sup>

<sup>a</sup>Bülent Ecevit University, Department of Chemistry, 67100 Zonguldak, Turkey

<sup>b</sup>Eskişehir Osmangazi University, Department of Chemistry, 26480 Eskişehir, Turkey

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### Trans-stereospecific polymerization of butadiene and random copolymerization with styrene using borohydrido neodymium/magnesium dialkyl catalysts

A. Ventura<sup>a</sup>, T. Chenal<sup>b,c,d,e</sup>, M. Briat<sup>b,f</sup>, F. Bonnet<sup>b,c,d,e</sup>, P. Zinck<sup>b,c,d,e</sup>, Y. Ngono-Ravache<sup>a</sup>, E. Balanzat<sup>a</sup>, M. Visseaux<sup>b,c,d,e</sup>

<sup>a</sup>CIMAP : Centre de Recherche sur les Ions, les Matériaux et la Photonique, CEA-CNRS, BP 5133, 14070 Cedex 5, France

<sup>b</sup>Univ Lille Nord de France, F-59000 Lille, France

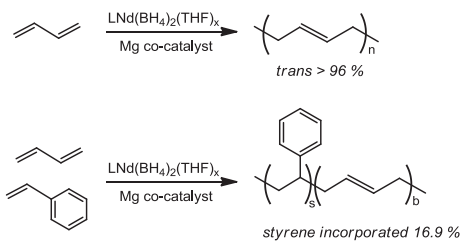
<sup>c</sup>ENSCL, UCCS, CCM, F-59652 Villeneuve d'Ascq, France

<sup>d</sup>USTL, UCCS, CCM, F-59655 Villeneuve d'Ascq, France

<sup>e</sup>CNRS, UMR8181, F-59652 Villeneuve d'Ascq, France

<sup>f</sup>USTL, CCM RMN, F-59000 Villeneuve d'Ascq, France

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### UV-curable coatings of highly crosslinked trimethylmelamine based acrylates and methacrylates

Klaus Bretterbauer<sup>a</sup>, Claudia Holzmann<sup>a</sup>, Egon Rubatscher<sup>b</sup>, Clemens Schwarzinger<sup>a</sup>, Albert Roessler<sup>b</sup>, Christian Paulik<sup>a</sup>

<sup>a</sup>Institute for Chemical Technology of Organic Materials, Johannes Kepler University Linz, Altenberger Strasse 69, 4040 Linz, Austria

<sup>b</sup>ADLER-Werk Lackfabrik, Johann Berghofer GmbH & Co KG, Bergwerkstrasse 22, 6130 Schwaz, Austria

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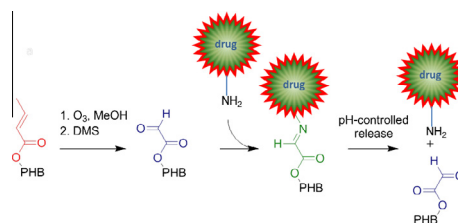
### Synthesis of PHB-based carrier for drug delivery systems with pH-controlled release

Michał Michalak<sup>a</sup>, Adam A. Marek<sup>b</sup>, Jan Zawadiak<sup>b</sup>, Michał Kawalec<sup>a</sup>, Piotr Kurcok<sup>a</sup>

<sup>a</sup>Centre of Polymer and Carbon Materials, Polish Academy of Sciences, 34, M. Curie-Skłodowska St., 41-819 Zabrze, Poland

<sup>b</sup>Department of Chemical Organic Technology and Petrochemistry, Silesian University of Technology, 4, Bolesława Krzywoustego St., 44-100 Gliwice, Poland

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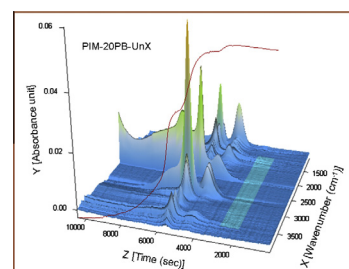


### Cross-linking of Polymer of Intrinsic Microporosity (PIM-1) via nitrene reaction and its effect on gas transport property

Muntazim Munir Khan, Gisela Bengtson, Sergey Shishatskiy, Bahadır N. Gacal, Md. Mushfequr Rahman, Silvio Neumann, Volkan Filiz, Volker Abetz

Helmholtz-Zentrum Geesthacht, Institute of Polymer Research, Max-Planck-Str. 1, 21502 Geesthacht, Germany

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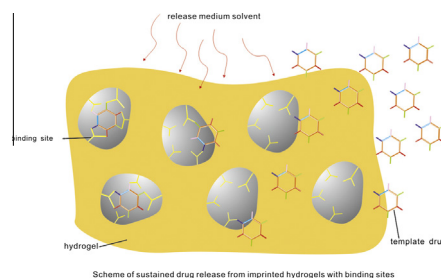
### Mathematical modeling and sustained release property of a 5-fluorouracil imprinted vehicle

Wentao Kan<sup>a</sup>, Xin Li<sup>b</sup>

<sup>a</sup>Institute of Nuclear Physics and Chemistry, China Academy of Engineering Physics, Mianyang, Sichuan 621900, China

<sup>b</sup>Department of Chemistry, Harbin Institute of Technology, Harbin, Heilongjiang 150001, China

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### Effect of spacer insertion in a commonly used dithienosilole/benzothiadiazole-based low band gap copolymer for polymer solar cells

Hussein Medlej<sup>a</sup>, Hussein Awada<sup>a,d</sup>, Mamatimin Abbas<sup>b</sup>, Guillaume Wantz<sup>b</sup>, Antoine Bousquet<sup>a</sup>, Eric Grelet<sup>c</sup>, Kamal Hariri<sup>d</sup>, Tayssir Hamieh<sup>d</sup>, Roger C. Hiorns<sup>e</sup>, Christine Dagon-Lartigau<sup>a</sup>

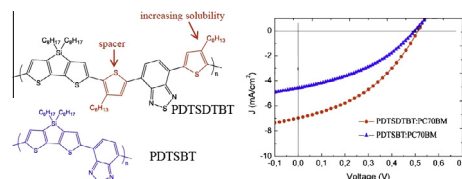
<sup>a</sup>IPREM CNRS-UMR 5254, Université de Pau et des Pays de l'Adour, Hélioparc, 2 avenue Président Angot, 64053 Pau Cedex 9, France

<sup>b</sup>Université de Bordeaux, Laboratoire IMS, UMR CNRS 5218, Ecole Nationale Supérieure de Chimie, Biologie et Physique, 16 Avenue Pey Berland, 33607 Pessac Cedex, France

<sup>c</sup>CNRS-Université de Bordeaux, Centre de Recherche Paul-Pascal, 115 Avenue Schweitzer, 33600 Pessac, France

<sup>d</sup>Laboratoire de Matériaux, Catalyse, Environnement et Méthodes Analytiques (MCEMA), Campus Rafic Hariri, Hadath, Lebanon

<sup>e</sup>CNRS, IPREM UMR 5254, Hélioparc, 2 avenue Président Angot, 64053 Pau Cedex 9, France



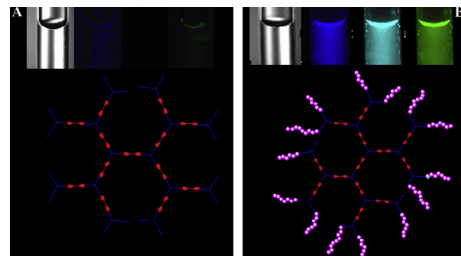
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### Strong fluorescence emission from PEGylated hyperbranched poly(amido amine)

Di Wang, Zhi-Qiang Yu, Chun-Yan Hong, Ye-Zi You

CAS Key Laboratory of Soft Matter Chemistry and Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, 230036 Anhui, PR China

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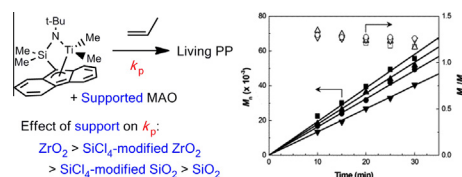


### Modification effect of spherical zirconia with SiCl<sub>4</sub> as a support of methylaluminoxane for heterogeneous single-site catalyst

Sasiradee Jantasee<sup>a</sup>, Bunjerd Jongsomjit<sup>a</sup>, Haruki Yano<sup>b</sup>, Takeshi Shiono<sup>b</sup>

<sup>a</sup>Center of Excellence on Catalysis and Catalytic Reaction Engineering, Department of Chemical Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok 10330, Thailand

<sup>b</sup>Department of Applied Chemistry, Graduate School of Engineering, Hiroshima University, Higashi-Hiroshima 739-8527, Japan



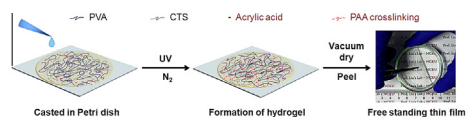
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### Fabrication and characterization of poly(vinyl alcohol)/chitosan hydrogel thin films via UV irradiation

Ngoc-Thang Nguyen, Jui-Hsiang Liu

Department of Chemical Engineering, National Cheng Kung University, Tainan 70101, Taiwan

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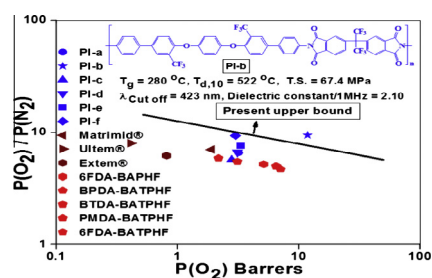


### Synthesis and characterization of new aromatic poly(ether imide)s and their gas transport properties

Tapas koley, Parthasarathi Bandyopadhyay, Aruna Kumar Mohanty, Susanta Banerjee

Materials Science Centre, Indian Institute of Technology, Kharagpur 721302, India

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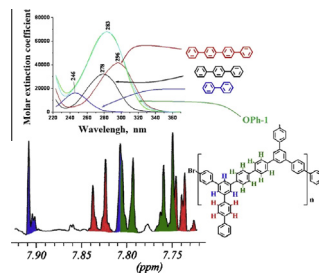
### Branched polyphenylenes and phenylene dendrimers: NMR and optical studies

Irina A. Khotina<sup>a</sup>, Roberto Consonni<sup>b</sup>, Natalia S. Kushakova<sup>a</sup>, William Porzio<sup>b</sup>, Umberto Giovanella<sup>b</sup>, Alexey I. Kovalev<sup>a</sup>, Marina A. Babushkina<sup>a</sup>, Alexander S. Peregudov<sup>a</sup>, Silvia Destri<sup>b</sup>

<sup>a</sup>A.N. Nesmeyanov Institute of Organoelement Compounds Russian Academy of Sciences, Vavilova str. 28, Moscow 119991, Russia

<sup>b</sup>Istituto per lo Studio delle Macromolecole del Consiglio Nazionale delle Ricerche, Via Bassini, 15, 20133 Milano, Italy

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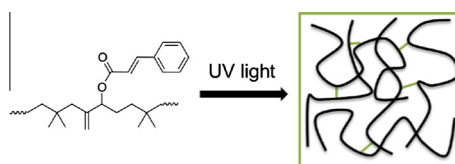
### Synthesis and application of cinnamate-functionalized rubber for the preparation of UV-curable films

Wei Wu<sup>a</sup>, Solmaz Karamdoust<sup>a</sup>, Bethany A. Turowec<sup>b</sup>, Elizabeth R. Gillies<sup>a,c</sup>

<sup>a</sup>Department of Chemistry, The University of Western Ontario, 1151 Richmond St., London N6A 5B7, Canada

<sup>b</sup>Biomedical Engineering Graduate Program, The University of Western Ontario, 1151 Richmond St., London N6A 5B9, Canada

<sup>c</sup>Department of Chemical and Biochemical Engineering, The University of Western Ontario, 1151 Richmond St., London N6A 5B9, Canada



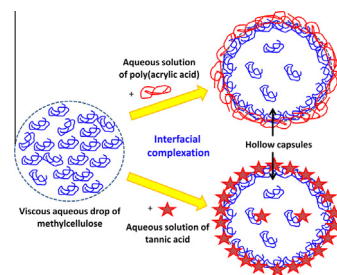
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### Hollow capsules formed in a single stage via interfacial hydrogen-bonded complexation of methylcellulose with poly(acrylic acid) and tannic acid

Krystie Driver, Sara Baco, Vitaliy V. Khutoryanskiy

Reading School of Pharmacy, University of Reading, Whiteknights, PO Box 224, Reading, United Kingdom

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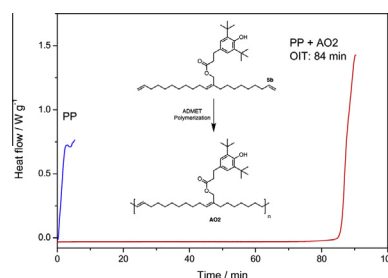


### Immobilization of antioxidants via ADMET polymerization for enhanced long-term stabilization of polyolefins

Stephan Beer, Ian Teasdale, Oliver Brueggemann

Institute of Polymer Chemistry, Johannes Kepler University Linz, A-4060 Leonding, Austria

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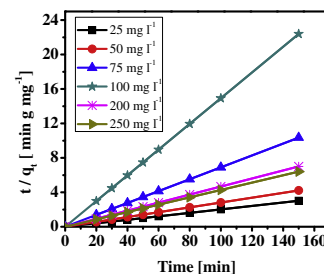


### Hydroxyethyl Starch-g-Poly-(N,N-dimethylacrylamide-co-acrylic acid): An efficient dye removing agent

Haradhan Kolya, Tridib Tripathy

Postgraduate Division of Chemistry, Midnapore College, Midnapore, Paschim Medinipur 721101, West Bengal, India

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### SHORT COMMUNICATION

### N-heterocyclic carbene enabled synthesis of conjugated polymers

Yasuo Suzuki<sup>a</sup>, Robert J. Ono<sup>a</sup>, Mitsuru Ueda<sup>b</sup>, Christopher W. Bielawski<sup>a</sup>

<sup>a</sup>Department of Chemistry and Biochemistry, The University of Texas at Austin, 1 University Station A1590, Austin, TX 78712, USA

<sup>b</sup>Department of Chemistry, Kanagawa University, 3-27-1 Rokkakubashi, Kanagawa-ku, Yokohama 221-8686, Japan

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