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# Graphical Abstracts/Eur Polym J 49 (2013) 1129–1143

**Publisher's Note** . . . . . 1144

***SPECIAL SECTION***
***BIO-BASED POLYMERS AND COMPOSITES 2012***

*Eur Polym J 49 (2013) 1146*

**Recent advances in bio-based polymers and composites. Preface to the BiPoCo 2012 Special Section**

B. Imre, B. Pukánszky

*Laboratory of Plastics and Rubber Technology, Department of Physical Chemistry and Materials Science, Budapest University of Technology and Economics, P.O. Box 91, H-1521 Budapest, Hungary*
*Institute of Materials and Environmental Chemistry, Research Centre for Natural Sciences, Hungarian Academy of Sciences, P.O. Box 17, H-1525 Budapest, Hungary*

*Eur Polym J 49 (2013) 1151*

**Oxidative upgrade of lignin – Recent routes reviewed**

Heiko Lange[a], Silvia Decina[a,b], Claudia Crestini[a]

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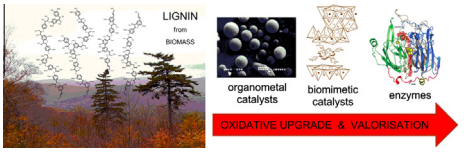
[b]*Tuscia University, Department of Ecology and Biological Sciences, Via San Camillo de Lellis, 01100 Viterbo, Italy*




*Eur Polym J 49 (2013) 1174*

**Green synthesis of flexible polyurethane foams from liquefied lignin**

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doi:10.1016/S0014-3057(13)00199-7

## Multi-functionalization of gallic acid. Synthesis of a novel bio-based epoxy resin

Eur Polym J 49 (2013) 1185

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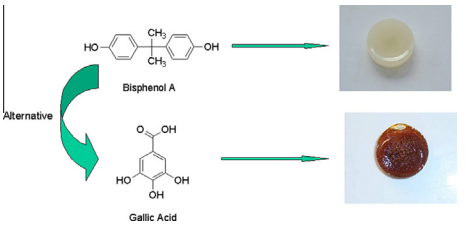


## Processing stabilisation of PE with a natural antioxidant, curcumin

Eur Polym J 49 (2013) 1196

Dóra Tátraaljai, Balázs Kirschweng, János Kovács, Enikő Földes, Béla Pukánszky

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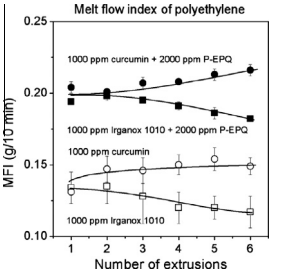


## Characterization of polyurethane networks structure and properties based on rapeseed oil derived polyol

Eur Polym J 49 (2013) 1204

Anda Fridrihsone, Uldis Stirna, Brigita Lazdiņa, Marija Misāne, Dzintra Vilsone

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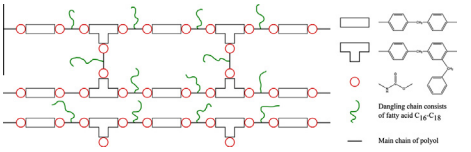


## Compatibilization in bio-based and biodegradable polymer blends

Eur Polym J 49 (2013) 1215

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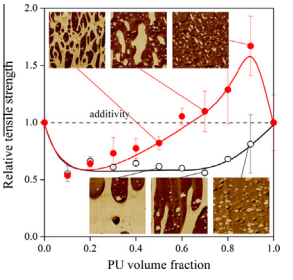

## Active pseudo-multilayered films from polycaprolactone and starch based matrix for food-packaging applications

Eur Polym J 49 (2013) 1234

Sébastien Alix[a], Angélique Mahieu[a], Caroline Terrie[a], Jérémie Soulestin[b], Eloïse Gerault[c], Marc G.J. Feuilloley[c], Richard Gattin[a], Vincent Edon [d], Tarik Ait-Younes[d], Nathalie Leblanc[a]

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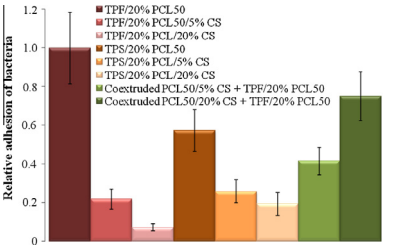


## A short review on novel biocomposites based on plant oil precursors

Eur Polym J 49 (2013) 1243

Mirna A. Mosiewicki, Mirta I. Aranguren

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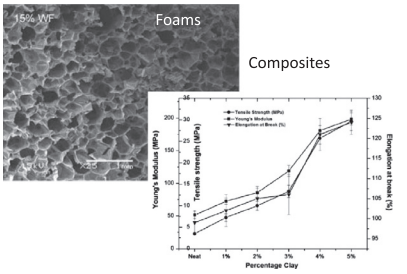


## Poly(L-lactic acid)/organically modified vermiculite nanocomposites prepared by melt compounding: Effect of clay modification on microstructure and thermal properties

Eur Polym J 49 (2013) 1257

M. Jesús Fernández, M. Dolores Fernández, Ibai Aranburu

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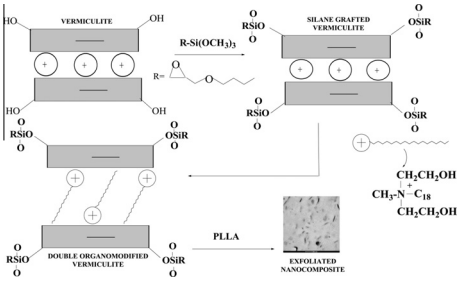


## Reversible disulphide formation in polymer networks: A versatile functional group from synthesis to applications

Eur Polym J 49 (2013) 1268

Benjámin Gyarmati, Árpád Némethy, András Szilágyi

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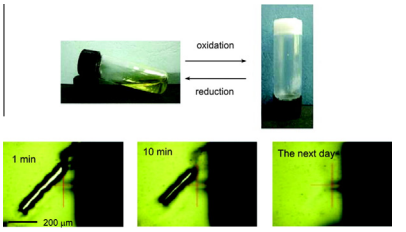

## MACROMOLECULAR NANOTECHNOLOGY ARTICLES

### Localization of MWCNTs in PET/LDPE blends

Eur Polym J 49 (2013) 1287

Romain Cardinaud[a], Tony McNally[b]

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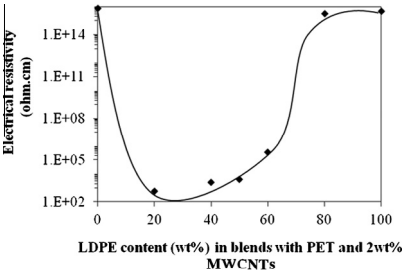


### Evolution of transient states and properties of an epoxy–silica hybrid cured at ambient temperature

Eur Polym J 49 (2013) 1298

Francesca Lionetto[a], Leno Mascia[b], Mariaenrica Frigione[a]

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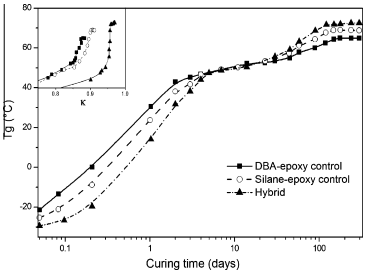


### Super-hydrophilic electrospun nylon-6/hydroxyapatite membrane for bone tissue engineering

Eur Polym J 49 (2013) 1314

Abdalla Abdal-hay[a,b,c], Hem Raj Pant[a], Jae Kyoo Lim[b]

[a]Department of Bionano System Engineering, College of Engineering, Chonbuk National University, Jeonju 561-756, Republic of Korea
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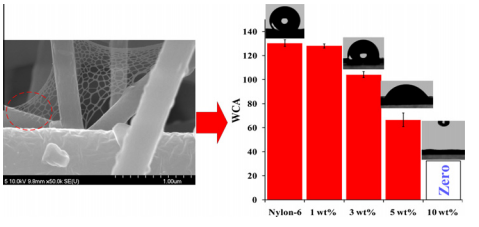
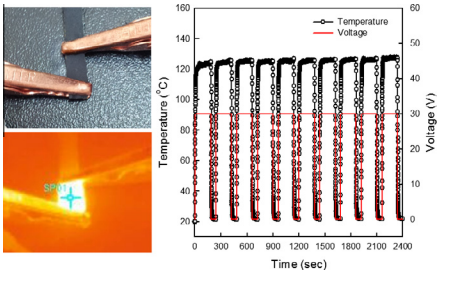



### Structure and electric heating performance of graphene/epoxy composite films

Eur Polym J 49 (2013) 1322

Ji-Eun An, Young Gyu Jeong

Department of Materials Design Engineering, Kumoh National Institute of Technology, Gumi, Gyeongbuk 730-701, Republic of Korea



## Controlled formation of poly(ε-caprolactone) ultrathin electrospun nanofibers in a hydrolytic degradation-assisted process

Eur Polym J 49 (2013) 1331

Nicolas Lavielle[a,b,c], Ana-Maria Popa[a], Matthijs de Geus[b], Anne Hébraud[c], Guy Schlatter[c], Linda Thöny-Meyer[b], René M. Rossi[a]

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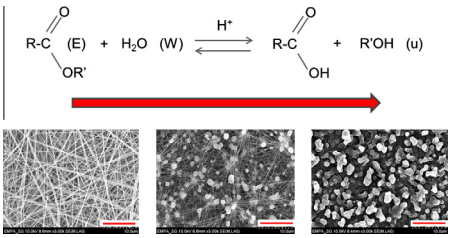


## Water transport mechanisms in wheat gluten based (nano)composite materials

Eur Polym J 49 (2013) 1337

Valérie Guillard, Anne Chevillard, Emmanuelle Gastaldi, Nathalie Gontard, Hélène Angellier-Coussy

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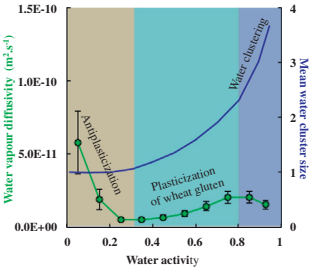


## Comparison of filler percolation and mechanical properties in graphene and carbon nanotubes filled epoxy nanocomposites

Eur Polym J 49 (2013) 1347

M. Martin-Gallego, M.M. Bernal, M. Hernandez, R. Verdejo, M.A. Lopez-Manchado

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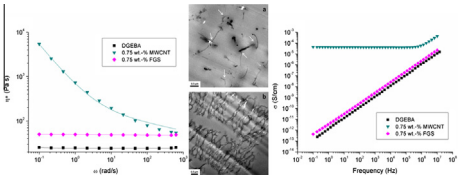


## Structural transitions of nylon 47 and clay influence on its crystallization behavior

Eur Polym J 49 (2013) 1354

Laura Morales-Gámez[a,b], María Teresa Casas[a], Lourdes Franco[a,b], Jordi Puiggalí[a,b]

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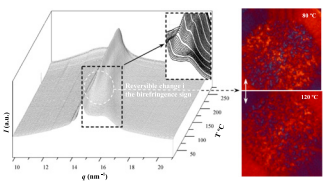

## One-step synthesis and photoluminescence properties of polycarbazole spheres and Ag/polycarbazole core/shell composites

Eur Polym J 49 (2013) 1365

Yujiang Zhuo, Cuiling Du, Xingqi Li, Wendong Sun, Ying Chu

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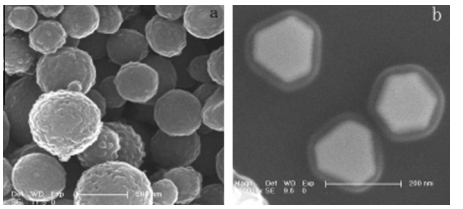


## The role of carbon nanotubes in both physical and chemical liquid–solid transition of polydimethylsiloxane

Eur Polym J 49 (2013) 1373

L.J. Romasanta, M.A. Lopez-Manchado, R. Verdejo

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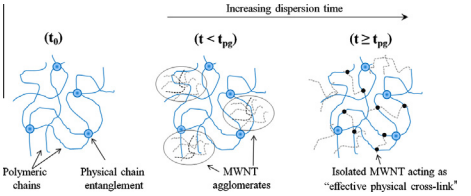


## Polyaniline nanostructures prepared in acidic aqueous solutions of ionic liquids acting as soft templates

Eur Polym J 49 (2013) 1381

David Pahovnik[a], Ema Žagar[a,b], Ksenija Kogej[c], Jiři Vohlídal[d], Majda Žigon[a,b]

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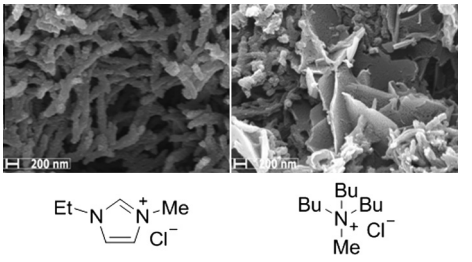


## Morphological evolution of oriented clay-containing block copolymer nanocomposites under elongational flow

Eur Polym J 49 (2013) 1391

Danilo J. Carastan[a], Leice G. Amurin[b], Aldo F. Craievich[c], Maria do Carmo Gonçalves[d], Nicole R. Demarquette[b]

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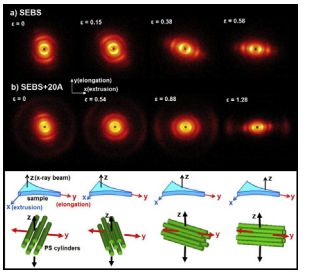

## Processing and assessment of high-performance poly(butylene terephthalate) nanocomposites reinforced with microwave exfoliated graphite oxide nanosheets

Eur Polym J 49 (2013) 1406

Jun Bian[a,b], Hai Lan Lin[a], Fei Xiong He[a], Ling Wang[a], Xiao Wei Wei[a], I-Ta Chang[b], Erol Sancaktar[b]

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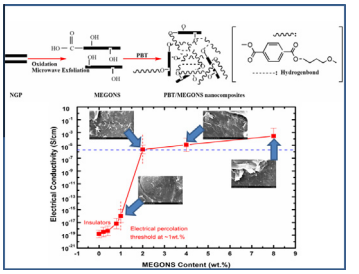


## Confined crystallization of POM in the CA-nanotubes fabricated by coaxial electrospinning

Eur Polym J 49 (2013) 1424

Hongjun Luo[a,b], Yong Huang[a,c,d], Dongshan Wang[a]

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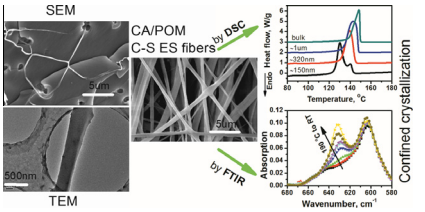


## Robust fabrication and evaluation of nanopattern insert molded parts

Eur Polym J 49 (2013) 1437

Sung Ho Kim[a], In Hwan Sul[b], Jun-ho Jeong[c], Young Seok Song[d], Jae Ryoun Youn[a]

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[c]*Nano-Mechanical Systems Research Center, Intelligent and Precision Machinery Research Division, Korea Institute of Machinery and Materials, 104 Sinseongno, Yuseong-gu, Daejeon 305-343, Republic of Korea*
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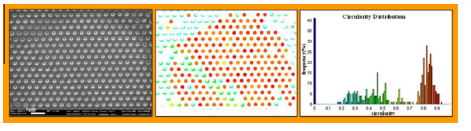


## Synthesis and characterization of sulfonated poly(styrene-*b*-(ethylene-*ran*-butylene)-*b*-styrene)/(strontium titanate) nanocomposites

Eur Polym J 49 (2013) 1446

Hongying Chen, Andreas Plagge, Kenneth A. Mauritz

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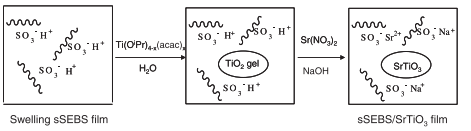

## High impact strength and low wear of epoxy modified by a combination of liquid carboxyl terminated poly(butadiene-co-acrylonitrile) rubber and organoclay

Wunpen Chonkaew[a,b], Narongrit Sombatsompop[c], Witold Brostow[b]

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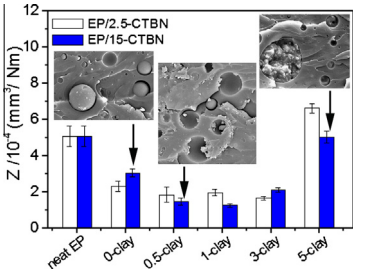
[c]*Polymer Processing and Flow (P-PROF) Group, School of Energy, Environment and Materials, King Mongkut's University of Technology Thonburi, 126 Pracha-utid Road, Bangmod, Thongkru, Bangkok 10140, Thailand*

*Eur Polym J 49 (2013) 1461*




## Factors affecting the dispersion of MWCNTs in electrically conducting SEBS nanocomposites

Nicola Calisi[a], Alessio Giuliani[a], Michele Alderighi[a], Jan M. Schnorr[b], Timothy M. Swager[b], Fabio Di Francesco[a,c], Andrea Pucci[a,c]

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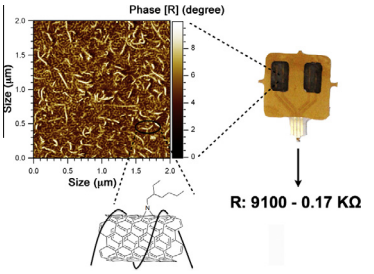
[c]*INSTM, Unità di Ricerca di Pisa, Via Risorgimento 35, 56126 Pisa, Italy*

*Eur Polym J 49 (2013) 1471*




## Preparation of polyacrylamide based microgels with different charges for drug encapsulation

Hui Wang, Youssef Helwa, Garry L. Rempel

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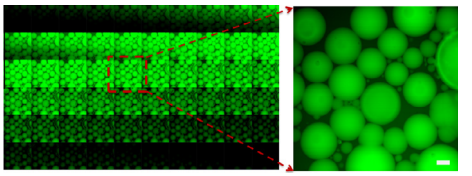

## Preparation of lead-ion imprinted crosslinked electro-spun chitosan nanofiber mats and application in lead ions removal from aqueous solutions

Yan Li, Tianbao Qiu, Xiaoyan Xu

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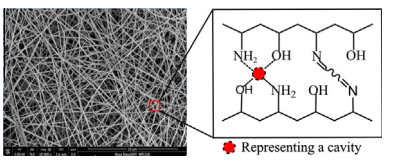

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### Effect of slight crosslinking on the mechanical relaxation behavior of poly(2-ethoxyethyl methacrylate) chains

M. Carsí[a], M.J. Sanchis[a], R. Díaz-Calleja[a], E. Riande[b], M.J.D. Nugent[c]

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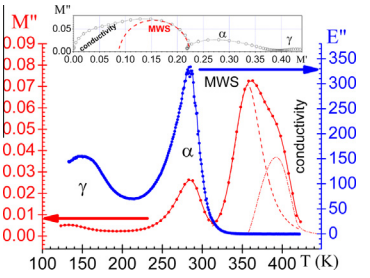


### Synthesis and properties of poly(3-*n*-dodecylthiophene) modified thermally expandable microspheres

George Vamvounis[a,b], Magnus Jonsson[a,c], Eva Malmström[a], Anders Hult[a]

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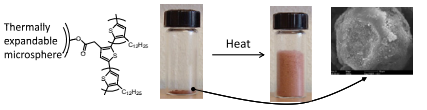


### Preparation and characterization of non-linear poly(ethylene glycol) analogs from oligo(ethylene glycol) functionalized polyisocyanopeptides

Matthieu Koepf, Heather J. Kitto, Erik Schwartz, Paul H.J. Kouwer, Roeland J.M. Nolte, Alan E. Rowan

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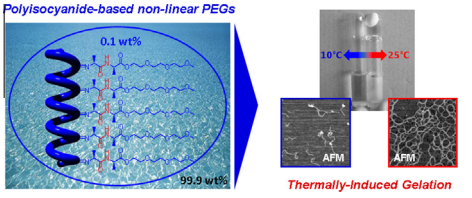


### Toughening of poly (lactic acid) by poly (*β*-hydroxybutyrate-co-*β*-hydroxyvalerate) with high *β*-hydroxyvalerate content

P. Ma[a,b], A.B. Spoelstra[b], P. Schmit[b], P.J. Lemstra[b]

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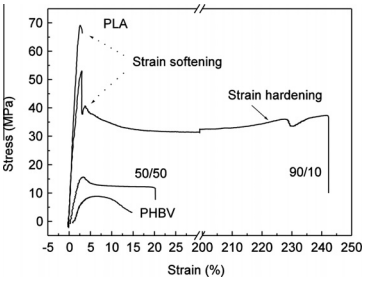

## Influence of the third monomer component on the X-ray-analyzed crystal structure of ethylene–tetrafluoroethylene copolymer

Eur Polym J 49 (2013) 1532

Atsushi Funaki[a], Kohji Tashiro[b]

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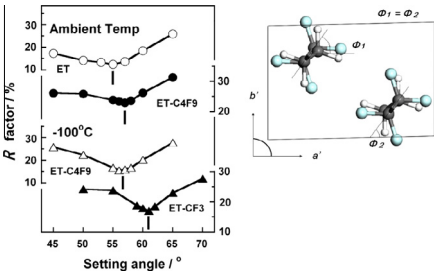


## Waterborne hybrid polymer particles: Tuning of the adhesive performance by controlling the hybrid microstructure

Eur Polym J 49 (2013) 1541

Aitziber Lopez[a], Yuri Reyes[a], Elise Degrandi-Contraires[b], Elisabetta Canetta[c], Costantino Creton[b], José M. Asua[a]

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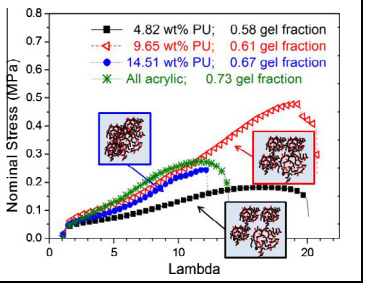


## A kinetic study of the formation of smectic phases in novel liquid crystal ionogens

Eur Polym J 49 (2013) 1553

A. Martínez-Felipe[a], J.D. Badia[a], L. Santonja-Blasco[a], C.T. Imrie[b], A. Ribes-Greus[a]

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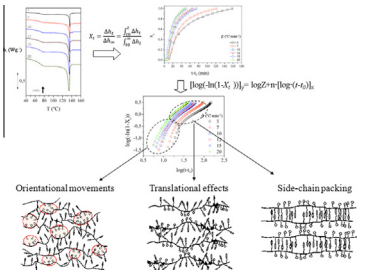
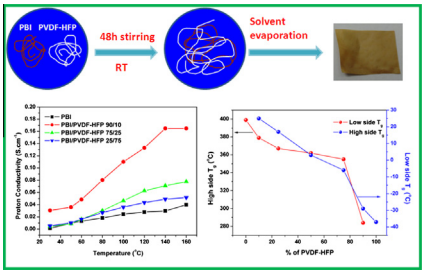



## Novel proton exchange membrane for fuel cell developed from blends of polybenzimidazole with fluorinated polymer

Eur Polym J 49 (2013) 1564

Mousumi Hazarika, Tushar Jana

*School of Chemistry, University of Hyderabad, Hyderabad, India*



Eur Polym J 49 (2013) 1577

## Crystallization and melting of propylene–ethylene random copolymers. Homogeneous nucleation and β-nucleating agents

Dimitrios G. Papageorgiou[a], George Z. Papageorgiou[b], Dimitrios N. Bikiaris[b], Konstantinos Chrissafis[a]

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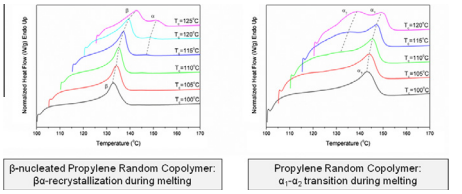
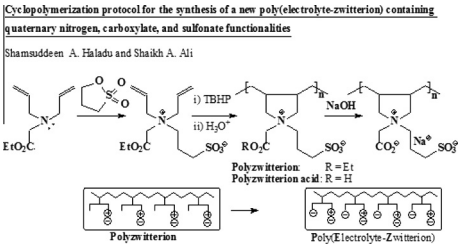



Eur Polym J 49 (2013) 1591

## Cyclopolymerization protocol for the synthesis of a new poly(electrolyte-zwitterion) containing quaternary nitrogen, carboxylate, and sulfonate functionalities

Shamsuddeen A. Haladu, Shaikh A. Ali

*Chemistry Department, King Fahd University of Petroleum & Minerals, Dhahran 31261, Saudi Arabia*




Eur Polym J 49 (2013) 1601

## Acid catalyzed polymerization of macrolactones in bulk and aqueous miniemulsion: Ring opening vs. condensation

Ana Pascual[a], Jose R. Leiza[b], David Mecerreyes[a,b]

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[b]*Ikerbasque, Basque Foundation for Science, E-48011 Bilbao, Spain*


Eur Polym J 49 (2013) 1610

## Enhancement of the impact strength of cationically cured cycloaliphatic diepoxide by adding hyperbranched poly(glycidol) partially modified with 10-undecenoyl chains

Marjorie Flores[a], Mireia Morell[a], Xavier Fernández-Francos[a], Francesc Ferrando[b], Xavier Ramis[c], Àngels Serra[a]

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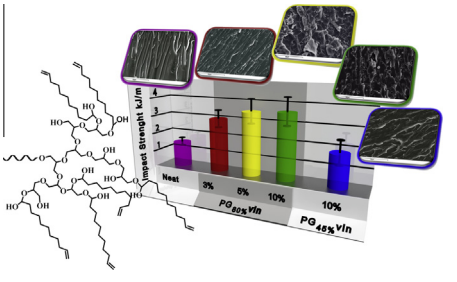
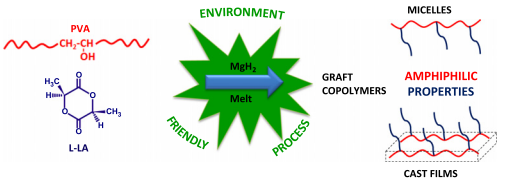


## Environment-friendly synthesis of amphiphilic polyester-*graft*-poly(vinyl alcohol)

*Eur Polym J 49 (2013) 1621*

Nadia Guerrouani, Benoit Couturaud, André Mas, François Schué, Jean-Jacques Robin

*Institut Charles Gerhardt, Montpellier, UMR5253 CNRS-UM2-ENSCM-UM1, Equipe Ingénierie et Architectures Macromoléculaires, Université Montpellier 2 – Bât 17 – cc1702, Place Eugène Bataillon, 34095 Montpellier cedex 5, France*

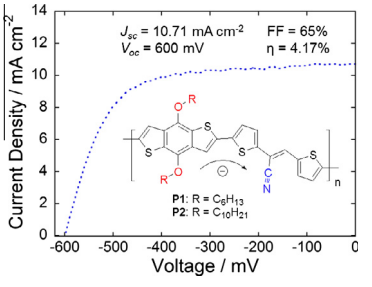



## Low bandgap polymers with benzodithiophene and bisthienylacrylonitrile units for photovoltaic applications

*Eur Polym J 49 (2013) 1634*

Zhifang Tan, Ichiro Imae, Yousuke Ooyama, Kenji Komaguchi, Joji Ohshita, Yutaka Harima

*Graduate School of Engineering, Hiroshima University, 1-4-1 Kagamiyama, Higashi-Hiroshima 739-8527, Japan*




## Synthesis and characterization of organo-soluble and photosensitive benzocyclobutene-terminated imides

*Eur Polym J 49 (2013) 1642*

Jun Yang, Yuanrong Cheng, Yunxia Jin, Dunying Deng, Fei Xiao

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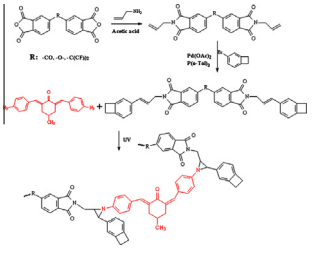

## Sintering kinetics of UHMWPE nascent powders by high velocity compaction: Influence of molecular weight

*Eur Polym J 49 (2013) 1654*

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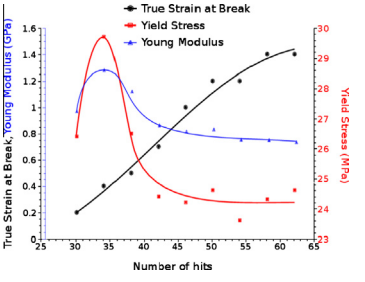

## Synthesis and characterization of chitosan-*g*-poly(2-(furan-2-carbonyl)-acrylonitrile): Grafting of chitosan using a novel monomer prepared by a Baylis–Hillman reaction

*Eur Polym J 49 (2013) 1662*

Fakhreia A. Al Sagheer[a], Khaled D. Khalil[a,b], Enas I. Ibrahim[a]

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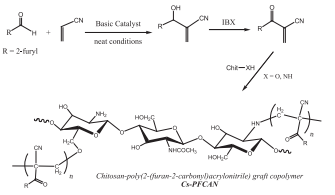


## Preparation and properties of novel sulfonated poly(arylene ether ketone) random copolymers for polymer electrolyte membrane fuel cells

*Eur Polym J 49 (2013) 1673*

Maryam Oroujzadeh, Shahram Mehdipour-Ataei, Masoud Esfandeh

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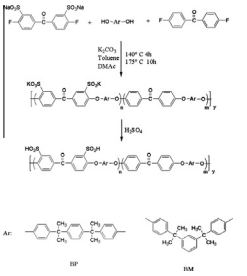

## Multiscale fibers via supramolecular self-assembly of a fully rigid, discotic aromatic aramid molecule

*Eur Polym J 49 (2013) 1682*

Youju Huang[a,b,c], Daoliang Wang[a,b], Lu Xu[a,b], Yuanhua Cong[a,b], Junjun Li[a,b], Liangbin Li[a,b]

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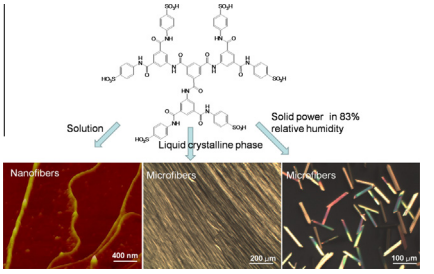


## From metal complexes to metallosupramolecular polymers *via* polycondensation: Synthesis, structure and electrochromic properties of Co(III)- and Fe(III)-based metallosupramolecular polymers with aromatic azo ligands

*Eur Polym J 49 (2013) 1688*

Anasuya Bandyopadhyay, Masayoshi Higuchi

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*CREST Project, Japan Science and Technology Agency (JST-CREST), Japan*

## Retardation effect in acetalization of poly(vinyl alcohol) with butyraldehyde

Eur Polym J 49 (2013) 1698

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[b]*Nizhny Novgorod State Technical University n.a. R.E. Alekseev, 24 Minin St., 603950 Nizhnii Novgorod, Russia*
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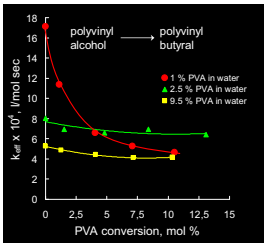


## Interface imaging process for high resolution and high aspect ratio patterning

Eur Polym J 49 (2013) 1707

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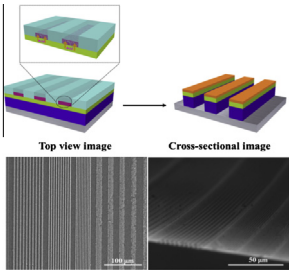


## High refractive index coumarin-based photorefractive polysiloxanes

Eur Polym J 49 (2013) 1714

Martin Schraub[a], Sebastian Soll[b], Norbert Hampp[a,c]

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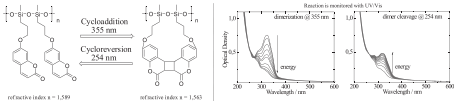


## The kinetics of crystallization of poly(ethylene terephthalate) measured by FTIR spectroscopy

Eur Polym J 49 (2013) 1722

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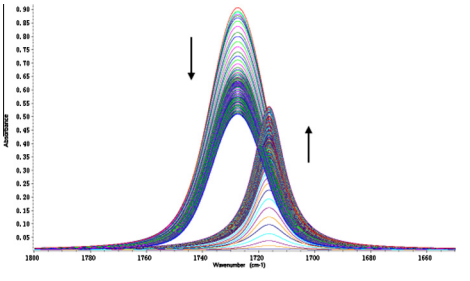

## Role of graded length side chains up to 18 carbons in length on the damping behavior of polyurethane/epoxy interpenetrating polymer networks

Wenwen Yu[a], Dezhi Zhang[c], Miao Du[a,b], Qiang Zheng[a,b]

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