

In this issue

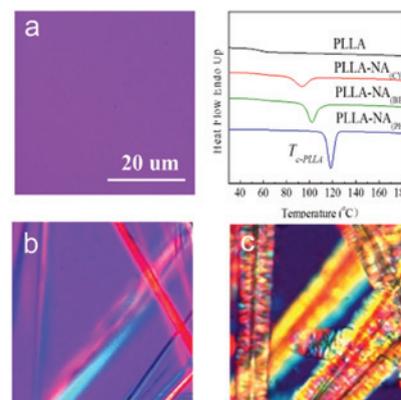
Long Jiang, Tianfeng Shen, Pengwu Xu, Xiyuan Zhao, Xiaojie Li, Weifu Dong, Piming Ma and Mingqing Chen

Crystallization modification of poly(lactide) by using nucleating agents and stereocomplexation

DOI 10.1515/epoly-2015-0179
e-Polymers 2016; 16(1): 1–13

Review: Poly(lactide) suffers from a low crystallization rate and low crystallinity. This review presents the recent approaches to achieve fast(er) crystallization of PLA including adding nucleating agents and stereocomplexation.

Keywords: crystallization; nucleation; poly(lactide); stereocomplexation.

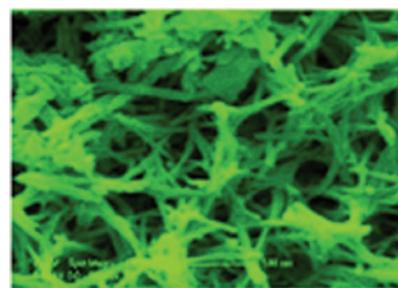


Emre Tekay, Sinan Şen, Demet Aydınoglu and Nihan Nugay
Biosorbent immobilized nanotube reinforced hydrogel carriers for heavy metal removal processes

DOI 10.1515/epoly-2015-0168
e-Polymers 2016; 16(1): 15–24

Full length article: Spirulina immobilization based three dimensional cage-like orientations of halloysite nanotubes.

Keywords: chitosan; composite hydrogel; halloysite nanotube; metal adsorption; Spirulina biosorbent.

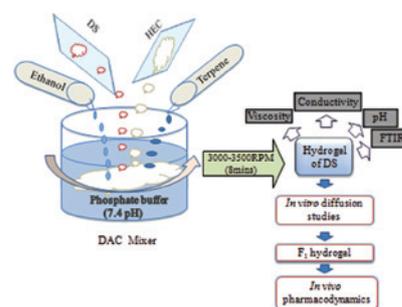


S. Arunkumar, H.N. Shivakumar, B.G. Desai and Purnima Ashok
Effect of gel properties on transdermal iontophoretic delivery of diclofenac sodium

DOI 10.1515/epoly-2015-0163
e-Polymers 2016; 16(1): 25–32

Full length article: Hydrogels of Diclofenac sodium (DS) were developed using terpenes as penetration enhancers and Hydroxyethyl cellulose (HEC) as gelling agent and characterized for *in vitro* diffusion and finally *in vivo* studies.

Keywords: constant voltage iontophoresis; diclofenac sodium; hydrogels; hydroxyethyl cellulose; terpenes.

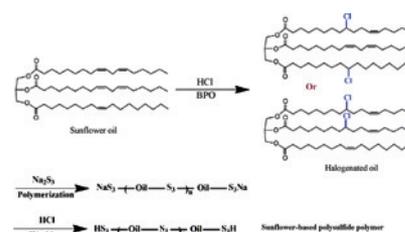


Samira Moqadam and Mehdi Salami-Kalajahi
Halogenated sunflower oil as a precursor for synthesis of polysulfide polymer

DOI 10.1515/epoly-2015-0152
e-Polymers 2016; 16(1): 33–39

Full length article: Synthesis of halogenated sunflower oil and its application as dihalide monomer in synthesis of sunflower-oil-based polysulfide as a new class of polysulfide polymers.

Keywords: halogenation; NMR spectra; polysulfides; sunflower oil; synthesis.



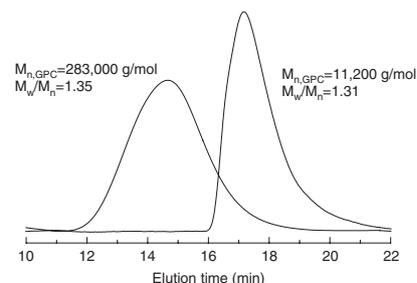
Xue-Hui Zhan

Fe-mediated ICAR ATRP of methyl methacrylate on photoinduced miniemulsion polymerization

DOI 10.1515/epoly-2015-0072

e-Polymers 2016; 16(1): 41–47

Full length article: The molecule weight of macroinitiator PMMA increased from $M_{n,GPC} = 11,200$ g/mol to $M_{n,GPC} = 283,000$ g/mol and the molecule weight distribution changed from $M_w/M_n = 1.31$ to $M_w/M_n = 13.6$. Further the living nature of the end of the macroinitiator has been verified.



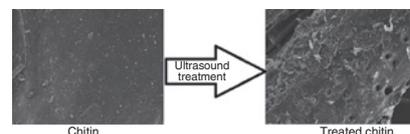
Keywords: ICAR ATRP; light; living polymerization; methyl methacrylate; miniemulsion.

Guilherme Luiz Dotto, Juliana Machado Nascimento dos Santos, Jaqueline Motta de Moura and Luiz Antonio de Almeida Pinto
Ultrasound-assisted treatment of chitin: evaluation of physicochemical characteristics and dye removal potential

DOI 10.1515/epoly-2015-0159

e-Polymers 2016; 16(1): 49–56

Full length article: Ultrasound was successfully employed as a simple and alternative method to improve the chitin adsorption characteristics regarding to Methylene Blue and Ponceau 4R dyes.



Keywords: amplitude; crystallinity index; cycle; Methylene Blue; Ponceau 4R.

Ayyaz Ahmad, Jianjia Liu, Xiaochi Liu, Li Li, Yisheng Xu and Xuhong Guo

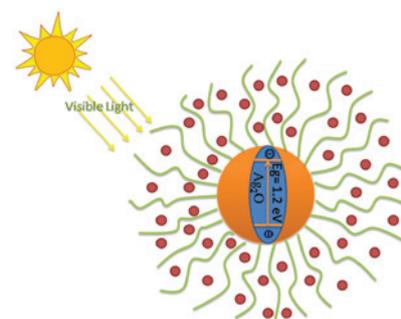
Synthesis of Ag₂O nano-catalyst in the spherical polyelectrolyte brushes and its application in visible photo driven degradation of dye

DOI 10.1515/epoly-2015-0194

e-Polymers 2016; 16(1): 57–63

Full length article: This study deals with the remediation of wastewater using visible light. A proposed mechanism for degradation of methyl blue is explained.

Keywords: Ag₂O; spherical polyelectrolyte brush; visible photocatalyst.

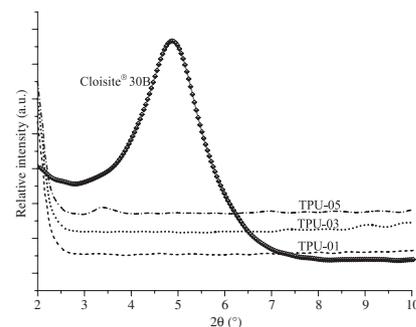


Narges Taheri and Soheil Sayyahi
Effect of clay loading on the structural and mechanical properties of organoclay/HDI-based thermoplastic polyurethane nanocomposites

DOI 10.1515/epoly-2015-0130
 e-Polymers 2016; 16(1): 65–73

Full length article: The mechanical properties of TPU/OMMT nanocomposites were correlated with the state of clay dispersion, degree of phase separation, crystallinity, and the microstructural filler-matrix interactions.

Keywords: clay content; degree of crystallinity; nanocomposites; organo-montmorillonite; thermoplastic polyurethane.

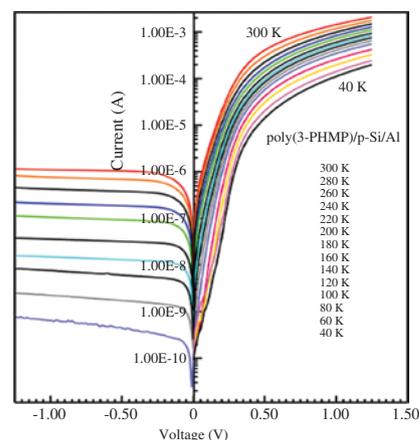


Hacı Ökkes Demir, Zakir Caldiran, Kadem Meral, Yılmaz Şahin, Murat Acar and Sakir Aydoğan
The effect of temperature on the electrical characterization of a poly(phenoxy-imine)/p-silicon heterojunction

DOI 10.1515/epoly-2015-0170
 e-Polymers 2016; 16(1): 75–82

Full length article: Poly(phenoxy-imine)/p-Si device showed a good rectifying behavior at low temperatures. The diode parameters have also shown a good temperature response. The polymer can be used in low temperature applications.

Keywords: barrier height; ideality factor; inhomogeneity barrier; poly(phenoxyimine); polymer film.



Xiaoping Zhan, Yuxuan Xin, Kai Zhao, Shuai Wang, Jian Chen, Yuankui Zhang and Zhenmin Mao
Synthesis, characterization and molecular dynamics simulation of the polyacrylates membranes

DOI 10.1515/epoly-2015-0211
 e-Polymers 2016; 16(1): 83–89

Full length article: This article investigated the relationship between the structures of the polyacrylates and release behaviors by experimental data and molecular dynamics simulation.

Keywords: drug delivery system; molecular dynamics simulation; permeability; polyacrylates; rate-controlling membrane.

