

## In this issue

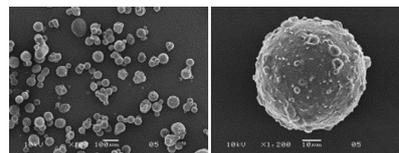
Onanong Cheerarat and Yodthong Baimark

### Biodegradable silk fibroin/chitosan blend microparticles prepared by emulsification-diffusion method

DOI 10.1515/epoly-2014-0134  
e-Polymers 2015; 15(2): 67–74

**Full length article:** The average microparticle sizes of SF/CS blends prepared using the water-in-oil emulsification-diffusion method were in the range 73–80  $\mu\text{m}$ . The blend microparticles were spherical with a rough surface texture.

**Keywords:** blend microparticles; chitosan; conformational transition; morphology; silk fibroin.



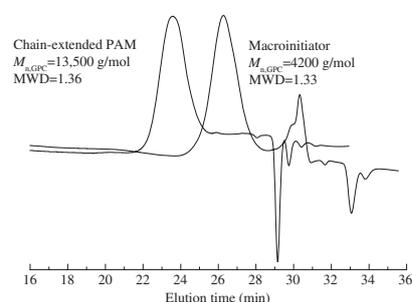
Guo-Xiang Wang, Mang Lu, Zhao-Hui Hou, Li-Chao Liu, En-Xiang Liang and Hu Wu

### Living radical polymerization of polyacrylamide with submicrometer size by dispersion polymerization

DOI 10.1515/epoly-2014-0200  
e-Polymers 2015; 15(2): 75–79

**Full length article:** A chain extension experiment was performed using chlorine-ended PAM as the macroinitiator ( $M_{n, \text{GPC}} = 4200$  g/mol,  $\text{MWD} = 1.33$ ). The  $M_{n, \text{GPC}}$  and  $\text{MWD}$  of the resulting PAM were 13,500 g/mol and 1.36, respectively.

**Keywords:** acrylamide; atom transfer radical dispersion polymerization; kinetics; living polymerization; submicrometer.



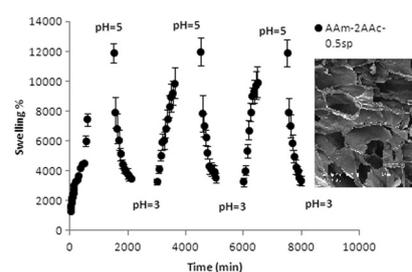
Demet Aydınoğlu

### Investigation of pH-dependent swelling behavior and kinetic parameters of novel poly(acrylamide-co-acrylic acid) hydrogels with spirulina

DOI 10.1515/epoly-2014-0170  
e-Polymers 2015; 15(2): 81–93

**Full length article:** A drastic change increase in swelling by changing pH for the AAm-AAc-sp hydrogels, containing especially 2% mol ratio of AAC and 0.5% weight ratio of Spirulina.

**Keywords:** diffusion coefficient; pH-sensitive hydrogel; spirulina; swelling kinetics; swelling ratio.

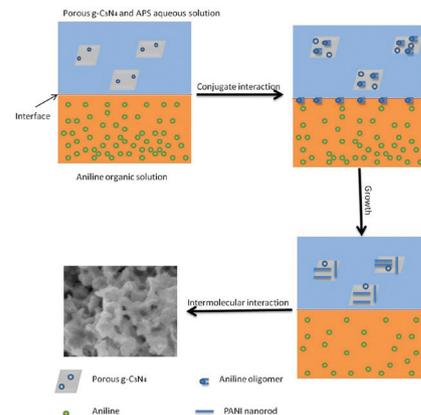


Qingbo Yu, Xianhua Li, Leigang Zhang, Xuexue Wang, Yulun Tao and Mingxu Zhang  
**Significantly improving the performance and dispersion morphology of porous g-C<sub>3</sub>N<sub>4</sub>/PANI composites by an interfacial polymerization method**

DOI 10.1515/epoly-2014-0218  
 e-Polymers 2015; 15(2): 95–101

**Full length article:** Polyaniline (PANI) nanorods grown on layered porous graphitic carbon nitride (porous g-C<sub>3</sub>N<sub>4</sub>) sheets (porous g-C<sub>3</sub>N<sub>4</sub>/PANI) were successfully synthesized by interfacial polymerization of aniline monomers in the presence of porous g-C<sub>3</sub>N<sub>4</sub> sheets.

**Keywords:** dispersion; interfacial polymerization; photocatalytic performance; porous g-C<sub>3</sub>N<sub>4</sub>/PANI composites; thermal stability.

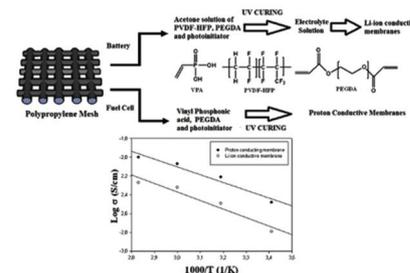


Emrah Çakmakçı, Mustafa Hulusi Uğur and A. Güngör  
**UV-Cured polypropylene mesh-reinforced composite polymer electrolyte membranes**

DOI 10.1515/epoly-2014-0222  
 e-Polymers 2015; 15(2): 103–110

**Full length article:** This work combines the properties of PP mesh with the fast and easy production of UV curing technology to fabricate novel conductive composite membranes for fuel cells and Li-ion batteries.

**Keywords:** composite polymer electrolyte; fuel cells; ionic conductivity; lithium batteries; UV curing.

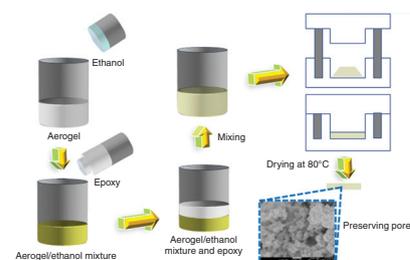


Hyung Min Kim, Hyun Su Kim, Seong Yun Kim and Jae Ryouon Youn  
**Silica aerogel/epoxy composites with preserved aerogel pores and low thermal conductivity**

DOI 10.1515/epoly-2014-0165  
 e-Polymers 2015; 15(2): 111–117

**Full length article:** A processing method for preserving the aerogel pores in a silica aerogel composite was developed using ethanol evaporation, which resulted in the lowest thermal conductivity of the composite, 0.04 W/m K.

**Keywords:** aerogel; composite; epoxy; porous material; thermal conductivity.

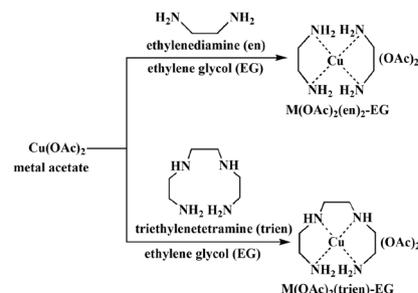


Duangruthai Sridaeng, Benjatham Sukkaneewat, Nuttawut Chueasakol and Nuanphun Chantarasiri  
**Copper-amine complex solution as a low-emission catalyst for flexible polyurethane foam preparation**

DOI 10.1515/epoly-2014-0197  
 e-Polymers 2015; 15(2): 119–126

**Full length article:** Copper-amine complexes in the form of solutions in ethylene glycol, namely,  $\text{Cu}(\text{OAc})_2(\text{en})_2\text{-EG}$  and  $\text{Cu}(\text{OAc})_2(\text{trien})\text{-EG}$ , were synthesized *in situ* and used as low-emission catalysts in the preparation of flexible polyurethane (FPUR) foams.

**Keywords:** copper acetate; copper-amine complex; flexible polyurethane foam; low-emission catalyst; synergistic effect.



Mohammad Ali Karimi, Pouran Pourhakkak, Mahdi Adabi, Saman Firoozi, Mohsen Adabi and Majid Naghibzadeh  
**Using an artificial neural network for the evaluation of the parameters controlling PVA/chitosan electrospun nanofibers diameter**

DOI 10.1515/epoly-2014-0198  
 e-Polymers 2015; 15(2): 127–138

**Full length article:** Artificial neural network modeling is an effective method for predicting the diameters of synthesized electrospun nanofibers. There was an inverse and direct relationship between the ratio of PVA/chitosan concentration in mixed polymers and nanofiber diameter.

**Keywords:** ANN; electrospinning; modeling; nanofibers; PVA/Chitosan.

