

EDITORIAL BOARD

Editor-in-chief

Prof. Dr.-Ing. Dr. h.c. J. Karger-Kocsis, Budapest Univ. of Technology and Econom. (H)

Editor

Prof. Dr. T. Czigány, Budapest University of Technology and Economics (H)

International Advisory Board

Dr. A. Bismarck, Imperial College London (UK)

Prof. Dr. W. Brostow, University of North Texas (USA)

Prof. Dr. S. Fakirov, The University of Auckland (NZ)

Dr. G. Filipcsei, ComErgen Inc., Budapest (H)

Prof. Dr. P.M. Frontini, University of Mar del Plata (ARG)

Prof. Dr. S. Hashemi, London Metropolitan University (UK)

Prof. Dr. B.K. Kim, Pusan National University (KOR)

Prof. Dr. P. Krawczak, Ecole des Mines, Douai (F)

Prof. Dr. A.S. Luyt, University of the Free State (ZA)

Prof. Dr. Gy. Marosi, Budapest University of Technology and Economics (H)

Prof. Dr. Z.A. Mohd-Ishak, Universiti Sains Malaysia, Penang (MAL)

Prof. Dr. A. Pegoretti, University of Trento (IT)

Prof. Dr. G.C. Psarras, University of Patras (GR)

Prof. Dr. J.V. Seppälä, Helsinki University of Technology (FIN)

Prof. Dr. R.A. Shanks, RMIT University, Melbourne (AU)

Dr. Z. Sun, University of New Mexico (USA)

Prof. Dr. S.C. Tjong, City University of Hong Kong (HK)

Prof. Dr. C. Werner, Max Bergmann Center of Biomaterials, Dresden (D)

Prof. Dr. M.Q. Zhang, Zhongshan University, Guangzhou (CHN)

Executive Editorial Board

Dr. L. Macskási General Editor (H)

Dr. Gy. Bánhegyi (H)

Dr. T. Bárány (H)

Dr. L. Mészáros (H)

Mr. B. Morlin (H)

Dr. G. Romhány (H)

Dr. A. Toldy (H)

Dr. J. Völgyi (H)

Publisher

Budapest University of Technology and Economics, Department of Polymer Engineering (BME-PT Hungary, H-1111 Budapest, Műegyetem rkp. 3.)

eXPRESS Polymer Letters

Web: www.expresspolymlett.com

E-mail: expresspolymlett@pt.bme.hu

ISSN 1788-618X

CONTENT

Volume 4, Number 1 / January, 2010 1

1. Czigány T., Bánhegyi G., Karger-Kocsis J.:
Preface 1
2. Demir M. M.:
Investigation on glassy skin formation of porous polystyrene fibers electrospun from DMF....2
3. Xiao C. M., Tan J., Xue G. N.:
Synthesis and properties of starch-g-poly(maleic anhydride-co-vinyl acetate).....9
4. Guo S. Z., Zhang C., Wang W. Z., Liu T. X.:
Preparation and characterization of organic-inorganic hybrid nanomaterials using polyurethane-b-poly[3-(trimethoxysilyl) propyl methacrylate] via RAFT polymerization.....17
5. Liu D. Y., Yuan X. W., Bhattacharyya D., Easteal A. J.:
Characterisation of solution cast cellulose nanofibre – reinforced poly(lactic acid).....26
6. Lipik V. T., Widjaja L. K., Liow S. S., Venkatraman S. S., Abadie M. J. M.:
Synthesis of biodegradable thermoplastic elastomers (BTPE) based on ε-caprolactone.....32
7. Jeong E. H., Sun K. R., Kang M. C., Jeong H. M., Kim B. K.:
Memory effect of polymer dispersed liquid crystal by hybridization with nanoclay39
8. Chang Z. J., Zhao X., Zhang Q. H., Chen D. J.:
Nanofibre-assisted alignment of carbon nanotubes in macroscopic polymer matrix via a scaffold-based method47

Volume 4, Number 2 / February, 2010..... 54

9. Zhang M. Q.:
Purposeful surface treatment of nanoparticles for tuning structure and properties of polymer based nanocomposites54
10. Bonnia N. N., Ahmad S. H., Zainol I., Mamun A. A., Beg M. D. H., Bledzki A. K.:
Mechanical properties and environmental stress cracking resistance of rubber toughened polyester/kenaf composite55
11. Ghasemi I., Karrabi M., Mohammadi M., Azizi H.:
Evaluating the effect of processing conditions and organoclay content on the properties of styrene-butadiene rubber/organoclay nanocomposites by response surface methodology62
12. Tyurin A., De Filpo G., Cupelli D., Nicoletta F. P., Mashin A., Chidichimo G.:
Particle size tuning in silver-polyacrylonitrile nanocomposites.....71
13. Al-Hassany Z., Genovese A., Shanks R. A.:
Fire-retardant and fire-barrier poly(vinyl acetate) composites for sealant application.....79
14. Chaichana E., Khaubunsongserm S., Praserthdam P., Jongsomjit B.:
Ethylene-hexene copolymer derived from [t-butylfluorenylsilyl-amido] dimethyl titanium complex.....94

15.	Horváth Z., Sajó I. E., Stoll K., Menyhárd A., Varga J.: <i>The effect of molecular mass on the polymorphism and crystalline structure of isotactic polypropylene</i>	101
16.	Dorigato A., Pegoretti A., Penati A.: <i>Linear low-density polyethylene/silica micro- and nanocomposites: dynamic rheological measurements and modelling</i>	115
Volume 4, Number 3 / March, 2010		130
17.	Seppälä J. V.: <i>Nanocomposites, excellent properties or hype?</i>	130
18.	Luo Y., Yu X. Y., Dong X. M., Rong M. Z., Zhang M. Q.: <i>Effect of nano-Si₃N₄ surface treatment on the tribological performance of epoxy composite</i>	131
19.	Jin J., Chen S. J., Zhang J.: <i>Non-isothermal crystallization kinetics of partially miscible ethylene-vinyl acetate copolymer/low density polyethylene blends</i>	141
20.	Franco-Urquiza E., Santana O. O., Gámez-Pérez J., Martínez A. B., Maspoch M. Ll.: <i>Influence of processing on the ethylene-vinyl alcohol (EVOH) properties: Application of the successive self-nucleation and annealing (SSA) technique</i>	153
21.	Krivoguz Yu. M., Guliyev A. M., Pesetskii S. S.: <i>Functionalization of LDPE and mLLDPE via grafting trans-ethylene-1,2-dicarboxylic acid by reactive extrusion</i>	161
22.	Kechaou B., Salvia M., Beaugiraud B., Juvé D., Fakhfakh Z., Treheux D.: <i>Mechanical and dielectric characterization of hemp fibre reinforced polypropylene (HFRPP) by dry impregnation process</i>	171
23.	Zhong W., Liu P., Shi H. G., Xue D. S.: <i>Ferroferric oxide/polystyrene (Fe₃O₄/PS) superparamagnetic nanocomposite via facile in situ bulk radical polymerization</i>	183
24.	Wu Y. M., Zhao W. P., Xu J., Wang C. X.: <i>A novel polymer of Al₂(SO₄)₃-poly(acrylamide-co-2-acrylamido-2-methyl-1-propanesulfonate) ionic hybrid prepared by dispersion polymerization</i>	188
Volume 4, Number 4 / April, 2010		196
25.	Kim K., Bismarck A.: <i>Science Babel: Does the lack of a common terminology in the field of emulsion templating hinder progress?</i>	196
26.	Babu R. R., Singha N. K., Naskar K.: <i>Interrelationships of morphology, thermal and mechanical properties in uncrosslinked and dynamically crosslinked PP/EOC and PP/EPDM blends</i>	197
27.	Izer A., Bárány T.: <i>Effect of consolidation on the flexural creep behaviour of all-polypropylene composite</i>	210

28. Zhou T., Wang X., Liu X. H., Lai J. Z.:
Effect of silane treatment of carboxylic-functionalized multi-walled carbon nanotubes on the thermal properties of epoxy nanocomposites 217
29. Huang N. H., Chen Z. J., Yi C. H., Wang J. Q.:
Synergistic flame retardant effects between sepiolite and magnesium hydroxide in ethylene-vinyl acetate (EVA) matrix 227
30. Raptis C. G., Patsidis A., Psarras G. C.:
Electrical response and functionality of polymer matrix-titanium carbide composites 234
31. Mouzakis D. E.:
Study of the stress oscillation phenomenon in syndiotactic polypropylene/montmorillonite nanocomposites 244
32. Azizi H., Morshedian J., Barikani M., Wagner M. H.:
Effect of layered silicate nanoclay on the properties of silane crosslinked linear low-density polyethylene (LLDPE) 252

Volume 4, Number 5 / May, 2010 263

33. Marosi Gy.:
Electrospinning a feasible nanotechnology 263
34. Khumalo V. M., Karger-Kocsis J., Thomann R.:
Polyethylene/synthetic boehmite alumina nanocomposites: Structure, thermal and rheological properties 264
35. Xu J., Zhao W. P., Wang C. X., Wu Y. M.:
Preparation of cationic polyacrylamide by aqueous two-phase polymerization 275
36. Xia Q., Zhao X. J., Chen S. J., Ma W. Z., Zhang J., Wang X. L.:
Effect of solution-blended poly(styrene-co-acrylonitrile) copolymer on crystallization of poly(vinylidene fluoride) 284
37. Aguilar J. O., Bautista-Quijano J. R., Avilés F.:
Influence of carbon nanotube clustering on the electrical conductivity of polymer composite films 292
38. Aziz S. B., Abidin Z. H. Z., Arof A. K.:
Influence of silver ion reduction on electrical modulus parameters of solid polymer electrolyte based on chitosan-silver triflate electrolyte membrane 300
39. Stevens E. S., Klamczynski A., Glenn G. M.:
Starch-lignin foams 311
40. Ma X. L., Li R., Ru L., Xu G. W., Huang Y. P.:
Effect of polyaspartic acid on hydroxyapatite deposition in silk fibroin blend films 321

Volume 4, Number 6 / June, 2010 328

41. Krawczak P.:
Polymer-based functionally graded materials (FGMs): potential and challenges 328

42.	Arsalani N., Fattahi H., Nazarpoor M.: <i>Synthesis and characterization of PVP-functionalized superparamagnetic Fe₃O₄ nanoparticles as an MRI contrast agent.....</i>	329
43.	Sorrentino A., Vertuccio L., Vittoria V.: <i>Influence of multi-walled carbon nanotubes on the β form crystallization of syndiotactic polystyrene at low temperature</i>	339
44.	Yang S. H., Fu P., Liu M. Y., Wang Y. D., Li Z. P., Zhao Q. X.: <i>Synthesis, characterization and thermal decomposition of poly(decamethylene 2,6-naphthalamide)</i>	346
45.	Bokobza L., Diop A. L.: <i>Reinforcement of poly(dimethylsiloxane) by sol-gel in situ generated silica and titania particles</i>	355
46.	Bledzki A. K., Letman-Sakiewicz M., Murr M.: <i>Influence of static and cyclic climate condition on bending properties of wood plastic composites (WPC).....</i>	364
47.	Wang X. X., Wang H. T., Song X. M., Wang G. Q., Du Q. G., Chen Q. T.: <i>Photocatalytic polymerization induced by a transparent anatase titania aqueous sol and fabrication of polymer composites.....</i>	373
48.	Tarrio-Saavedra J., Lopez-Beceiro J., Naya S., Gracia C., Artiaga R.: <i>Controversial effects of fumed silica on the curing and thermomechanical properties of epoxy composites</i>	382
	Volume 4, Number 7 / July, 2010	396
49.	Czigány T.: <i>The first impact factor has been given to Express Polymer Letters</i>	396
50.	Cai L. F., Lin Z. Y., Qian H.: <i>Dispersion of nano-silica in monomer casting nylon6 and its effect on the structure and properties of composites</i>	397
51.	Chieng B. W., Ibrahim N. A., Wan Yunus W. M. Z.: <i>Effect of organo-modified montmorillonite on poly(butylene succinate)/poly(butylene adipate-co-terephthalate) nanocomposites</i>	404
52.	Namkajorn M., Petchsuk A., Opaprakasit M., Opaprakasit P.: <i>Synthesis and characterizations of degradable aliphatic-aromatic copolyesters from lactic acid, dimethyl terephthalate and diol: Effects of diol type and monomer feed ratio ..</i>	415
53.	Kumar R., Yakubu M. K., Anandjiwala R. D.: <i>Biodegradation of flax fiber reinforced poly lactic acid.....</i>	423
54.	Monsalve M., Contreras J. M., Laredo E., Lopez-Carrasco F.: <i>Ring-opening copolymerization of (R,S)-β-butyrolactone and ε-caprolactone using sodium hydride as initiator.....</i>	431
55.	Yang S. H., Fu P., Liu M. Y., Wang Y. D., Zhang Y. C., Zhao Q. X.: <i>Synthesis, characterization of polytridecamethylene 2,6-naphthalamide as semiaromatic polyamide containing naphthalene-ring</i>	442

56.	Wang J. Q., Satoh M.:	<i>A novel reversible thermo-swelling hydrogel</i>	450
Volume 4, Number 8 / August, 2010.....			455
57.	Muniz E. C., Lucas E. F.:	<i>Preface</i>	455
58.	Abreu F. O. M. S., Forte M. M. C., Kist T. B. L., Honaiser L. P.:	<i>Effect of the preparation method on the drug loading of alginate-chitosan microspheres</i> ..	456
59.	Fávaro S. L., Ganzerli T. A., de Carvalho Neto A. G. V., da Silva O. R. R. F., Radovanovic E.:	<i>Chemical, morphological and mechanical analysis of sisal fiber-reinforced recycled high-density polyethylene composites</i>	465
60.	Cardoso J. J. F., Spinelli L. S., Monteiro V., Lomba R., Lucas E. F.:	<i>Influence of polymer and surfactant on the aiphrons characteristics: Evaluation of fluid invasion controlling</i>	474
61.	Valente A. J. M., Cruz S. M. A., Morán M. C., Murtinho D. B., Muniz E. C., Miguel M. G.:	<i>Release of DNA from cryogel PVA-DNA membranes</i>	480
62.	Pereira A. G. B., Paulino A. T., Rubira A. F., Muniz E. C.:	<i>Polymer-polymer miscibility in PEO/cationic starch and PEO/hydrophobic starch blends</i> ...	488
63.	Timochenco L., Grassi V. G., Dal Pizzol M., Costa J. M., Castellares L. G., Sayer C., Machado R. A. F., Araújo P. H. H.:	<i>Swelling of organoclays in styrene. Effect on flammability in polystyrene nanocomposites</i> ..	500
64.	Corradini E., de Moura M. R., Mattoso L. H. C.:	<i>A preliminary study of the incorporation of NPK fertilizer into chitosan nanoparticles</i>	509
Volume 4, Number 9 / September, 2010			516
65.	Tjong S. C.:	<i>Carbon nanotubes - attractive nanofillers for forming bio-, functional and structural polymer composites</i>	516
66.	Tham W. L., Chow W. S., Mohd Ishak Z. A.:	<i>Simulated body fluid and water absorption effects on poly(methyl methacrylate)/hydroxyapatite denture base composites</i>	517
67.	Guo B. C., Chen F., Chen W. W., Lei Y. D., Jia D. M.:	<i>Reinforcement of nitrile rubber by in situ formed zinc disorbate</i>	529
68.	Chen L. J., Tai Q. L., Song L., Xing W. Y., Jie G. X., Hu Y.:	<i>Thermal properties and flame retardancy of an ether-type UV-cured polyurethane coating</i>	539
69.	Huang F. L., Wang Q. Q., Wei Q. F., Gao W. D., Shou H. Y., Jiang S. D.:	<i>Dynamic wettability and contact angles of poly(vinylidene fluoride) nanofiber membranes grafted with acrylic acid</i>	551

70.	Sengwa R. J., Choudhary S.: <i>Investigation of correlation between dielectric parameters and nanostructures in aqueous solution grown poly(vinyl alcohol)-montmorillonite clay nanocomposites by dielectric relaxation spectroscopy</i>	559
71.	Brostow W., Dutta M., Ricardo de Souza J., Rusek P., Marcos de Medeiros A., Ito E. N.: <i>Nanocomposites of poly(methyl methacrylate) (PMMA) and montmorillonite (MMT) Brazilian clay: A tribological study</i>	570
72.	Rausch J., Zhuang R. C., Mäder E.: <i>Systematically varied interfaces of continuously reinforced glass fibre/polypropylene composites: Comparative evaluation of relevant interfacial aspects</i>	576
Volume 4, Number 10 / October, 2010		589
73.	Kim B. K.: <i>New frontiers of shape memory polymers</i>	589
74.	Deák T., Czigány T., Tamás P., Németh Cs.: <i>Enhancement of interfacial properties of basalt fiber reinforced nylon 6 matrix composites with silane coupling agents</i>	590
75.	Zhang Y. L., Dou X. W., Jin T.: <i>Synthesis and self-assembly behavior of amphiphilic diblock copolymer dextran-block-poly(ϵ-caprolactone) (DEX-<i>b</i>-PCL) in aqueous media</i>	599
76.	Fuad M. Y. A., Hanim H., Zarina R., Mohd. Ishak Z. A., Azman Hassan: <i>Polypropylene/calcium carbonate nanocomposites – effects of processing techniques and maleated polypropylene compatibiliser</i>	611
77.	Matuana L. M., Faruk O.: <i>Effect of gas saturation conditions on the expansion ratio of microcellular poly(lactic acid)/wood-flour composites</i>	621
78.	Thomas P., Satapathy S., Dwarakanath K., Varma K. B. R.: <i>Dielectric properties of poly(vinylidene fluoride)/CaCu₃Ti₄O₁₂ nanocrystal composite thick films</i>	632
79.	Yuan Y. C., Rong M. Z., Zhang M. Q., Yang G. C., Zhao J. Q.: <i>Healing of fatigue crack in epoxy materials with epoxy/mercaptopan system via manual infiltration</i>	644
80.	Tábi T., Sajó I. E., Szabó F., Luyt A. S., Kovács J. G.: <i>Crystalline structure of annealed polylactic acid and its relation to processing</i>	659
Volume 4, Number 11 / November, 2010		669
81.	Pegoretti A.: <i>Nanocomposite fibres: a strategy for stronger materials?</i>	669
82.	Wang H. H., Li X. R., Fei G. Q., Mou J.: <i>Synthesis, morphology and rheology of core-shell silicone acrylic emulsion stabilized with polymerisable surfactant</i>	670

83.	Uragami T., Wakita D., Miyata T.: <i>Dehydration of an azeotrope of ethanol/water by sodium carboxymethylcellulose membranes cross-linked with organic or inorganic cross-linker.....</i>	681
84.	Lei Y. D., Tang Z. H., Guo B. C., Zhu L. X., Jia D. M.: <i>Synthesis of novel functional liquid and its application as a modifier in SBR/silica composites</i>	692
85.	Fang Z. H., Shang J. J., Huang Y. X., Wang J., Li D. Q., Liu Z. Y.: <i>Preparation and characterization of the heat-resistant UV curable waterborne polyurethane coating modified by bisphenol A</i>	704
86.	Han Y., Fang X. Z., Zuo X. X.: <i>Melt processable homo- and copolyimides with high thermo-oxidative stability as derived from mixed thioetherdiphthalic anhydride isomers.....</i>	712
87.	Wu X. L., Liu P.: <i>Poly(vinyl chloride)-grafted multi-walled carbon nanotubes via Friedel-Crafts alkylation...</i>	723
88.	Dikobe D. G., Luyt A. S.: <i>Comparative study of the morphology and properties of PP/LLDPE/wood powder and MAPP/LLDPE/wood powder polymer blend composites.....</i>	729
	Volume 4, Number 12 / December, 2010.....	742
89.	Shanks R. A.: <i>Physically Networked Polymers: Materials that change with their environment</i>	742
90.	Huang N. H., Chen Z. J., Wang J. Q., Wei P.: <i>Synergistic effects of sepiolite on intumescence flame retardant polypropylene</i>	743
91.	Kong J., Yung K. L., Xu Y., Tian W.: <i>Wettability transition of plasma-treated polystyrene micro/nano pillars-aligned patterns.</i>	753
92.	Nagy Zs. K., K. Nyúl K., Wagner I., Molnár K., Marosi Gy.: <i>Electrospun water soluble polymer mat for ultrafast release of Donepezil HCl</i>	763
93.	Deng K. L., Zhong H. B., Tian T., Gou Y., Li Q., Dong L. R.: <i>Drug release behavior of a pH/temperature sensitive calcium alginate/poly(N-acryloylglycine) bead with core-shelled structure</i>	773
94.	Baimark Y., Srisa-ard M., Srihanam P.: <i>Morphology and thermal stability of silk fibroin/starch blended microparticles</i>	781
95.	Figueiro S. D., Mallmann E. J. J., Góes J. C., Ricardo N. M. P. S., Denardin J. C., Sombra A. S. B., Fechine P. B. A.: <i>New ferrimagnetic biocomposite film based in collagen and yttrium iron garnet</i>	790
96.	Zhuang R.-C., Burghardt T., Plonka R., Liu J.-W., Mäder E.: <i>Affecting glass fibre surfaces and composite properties by two stage sizing application</i>	798