

JOURNAL OF POLYMER ENGINEERING

EDITOR-IN-CHIEF

Nino Grizzuti, Naples

EDITORS

Abdellah Aji, Montreal, QC

Pedro Fardim, Turku

Hiroshi Ito, Yamagata

Shih-Jung Liu, Tao-Yuan

Ana Vera Machado, Minho

Tim A. Osswald, Madison, WI

Roberto Pantani, Salerno

Peter Van Puyvelde, Leuven

ADVISORY BOARD

Francisco J. Baltá Calleja, Madrid

Satinath N. Bhattacharya, Melbourne

Shia-Chung Chen, Chung-Li

José A. Covas, Guimarães

Igor Emri, Ljubljana

Donald L. Feke, Cleveland, OH

Dino Ferri, Mantua

Walter W. Focke, Hatfield

Russell E. Gorga, Raleigh, NC

Juan P. Hernández Ortiz, Medellín

Christian Hopmann, Aachen

Sadhan C. Jana, Akron, OH

Takeshi Kikutani, Tokyo

Christopher W. Macosko, Minneapolis, MN

Ica Manas-Zloczower, Cleveland, OH

Han E. H. Meijer, Eindhoven

Ashok Misra, Bombay

Luiz A. Pessan, São Carlos

Hans-J. Radusch, Wittenberg

Tadamoto Sakai, Tokyo

Bruno Vergnes, Sophia Antipolis

Xinling Wang, Shanghai

Zehev Tadmor, Haifa

DE GRUYTER

ABSTRACTED/INDEXED IN Baidu Scholar; Celdes; Chemical Abstracts Service (CAS) - Cplus; Chemical Abstracts Service (CAS) - SciFinder; CNKI Scholar (China National Knowledge Infrastructure); CNPIE; EBSCO (relevant databases); EBSCO Discovery Service; Elsevier - Compendex; Elsevier - Engineering Village; Elsevier - Reaxys; Elsevier - SCOPUS; Genamics JournalSeek; Google Scholar; Inspec; J-Gate; JournalTOCs; Naviga (Softweco); Paperbase; Pirabase; Polymer Library; Primo Central (ExLibris); ReadCube; ResearchGate; SCImago (SJR); Sherpa/RoMEO; Summon (Serials Solutions/ProQuest); TDOne (TDNet); TEMA Technik und Management; Thomson Reuters - Current Contents/Engineering, Computing, and Technology; Thomson Reuters - Journal Citation Reports/Science Edition; Thomson Reuters - Reaction Citation Index; Thomson Reuters - Science Citation Index Expanded; Ulrich's Periodicals Directory/ulrichsweb; WorldCat (OCLC)

The publisher, together with the authors and editors, has taken great pains to ensure that all information presented in this work (programs, applications, amounts, dosages, etc.) reflects the standard of knowledge at the time of publication. Despite careful manuscript preparation and proof correction, errors can nevertheless occur. Authors, editors and publisher disclaim all responsibility for any errors or omissions of liability for the results obtained from use of the information, or parts thereof, contained in this work.

The citation of registered names, trade names, trademarks, etc. in this work does not imply, even in the absence of a specific statement, that such names are exempt from laws and regulations protecting trademarks etc. and therefore free for general use.

ISSN 0334-6447 · e-ISSN 2191-0340

All information regarding notes for contributors, subscriptions, Open access, back volumes and orders is available online at www.degruyter.com/polyeng

RESPONSIBLE EDITOR Prof. Nino Grizzuti, Department of Chemical, Materials and Production Engineering, University of Naples Federico II, Piazzale V. Tecchio 80, 80125 Naples, Italy, Tel.: +39-081-7682285, Email: nino.grizzuti@unina.it

JOURNAL MANAGER Dr. Gunda Stöber, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany, Tel.: +49 (0)30 260 05-279, Fax: +49 (0)30 260 05-298, Email: polyeng.editorial@degruyter.com

RESPONSIBLE FOR ADVERTISEMENTS Claudia Neumann, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany. Tel.: +49 (0)30.260 05-226, Fax: +49 (0) 30.260 05-264 Email: anzeigen@degruyter.com

© 2017 Walter de Gruyter GmbH, Berlin/Boston

TYPESETTING Compuscript Ltd., Shannon, Ireland

PRINTING Franz X. Stückle Druck und Verlag e.K., Ettenheim
Printed in Germany



Contents

Original articles

Shuai Li, Guoqun Zhao and Jiachang Wang

A method to improve dimensional accuracy and mechanical properties of injection molded polypropylene parts — 323

Yottha Srithep, Dutchanee Pholharn, Onpreeya Veang-in and Suphan Yangyuen

Effect of banana fibers and plasticizer on melt processing of poly(vinyl alcohol) — 335

Yisha Yang, Duxin Li, Gaojie Si, Qilong Liu and Yue Chen

Improved thermal and mechanical properties of carbon fiber filled polyamide 46 composites — 345

Xiaochun Yin, Liang Wang, Sai Li, Guangjian He, Zhitao Yang, Yanhong Feng and Jinping Qu

Preparation and characterization of carbon fiber/poly(lactic acid)/thermoplastic polyurethane (CF/PLA/TPU) composites prepared by a vane mixer — 355

Zhe Zhai, Lajun Feng, Shasha Zhou, Guangzhao Li, Hong Lou and Zheng Liu

Influence of micron size aluminum particles on the aging properties and wear resistance of epoxy resin coatings — 365

Nana Li, Zhe Chang, Xiuzhen Zhao and Changfa Xiao

The effect of casting solution composition on surface structure and performance of poly(vinylidene fluoride)/multi-walled carbon nanotubes (PVDF/MWCNTs) hybrid membranes prepared via vapor induced phase separation — 373

Siti Hajar Othman, Nurhafiqha Hassan, Rosnita A. Talib, Roseliza Kadir Basha and Nazratul Putri Risyon

Mechanical and thermal properties of PLA/halloysite bio-nanocomposite films: effect of halloysite nanoclay concentration and addition of glycerol — 381

Chun-yu Wang, Yu-huan Bu, Hua-jie Liu and Sheng-lai Guo

Preparation and characterization of core-shell oil absorption materials stabilized by modified fumed silica — 391

Zhanyu Zhai, Christian Gröschel and Dietmar Drummer

Investigating the in-plane mechanical behavior of single-ply quasi-unidirectional glass fiber/polypropylene composites — 401

Martin Löhner and Dietmar Drummer

Characterization of layer built-up and inter-layer boundaries in rotational molding of multi-material parts in dependency of the filling strategy — 411

Kamran Alasvand Zarasvand and Hossein Golestanian

Experimental and numerical determination of compressive mechanical properties of multi-walled carbon nanotube reinforced polymer — 421