

JOURNAL OF POLYMER ENGINEERING

EDITOR-IN-CHIEF

Nino Grizzuti, Naples

EDITORS

Abdellah Aji, Montreal, QC
Mosto Bousmina, Quebec, QC
Pedro Fardim, Turku
Hiroshi Ito, Yamagata
Shih-Jung Liu, Tao-Yuan
Ana Vera Machado, Minho
Tim A. Osswald, Madison, WI
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 Celdes; Chemical Abstracts Service (CAS); Chemical Abstracts Service (CAS) – SciFinder; CNKI Scholar (China National Knowledge Infrastructure); CNPIEC; EBSCO - TOC Premier; EBSCO Discovery Service; Elsevier - Compendex; Elsevier - Engineering Village; Elsevier - SCOPUS; Google Scholar; Inspec; J-Gate; Naviga (Softweco); Paperbase; Pirabase; Polymer Library; Primo Central (ExLibris); ReadCube; SCImago (SJR); 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 Heiko Schulze, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany. Tel.: +49 (0)30.260 05-358, Fax: +49 (0) 30.260 05-264 Email: anzeigen@degruyter.com

© 2015 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

Qingsheng Liu, Jie Ouyang, Zhijun Liu and Wuming Li
Visualization and simulation of filling process of simultaneous co-injection molding based on level set method — 813

Huan Yu Liu, Fu Quan Chen, Rui Biao Guo, GuiZhen Zhang and JinPing Qu
Effect of compatibilizer on the properties of PBS/lignin composites prepared via a vane extruder — 829

Xia Cai, Jinghong Xu and Fenglei Shen
Fabrication and characterization of thermally conductive composites based on poly(butylene terephthalate)/glass fiber-silicon carbide — 839

Jingshui Xu, Denglong Chen, Xianglong Hu, Yangchuan Ke, Qian Zhou, Wensuai Gao, Zheling Zeng and Guoliang Zhang
Preparation and characterization of poly(MMA-EGDMA-AMPS) microspheres by soap-free emulsion polymerization — 847

Won-Suk Kong, Tae-Jun Ju, Jun-Hyo Park, Jae-Wook Lee and Ho Gyu Yoon
Modification of biaxially oriented polypropylene films using dicyclopentadiene based hydrogenated hydrocarbon resin — 859

Saheem Absar, Mujibur Khan, Kyle Edwards and Jeffrey Neumann
Investigation of synthesis and processing of cellulose, cellulose acetate and poly(ethylene oxide) nanofibers incorporating anti-cancer/tumor drug cis-diammineplatinum (II) dichloride using electrospinning techniques — 867

Zhifeng Zhu, Zhongqiu Zhu and Linyan Zhang
Grafting poly(2-acryloyloxyethyl trimethyl ammonium chloride) branches onto the backbones of corn starch for toughening starch film — 879

Uttam Kumar Debnath, Mohammad Asaduzzaman Chowdhury, Dewan Muhammad Nuruzzaman, Md. Mostafizur Rahman, Biplov Kumar Roy, Md. Arefin Kowser and Md. Monirul Islam
Erosion characteristics of Teflon under different operating conditions — 889

Mohammed Rafi Shaik, Manawwer Alam and Naser M. Alandis
Development of sustainable resource based poly(urethane-etheramide)/Fe₂O₃ nanocomposite as anticorrosive coating materials — 905