

INTERNATIONAL JOURNAL OF FOOD ENGINEERING

EDITOR-IN-CHIEF

Xiao Dong Chen, *Suzhou, China*

ASSOCIATE EDITORS

Mark Nelson, *Wollongong, Australia*

Ruben Mercadé-Prieto, *Suzhou, China*

Meng Wai Woo, *Melbourne, Australia*

Brent Young, *Auckland City, New Zealand*

Aditya Putranto, *Bandung, Indonesia*

Nan Fu, *Suzhou, China*

EDITORIAL MEMBERS

José Miguel Aguilera, *Santiago, Chile*

V.M. (Bala) Balasubramaniam, *Columbus, USA*

Bipan Bansal, *Palmerston North, New Zealand*

Jose J. Benedito, *Valencia, Spain*

Bhesh Bhandari, *St. Lucia, Australia*

Su-Ling Brooks, *Halifax, Canada*

Guohua Chen, *Hong Kong, China*

Nyuk Ling Chin, *Serdang, Malaysia*

Sakamon Devahastin, *Bangkok Thailand*

Ashim K. Datta, *Ithaca, USA*

Bryony James, *Auckland, New Zealand*

Dong Li, *Beijing, China*

Gauri S. Mittal, *Guelph, Canada*

Arun S. Mujumdar, *Montreal, Canada*

Sing Kiong Nguang, *Auckland, New Zealand*

Minh Nguyen, *Ourimbah, Australia*

Necati Özkan, *Ankara, Turkey*

Shafiur Rahman, *Muscat, Oman*

Carmen Rosselló, *Palma de Mallorca, Spain*

Shyam S. Sablani, *Pullman, USA*

Juming Tang, *Pullman, USA*

Ian Wilson, *Cambridge, United Kingdom*

Weibiao Zhou, *Singapore, Singapore*

DE GRUYTER

INTERNATIONAL JOURNAL OF FOOD ENGINEERING is devoted to engineering disciplines related to processing foods. The areas of interest include heat, mass transfer and fluid flow in food processing; food microstructure development and characterization; application of artificial intelligence in food engineering research and in industry; food biotechnology; and mathematical modeling and software development for food processing purposes. Authors and editors come from top engineering programs around the world: the U.S., Canada, the U.K., and Western Europe, but also South America, Asia, Africa, and the Middle East.

ISSN 2194-5764 · e-ISSN 1556-3758

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

ABSTRACTED/INDEXED IN AGRICOLA (National Agricultural Library) · CABI: Abstracts on Hygiene and Communicable Diseases (AHCD); AgBiotech News and Information; AgBiotechNet; Agricultural Economics Database; Agricultural Engineering Abstracts; Agroforestry Abstracts; Animal Breeding Abstracts; Animal Production Database; Animal Science Database; Biocontrol News and Information; Biofuels Abstracts; CAB Abstracts; Crop Physiology Abstracts; Crop Science Database; Dairy Science Abstracts; Environmental Impact; Environmental Science Database; Field Crop Abstracts; Forest Products Abstracts; Forest Science Database; Forestry Abstracts; Global Health; Horticultural Science Abstracts; Horticultural Science Database; Maize Abstracts; Nutrition Abstracts and Reviews; Nutrition Abstracts and Reviews Series B: Livestock Feeds and Feeding; Nutrition and Food Sciences Database; Organic Research Database; Ornamental Horticulture; Parasitology Database; Pig News and Information; Plant Breeding Abstracts; Plant Genetic Resources Abstracts; Plant Genetics and Breeding Database; Plant Growth Regulator Abstracts; Plant Protection Database; Postharvest News and Information; Potato Abstracts; Poultry Abstracts; Protozoological Abstracts; Review of Agricultural Entomology; Review of Aromatic and Medicinal Plants (RAMP); Review of Medical and Veterinary Entomology; Review of Medical and Veterinary Mycology; Rice Abstracts; Rural Development Abstracts; Seed Abstracts; Soil Science Database; Soils and Fertilizers; Soybean Abstracts; Sugar Industry Abstracts; Tropical Diseases Bulletin; Veterinary Science Database; Weed Abstracts; Wheat, Barley and Triticale Abstracts; World Agricultural Economics and Rural Sociology Abstracts (WAERSA) · Celdes · CNPIEC · EBSCO: Academic Search; Engineering Source; Food Science Source; TOC Premier; Discovery Service · Elsevier: BIOBASE/CABS (Current Awareness in Biological Sciences); Compendex; Engineering Village; SCOPUS · Foodline Science · FSTA - Food Science & Technology Abstracts · Google Scholar · Inspec · J-Gate · Naviga (Softweco) · Primo Central (ExLibris) · ProQuest: Advanced Technologies Database with Aerospace; Aerospace Database; Aluminium Industry Abstracts; ANTE: Abstracts in New Technologies and Engineering; Biological Sciences Journals; Biotechnology and Bioengineering Abstracts; Biotechnology Research Abstracts; Ceramic Abstracts/World Ceramics Abstracts; Civil Engineering Abstracts; Computer and Information Systems Abstracts; Copper Technical Reference Library; Corrosion Abstracts; Earthquake Engineering Abstracts; Electronics and Communications Abstracts; Engineered Materials Abstracts; Engineering Research Database; Environmental Science and Pollution Management; Industrial and Applied Microbiology Abstracts (Microbiology Abstracts A); Materials Business File; Materials Research Database; Mechanical & Transportation Engineering Abstracts; METADEX (Metals Abstracts); Solid State and Superconductivity Abstracts; Technology Research Database · SCImago (SJR) · Summon (Serials Solutions/ProQuest) · TDOne (TDNet) · Thomson Reuters: Current Contents/Agriculture, Biology, and Environmental Sciences; Science Citation Index; Science Citation Index Expanded · Ulrich's Periodicals Directory/ulrichsweb · WorldCat (OCLC)

RESPONSIBLE EDITOR Xiao Dong Chen, School of Chemical and Environmental Engineering, Soochow University, Suzhou Industrial Park, Jiangsu Province 215123, China.
Email: xdchen@suda.edu.cn

JOURNAL MANAGER Theresa Haney, De Gruyter, Genthiner Straße 13, 10785 Berlin, Germany.
Tel.: +49 (0)30 260 05-375, Fax: +49 (0)30 260 05-250
Email: Theresa.Haney@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 Integra Software Services Pvt. Ltd., Pondicherry, India

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

COVER ILLUSTRATION Zeljko Bozic/Hemera/Thinkstock



Contents

Research Articles

Ali Ghaffari and Ramin Mehdipour

Modeling and Improving the Performance of Cabinet Solar Dryer Using Computational Fluid Dynamics — 157

Nafiisa Sobratee and Tilahun S. Workneh

Evaluation of Chemical, Biochemical and Microbiological Quality in Tomato Using Multivariate Analysis — 173

Ece Cagdas and Seher Kumcuoglu

Effects of the Addition of Grape Seed Powder on the Thermorheological Properties of Frying Batters — 185

Joseph Hategekimana and Fang Zhong

Degradation of Vitamin E in Nanoemulsions during Storage as Affected by Temperature, Light and Darkness — 199

Weiqi Chen, Yurong Guo, Juan Zhang, Xiaorui Zhang and Yonghong Meng

Effect of Different Drying Processes on the Physicochemical and Antioxidant Properties of Thinned Young Apple — 207

Leila Nouri, Abdorreza Mohammadi Nafchi and A. A. Karim

Mechanical and Sensory Evaluation of Noodles Incorporated with Betel Leaf Extract — 221

Iva Kucerova, Anna Hubackova, Bo-Anne Rohlik and Jan Banout

Mathematical Modeling of Thin-Layer Solar Drying of Eland (*Taurotragus oryx*) Jerky — 229

Sirirattana Chimplee and Utai Klinkesorn

Thin-Layer Drying Model of Rambutan (*Nephelium lappaceum* L.) Kernel and Its Application in Fat Extraction Process — 243

Elçin Demirhan and Belma Özbek

Color Change Kinetics of Tea Leaves During Microwave Drying — 255

Li-Shuang Cheng, Sheng Fang and Mao-Lin Ruan

Influence of Blanching Pretreatment on the Drying Characteristics of Cherry Tomato and Mathematical Modeling — 265

Savitha HG and Manohar B

Studies on Grinding and Extraction of Oil from Fenugreek (*Trigonella foenum-graecum*) Seed — 275

S.L. Chia and G.H. Chong

Effect of Drum Drying on Physico-chemical Characteristics of Dragon Fruit Peel (*Hylocereus polyrhizus*) — 285

Santosh Gagare, V.D. Mudgal, P.S. Champawat and Amit Pisal

Standardization of Curing and Microwave Drying of Turmeric (*Curcuma longa*) Rhizomes — 295

Shorter Communication

Fengjuan Li, Kohji Yamaki, Yongqiang Cheng and Yuanyuan Fang

Assessment and Separation of Angiotensin I-Converting Enzyme Inhibitory Peptides in Chinese Soypaste — 301