Food Engineering Reviews Special Issue based on the 13th International Congress on Engineering and Food – (ICEF 13)

Roman Buckow¹ · Gustavo V. Barbosa-Cánovas² · Kezban Candoğan³ · Jorge Weltri-Chanes⁴ · Yrjö Roos⁵

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This Special Issue includes peer-reviewed articles based on presentations delivered during the 13th International Congress on Engineering and Food, ICEF13, which was held from September 23 to 26, 2019, in Melbourne, Australia.

The Guest Editors of this publication are Gustavo V. Barbosa-Cánovas, Kezban Candoğan, Jorge Weltri-Chanes, and Yrjö Roos.

They took the responsibility to assess the suitability of the manuscripts for the journal, to decide whether to send them for review or rejecting them. Those manuscripts that went for review received the feedback from at least two reviewers plus one of the editors. The Guest Editors were very rigorous to make sure only articles of excellent quality would be included in this Special Issue.

This issue includes review and research articles. In general, this journal only publishes review articles, but an exception was made in order to feature some relevant research work based on presentations at ICEF 13. This Issue is part of the ICEF 13 legacy, and the organizers of this Congress are very thankful to the Guest Editors as well as the publisher, Springer Nature, for contributing expertise and valuable time in preparing this very valuable scientific document.

Highlights of the 13th International Congress on Engineering and Food – ICEF 13

ICEF is considered the premier international event in the field of food engineering. The first ICEF was held in Boston, USA, in 1976, followed by 12 more in various locations worldwide, identified and selected by the International Association for Engineering and Food (IAEF). IAEF is a global body of 35 delegates representing professional engineering societies including relevant food engineering activities. The main objective of the IAEF is to organize ICEF events and to promote the food engineering profession all around the world.

ICEF13 was an outstanding success with 750 presentations and 550 delegates from 40 countries and 5 continents. The delegates represented leading academic institutions, professionals from the food industry, as well as from equipment and software suppliers. Most attendees (70%) were from overseas, 64% were from academia, and 23% were students. This congress was financially profitable, and the excess money was transferred to the organizers of ICEF14 which will be held in Nantes, France, in 2023.

The ICEF13 theme was “Engineering Innovations for Food Supply Chains.” Topics covered during ICEF13 were equally interesting and broad, including food security, food waste, alternative or novel foods, waste minimization, Industry 4.0 (and even industry 5.0), new processing technologies, engineering aspects of digestion, food systems, packaging, 3D food printing, smart sensors, bioavailability, and space foods.

The congress was a result of the efforts of the Australian Food Engineering Association (AFEA), Engineers Australia, and Waldron Smith Management, who supported all the conference logistics within and outside the Congress Venue. IAEF member representatives also contributed to shaping the conference through numerous conference calls between 2016 and 2019. The ICEF13 Local Organizing Committee (Andrew Watkins, Benu

✉ Kezban Candoğan
candogan@eng.ankara.edu.tr

Roman Buckow
roman.buckow@sydney.edu.au

Gustavo V. Barbosa-Cánovas
Barbosa@wsu.edu

Jorge Weltri-Chanes
jweltri@tec.mx

Yrjö Roos
yrjo.roos@ucc.ie

¹ University of Sydney, Sydney, Australia

² Washington State University, Pullman, USA

³ Ankara University, Ankara, Turkey

⁴ Tecnológico de Monterrey, Monterrey, Mexico

⁵ University College Cork, Cork, Ireland

Adhikari, Dennis Forte, Geoff Hurst, Gordon Young, Janet Paterson, Jay Sellaheewa, Kim Staples, Kai Knoerzer, Meltem Bayrak, Minh Nguyen, Pablo Juliano, Roman Buckow) devoted significant amount of time providing true leadership for the success of this meeting, they worked as a genuine team. The organizers appointed several subcommittees as follows: Scientific, Marketing, Publications and Sponsorship, which were led by Jay Sellaheewa, Kim Staples, Pablo Juliano, and Kai Knoerzer, respectively.

I would like to acknowledge and give special thanks to the organizers, management team, sub-committee members, guest editors, speakers, poster presenters, and delegates who have made this congress a great and unique food engineering event.

Prof Roman Buckow, University of Sydney
IAEF President 2015–2019

A Note from the Guest Editors

We are very thankful to the ICEF 13 Organizers, especially to the Publications Subcommittee, for giving us the opportunity to be part of this excellent event by putting together

this Food Engineering Reviews Special Issue. We strived to bring to the Food Engineering Community a quality product on topics of current interest. We are very thankful, as well, to the authors and reviewers of the manuscripts under consideration. This publication together with a Journal of Food Engineering Special Issue and a book including several oral presentations, all derived from ICEF 13, constitutes a major achievement, and we are sure all of these publications will be very well received; we can call them the ICEF 13 trilogy, an excellent testimony of this exceptional Congress.

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