

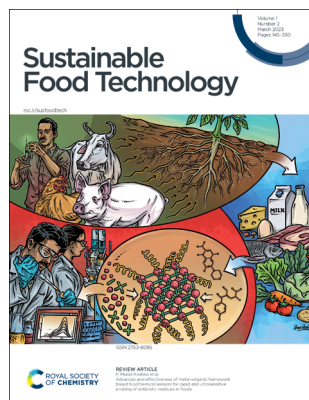
Sustainable Food Technology

rsc.li/susfoodtech

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2753-8095 CODEN SFTUAG 1(2) 145–330 (2023)



Cover

See P. Murali Krishna *et al.*, pp. 152–184. Image reproduced by permission of Mirinal Kumar Rayappa from *Sustainable Food Technol.*, 2023, **1**, 152.

REVIEWS

152

Advances and effectiveness of metal–organic framework based bio/chemical sensors for rapid and ultrasensitive probing of antibiotic residues in foods

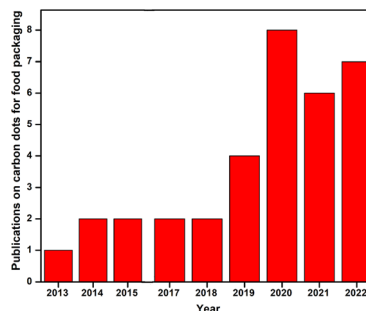
Mirinal Kumar Rayappa, Kavya K. S., Gurdeep Rattu and P. Murali Krishna*



185

Carbon dots for food packaging applications

Deepika, Lokesh Kumar and Kirtiraj K. Gaikwad*



Editorial Staff

Executive Editor

Anna Rulka

Deputy Editor

Audra Taylor

Editorial Production Manager

Viktoria Titmus

Assistant Editors

Shwetha Krishna, Michael Whitelaw, Alexander Whiteside

Editorial Assistant

Samantha Campos

Publishing Assistant

Brittany Hanlon

Publisher

Neil Hammond

For queries about submitted papers, please contact Viktoria Titmus, Editorial Production Manager in the first instance. E-mail: susfoodtech@rsc.org

For pre-submission queries please contact Anna Rulka, Executive Editor. E-mail: susfoodtech-rsc@rsc.org

Sustainable Food Technology (electronic: ISSN 2753-8095) is published 6 times a year by the Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, UK CB4 0WF.

Sustainable Food Technology is a Gold Open Access journal and all articles are free to read. Please email orders@rsc.org to register your interest or contact Royal Society of Chemistry Order Department, Royal Society of Chemistry, Thomas Graham House, Science Park, Milton Road, Cambridge, CB4 0WF, UK Tel +44 (0)1223 432398; E-mail: orders@rsc.org

Whilst this material has been produced with all due care, the Royal Society of Chemistry cannot be held responsible or liable for its accuracy and completeness, nor for any consequences arising from any errors or the use of the information contained in this publication. The publication of advertisements does not constitute any endorsement by the Royal Society of Chemistry or Authors of any products advertised. The views and opinions advanced by contributors do not necessarily reflect those of the Royal Society of Chemistry which shall not be liable for any resulting loss or damage arising as a result of reliance upon this material. The Royal Society of Chemistry is a charity, registered in England and Wales, Number 207890, and a company incorporated in England by Royal Charter (Registered No. RC000524), registered office: Burlington House, Piccadilly, London W1J 0BA, UK, Telephone: +44 (0) 207 4378 6556.

Advertisement sales:

Tel +44 (0) 1223 432246; Fax +44 (0) 1223 426017; E-mail advertising@rsc.org

For marketing opportunities relating to this journal, contact marketing@rsc.org

Sustainable Food Technology

rsc.li/susfoodtech

Sustainable Food Technology publishes cultivating sustainable solutions to food processing and engineering.

Editorial Board

Editor-in-Chief

Jorge Barros Velázquez, University of Santiago de Compostela, Spain

Associate Editors

Rekha Singhal, Institute of Chemical Technology, India
Qin Wang, University of Maryland, USA

Benu Adhikari, RMIT University, Australia

Editorial Board Members
Paula Bourke, University College Dublin, Ireland

Advisory Board

Cristóbal N. Aguilar, Universidad Autónoma de Coahuila, Mexico
Maria G. Corradini, University of Guelph, Canada
Sakamon Devahastin, King Mongkut's University of Technology Thonburi (KMUTT), Thailand
Tian Ding, Zhejiang University, China
Hao Feng, North Carolina A&T State University, USA
Joe P. Kerry, University College Cork, Ireland
Olga Martín-Belloso, Universidad de Lleida, Catalonia, Spain
Maria Angela A Meireles, Universidade Estadual de Campinas, Brazil
Solange I. Mussatto, Technical University of Denmark, Denmark
Indrawati Oey, University of Otago, New Zealand
Umezurike Linus Opara, Stellenbosch University, South Africa
Federico Pallottino, CREA-IT, Italy
Marco Poiana, Mediterranean University of Reggio Calabria, Italy
Anet Režek Jambrak, University of Zagreb, Croatia
Victor Rodov, ARO - The Volcani Institute, Israel
Andreas Schieber, Universität Bonn, Germany
Juming Tang, Washington State University, USA
Paula Teixeira, Universidade Católica Portuguesa, Portugal
Long Yu, South China University of Technology, Institute of Chemistry, Henan Academy of Sciences, China
Min Zhan, Jiangnan University, China

Information for Authors

Full details on how to submit material for publication in Sustainable Food Technology are given in the Instructions for Authors (available from <http://www.rsc.org/authors>). Submissions should be made via the journal's homepage: rsc.li/susfoodtech

Authors may reproduce/republish portions of their published contribution without seeking permission from the Royal Society of Chemistry, provided that any such republication is accompanied by an acknowledgement in the form: (Original Citation)–Reproduced by permission of the Royal Society of Chemistry.

This journal is © The Royal Society of Chemistry 2023. Apart from fair dealing for the purposes of research or private study for non-commercial purposes, or criticism or review, as permitted under the Copyright, Designs and Patents Act 1988 and the Copyright and Related Rights Regulation 2003, this publication may only be reproduced, stored or transmitted, in any form or by any means, with the prior permission in writing of the Publishers or in the case of reprographic reproduction in accordance with the terms of licences issued by the Copyright Licensing Agency in the UK. US copyright law is applicable to users in the USA.

Registered charity number: 207890

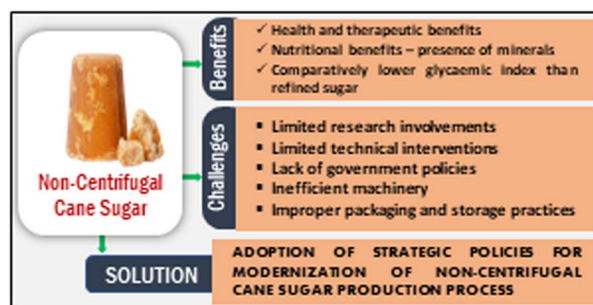


REVIEWS

200

Current production strategies and sustainable approaches towards the resurgence of non-centrifugal cane sugar production – a review

Venkatesh T,* Nandhu Lal A. M., Silpa V., Balakrishnan Dharmalingam, Padma Ishwarya S., Reshma M. V., Sajeev M. S., Ravi Pandiselvam and Anjineyulu Kothakota*



215

Eco-friendly biodegradable nanocomposite materials and their recent use in food packaging applications: a review

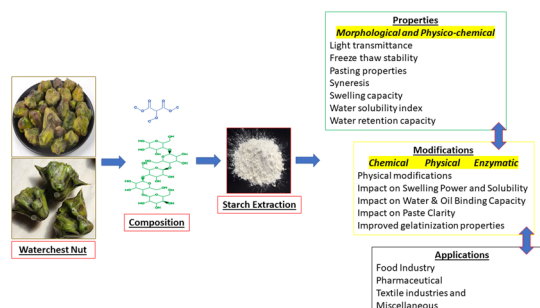
Samah M. El-Sayed* and Ahmed M. Youssef*



228

Water chestnut starch: extraction, chemical composition, properties, modifications, and application concerns

Kamalpreet Kaur, Gurpreet Kaur and Ajay Singh*

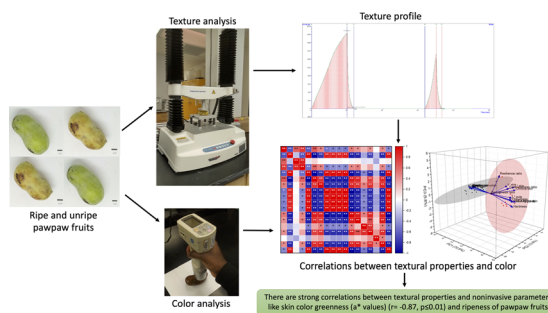


COMMUNICATIONS

263

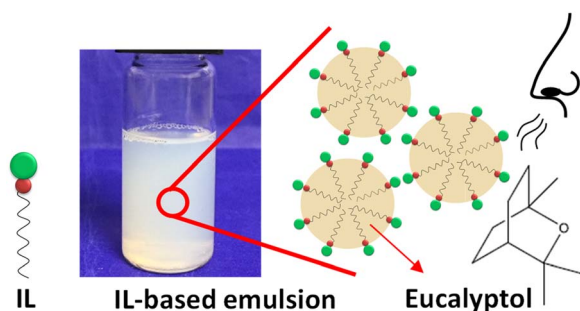
Correlations between color, textural properties and ripening of the North American pawpaw (*Asimina triloba*) fruit

Bezalel Adainoo, Andrew L. Thomas and Kiruba Krishnaswamy*



COMMUNICATIONS

275

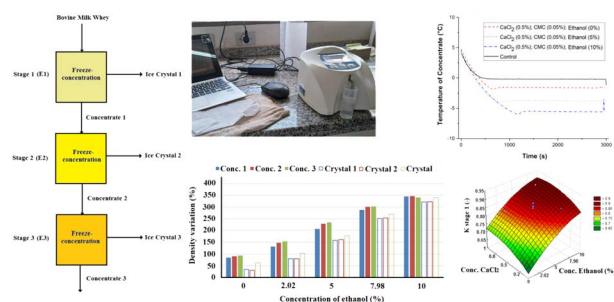


Novel naturally derived encapsulation agents in the ionic liquid form for sustainable emulsion-based products

Ariel A. C. Toledo Hijo,* Eric Keven Silva, Aureliano A. D. Meirelles, Rosiane L. Cunha and Antonio J. A. Meirelles*

PAPERS

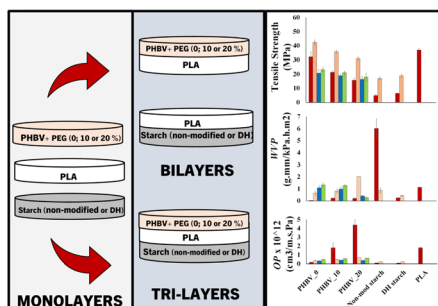
280



Effects of mixtures of ethanol-calcium chloride-carboxymethylcellulose on the bovine milk whey freeze concentration process

Camilla Soares Duarte, Adrise Aparecida Rodrigues, Ana Cristina Freitas de Oliveira Meira, Luiz Ronaldo de Abreu, Fabiano Freire Costa and Jaime Vilela de Resende*

296



Lamination of starch/polyesters by thermocompression for food packaging purposes

Carla I. La Fuente Arias,* Chelo González-Martínez and Amparo Chiralt

306



Utilization of button mushroom (*Agaricus bisporus*) powder to improve the physiochemical and functional properties of cookies

Rafeeya Shams,* Jagmohan Singh, Kshirod K. Dash, Aamir Hussain Dar* and R. Pandiselvam



319

Towards a sustainable and green extraction of curcuminoids using the essential oil of *Cinnamomum cassia*

Verena Huber,^{*} Michael Schmidt, Didier Touraud and Werner Kunz^{*}

