

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 2(4) 851–1154 (2024)



Cover
See Wahyu Ramadhan, Anita Nurul Firadaos *et al.*, pp. 1022–1032. Image reproduced by permission of Wahyu Ramadhan from *Sustainable Food Technol.*, 2024, 2, 1022.



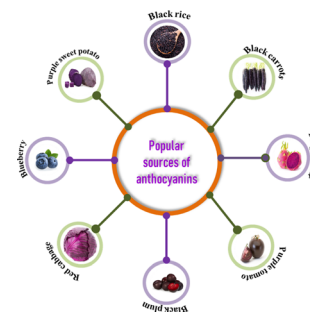
Inside cover
See Guoqiang Zhang, Manfei Fu *et al.*, pp. 1033–1040. Image reproduced by permission of Guoqiang Zhang from *Sustainable Food Technol.*, 2024, 2, 1033.

REVIEWS

860

Plant phytochemicals as bio-responsive compounds in smart packaging for food spoilage detection: a comprehensive review

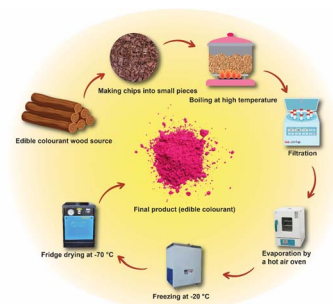
Konala Akhila, Dakuri Ramakanth, Lingala Lakshman Rao, Suman Singh and Kirtiraj K. Gaikwad*



876

Edible ink for food printing and packaging applications: a review

Lokman Hakim, Ram Kumar Deshmukh, Youn Suk Lee* and Kirtiraj K. Gaikwad*



ChemComm

Uncover new possibilities
with outstanding
preliminary research

Original discoveries, fuelling
every step of scientific progress

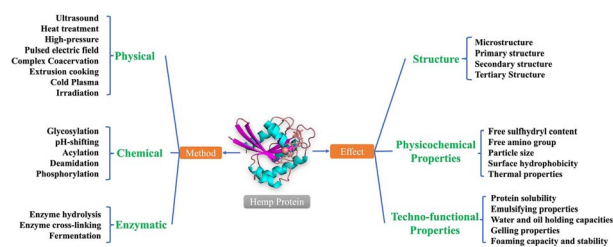
rsc.li/chemcomm

Fundamental questions
Elemental answers

893

Recent advances in plant protein modification: spotlight on hemp protein

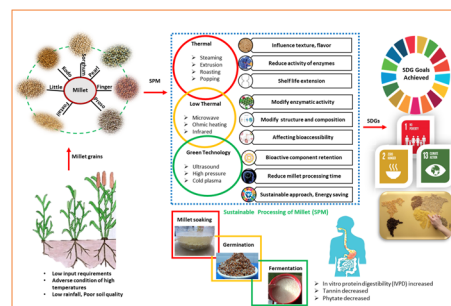
Xinye Liu,* Feng Xue* and Benu Adhikari*



908

Millets as supergrains: a holistic approach for sustainable and healthy food product development

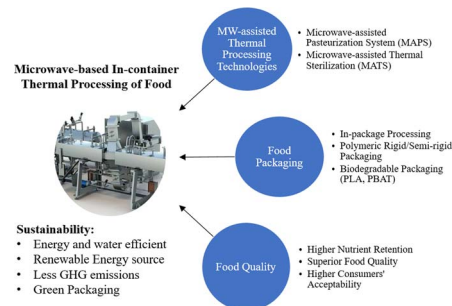
Anil Kumar Anal,* Ranjit Singh, Daniel Rice, Kingkan Pongtong, Udipta Hazarika, Dipika Trivedi and Sanjaya Karki



926

Microwave-based sustainable in-container thermal pasteurization and sterilization technologies for foods

Kanishka Bhunia,* Juming Tang and Shyam S. Sablani*



945

Lignin-derived bionanocomposites as functional food packaging materials

Muhammad Zubair, Zahid Rauf, Seerat Fatima and Aman Ullah*



REVIEWS

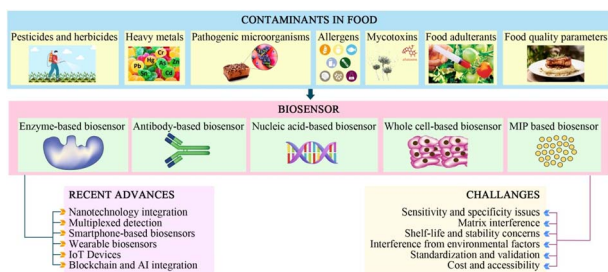
967



Sustainable solutions for mitigating spring frost effects on grape and wine quality: facilitating digital transactions in the viniculture sector

Antonia Terpou,* Olga S. Arvaniti, Nikolaos Afratis, Gina Athanasiou, Frank Binard and Theodore Zahariadis

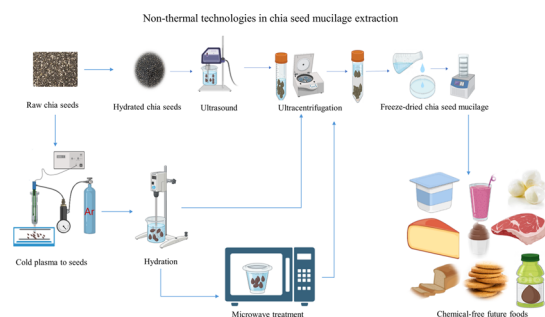
976



Advancements in food quality monitoring: integrating biosensors for precision detection

Soumitra Nath*

993

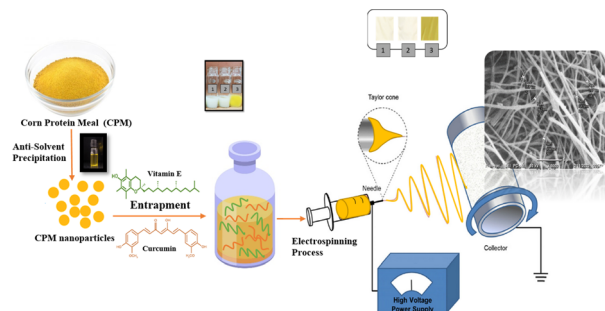


Prospects of using non-thermal technologies for chia seed mucilage extraction

Divyang Solanki, Indrawati Oey,* Sangeeta Prakash,* Bhesh Bhandari and Jatindra K. Sahu

COMMUNICATION

1011



Sustainable nanofiber synthesis from corn protein meal for enhanced vitamin E and curcumin nutrient delivery in food systems

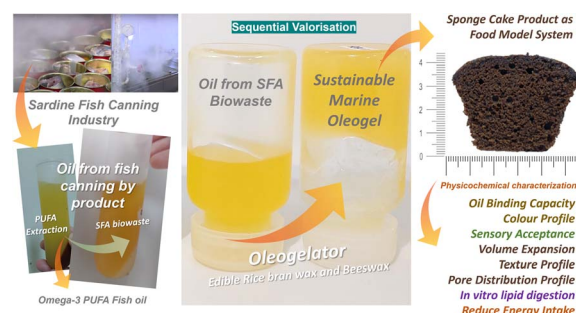
Vibhu Mishra, Dalveer Kaur, Saumya Singh, Devendra Pratap Singh and Meena Krishania*



1022

Synthesis of a sustainable marine oleogel and its application as a fat substitute in a sponge cake system

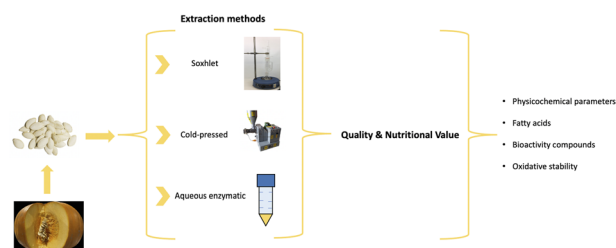
Wahyu Ramadhan,* Anita Nurul Firdaos, William Vito Krisnawan, Sugeng Heri Suseno, Bambang Riyanto, Wini Trilaksani and Joko Santoso



1033

Comparison of quality and oxidative stability of pumpkin seed (*Cucurbita maxima*) oil between conventional and enzymatic extraction methods

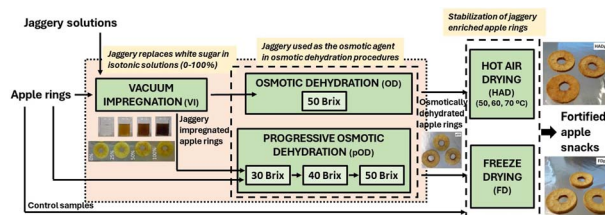
Guoqiang Zhang,* Ziqian Li and Manfei Fu*



1041

Potential of vacuum impregnation and osmotic dehydration techniques in producing jaggery-fortified apple snacks

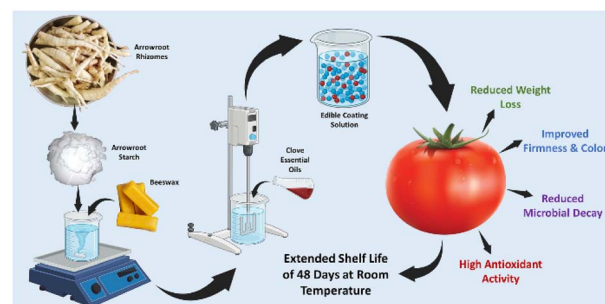
Cristina Barrera, Noelia Betoret and Lucía Seguí*



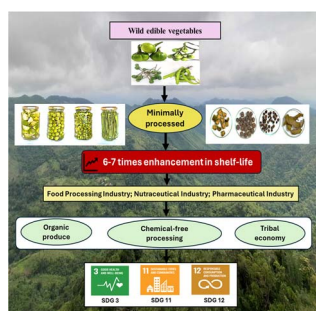
1052

Clove essential oil emulsions-loaded arrowroot starch-beeswax-based edible coating extends the shelf life and preserves the postharvest quality of fresh tomatoes (*Solanum lycopersicum* L.) stored at room temperature

Nimesh Dileesha Lakshan, Chathuri M. Senanayake,* Thushari Liyanage and Ahinsa Lankanayaka



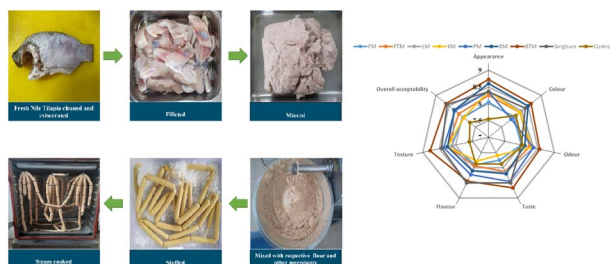
1069



Effects of brining and standardized drying on the composition, shelf stability, microbial safety and antioxidant status of four wild edible vegetables

Gunjana Deka, Sayantan Chakraborty, Madhu Kumari, HC Lalbiakdiki, Tridip Kumar Hazarika and Himjyoti Dutta*

1088

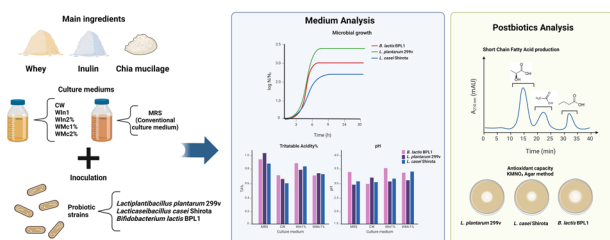


Millet flour as a potential ingredient in fish sausage for health and sustainability

Krishnamoorthy Elavarasan,* Mathew Malini, George Ninan, C. N. Ravishankar and B. R. Dayakar

1101

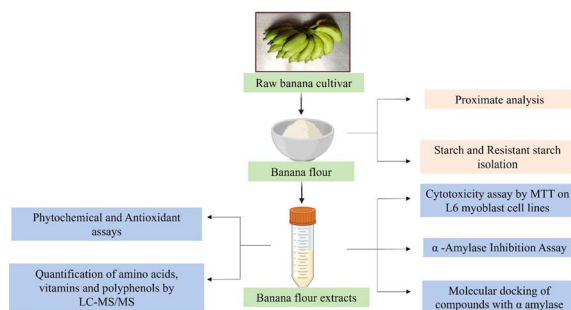
Use of whey for a sustainable production of postbiotics with potential bioactive metabolites



Use of whey for a sustainable production of postbiotics with potential bioactive metabolites

Victor E. Vera-Santander, Emma Mani-López, Aurelio López-Malo and Maria Teresa Jiménez-Munguía*

1113



Exploring the nutritional, physicochemical and hypoglycemic properties of green banana flours from unexploited banana cultivars of southern India

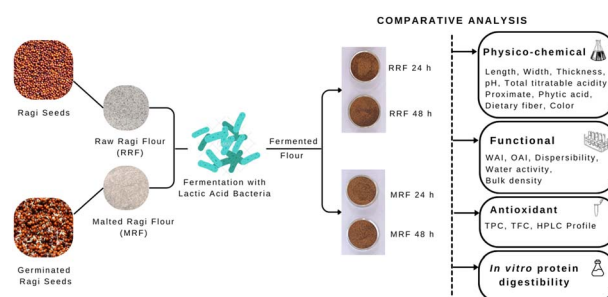
V. S. Shini, Abraham Billu, Abhijith Suvachan and P. Nisha*



1128

Effect of lactic acid fermentation on the physico-chemical, functional, and antioxidant properties, and *in vitro* protein digestibility of malted ragi (*Eleusine coracana* L.)

Rahul Dev, Shriya Bhatt and Mahesh Gupta*



1139

Formulation of plant-based meat alternatives and its optimization by experimental design using response surface methodology

T. Archana Devi, R. Rahul, H. Melvin Joshua, N. Naveen and Pothiyappan Karthik*

