

# Sustainable Food Technology

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ISSN 2753-8095 CODEN SFTUAG 4(2) 1191–2200 (2026)



### Cover

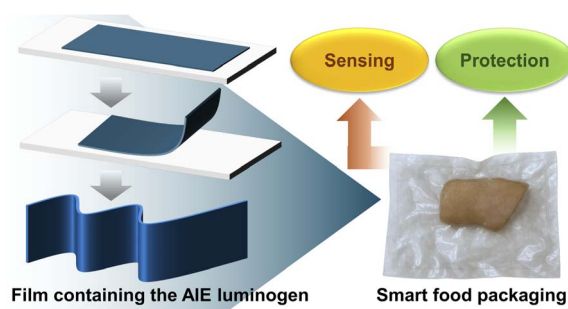
See Federica Turrini *et al.*, pp. 1475–1491. Image reproduced by permission of Federica Turrini, Raffaella Boggia and Federica Grasso from *Sustainable Food Technol.*, 2026, 4, 1475.

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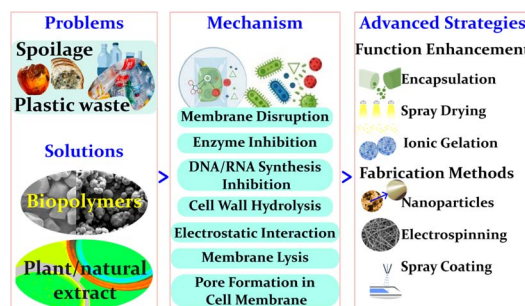
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Shubhajit Sarkhel, Samandeep Kaur, Rahul Das, Aditi Sharma, Ankan Kheto, Debapam Saha and Yogesh Kumar\*



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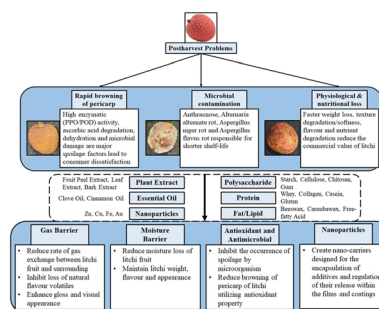
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## Intelligent & edible biopolymer-based packaging technologies for postharvest shelf-life enhancement of litchi (*Litchi chinensis*) fruit: a comprehensive review

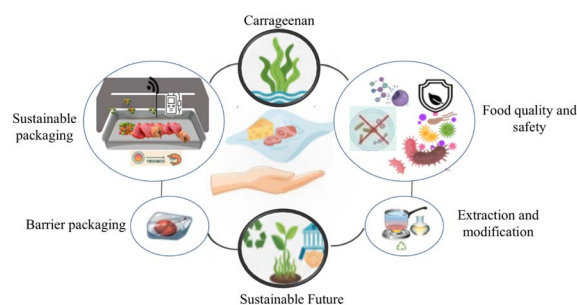
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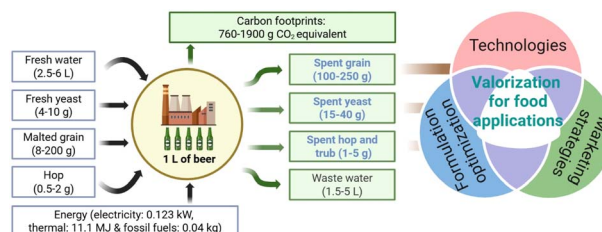
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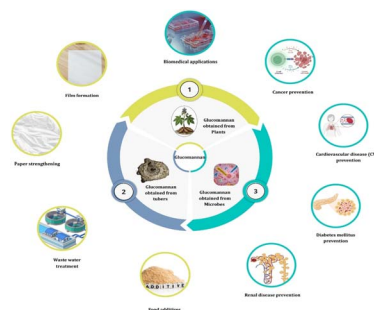
Abedalghani Halahlah, Abdessamie Kellil, Susanna Peltonen and Thao M. Ho\*



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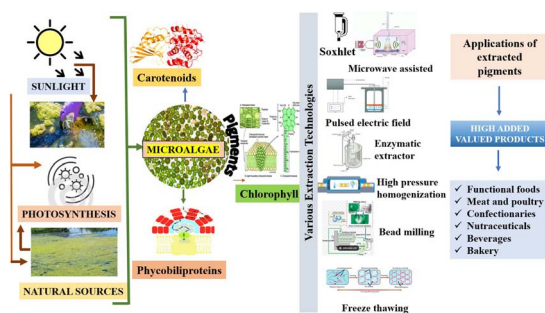
## Glucomannan: sources, physiological mechanisms and applications of an emerging dietary fiber

Raju Sasikumar,\* Anyasha Das and Selva Kumar T



## REVIEWS

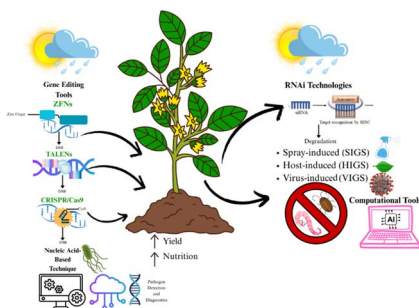
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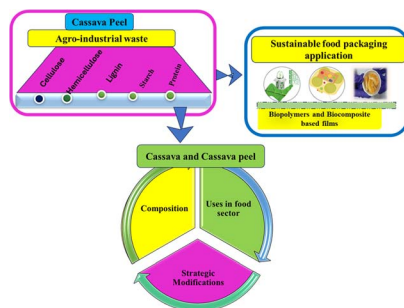
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### Integrating nucleic acid research and computational strategies for advancing plant food security

Yashika, Leena Aggarwal\* and Pradeep Pant\*

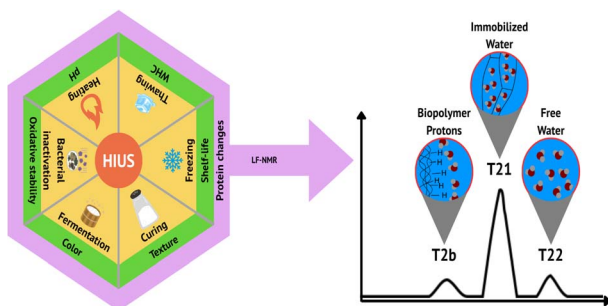
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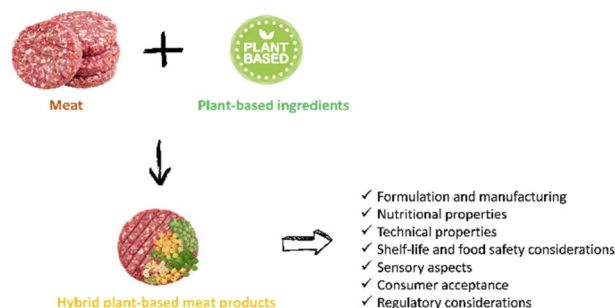
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### Hybrid plant-meat products – addressing the sustainability debate around processed meat consumption: a review

Zuo Song, Ruth M. Hamill and Joseph P. Kerry\*

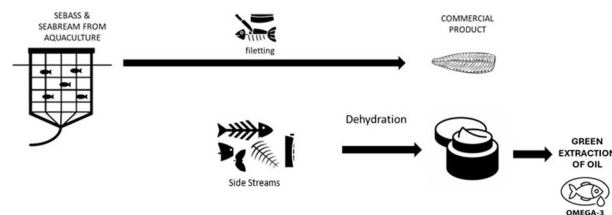


## PAPERS

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### Evaluating sustainable techniques for the extraction of oils from processed sea bass and sea bream aquaculture side streams

Federica Grasso, Federica Turrini,\* Marte Jenssen, Valentina Orlandi, Aseel Swaidan, Filippo Falco, Kjersti Lian and Raffaella Boggia



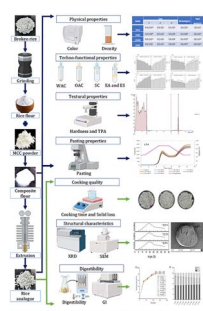
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### Plant fibre-reinforced oilseed meal based biocomposites and biodegradable plates: development and performance analysis

Ruchi Rani, Prakash Verma, Sriram Marimuthu and Laxmikant S. Badwaik\*



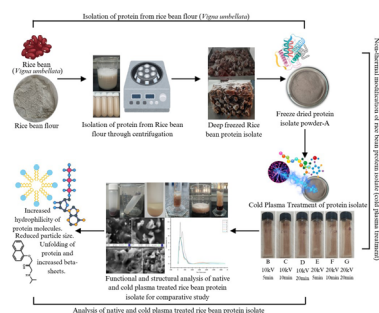
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## Incorporation of microcrystalline cellulose into extruded rice analogue: effects on the physicochemical, technofunctional, textural, cooking and structural properties, *in vitro* digestibility and estimated glycaemic index

Malla Vandana, Siddharth Vishwakarma, Shubham Mandliya, Hari Niwas Mishra\* and Yuvraj Bhosale\*

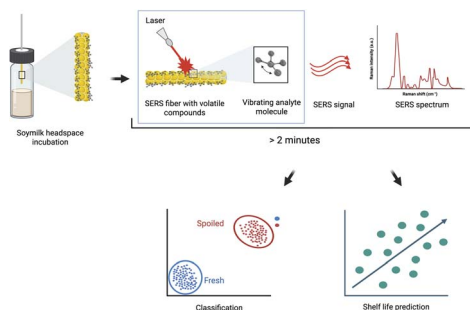
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## Unveiling the effects of cold plasma treatment on the structural, rheological, and functional properties of rice bean protein isolate

Charu Agarwal, Rachna Sehrawat, Loveleen Sharma\* and Manoj Kumar Patel\*

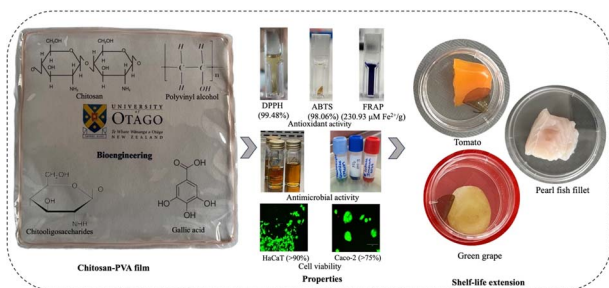
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## Real-time prediction of shelf-life of soymilk using a surface-enhanced Raman spectroscopy (SERS) fiber and convolutional neural networks

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## Antioxidant, antimicrobial, and cytotoxic properties of chitosan–PVA films functionalised with chito oligosaccharide and gallic acid for shelf-life extension of perishable foods

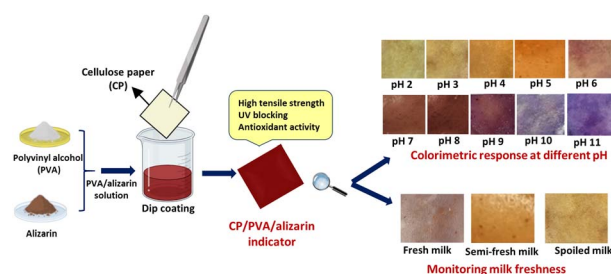
Shuva Bhowmik, Dominic Agyei and Azam Ali\*



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## Development and characterization of a novel pH-responsive colorimetric indicator based on cellulose paper and polyvinyl alcohol loaded with alizarin for monitoring milk freshness

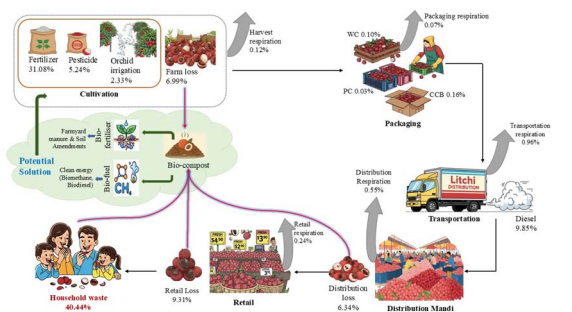
Satti Venu Gopala Kumari, Jibin Joseph, Kannan Pakshirajan and G. Pugazhenthil\*



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## Life cycle carbon accounting and waste valorisation in litchi supply chains for climate-resilient food systems

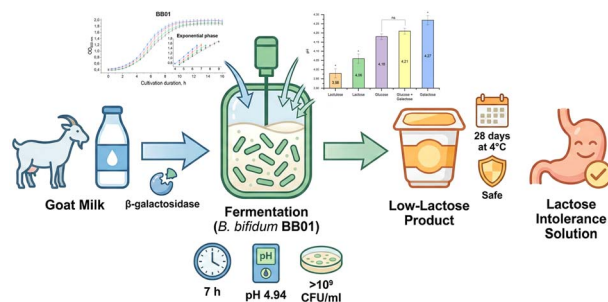
Neha Singh, Rohit Biswas and Mamoni Banerjee\*



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## Probiotics selection for low-lactose fermented goat milk products

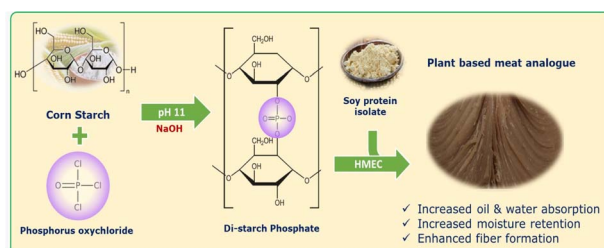
Mariia Antsyperova, Tamara Arseneva, Aleksei Fedorov, Elena Lemeshonok, Lyudmila Zabolova and Denis Baranenko\*



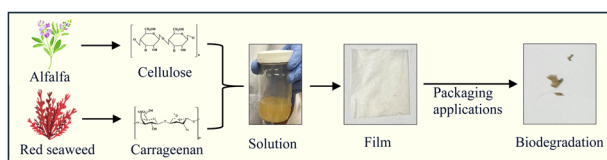
1615

## Role of phosphorylated corn starch in the texturization of high moisture meat analogues

R. Arjun, R. Keerthi, P. Monica and K. V. Ragavan\*



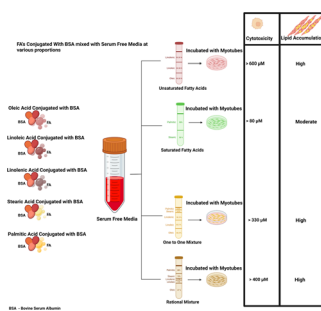
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### Biodegradable films based on alfalfa cellulosic residue and carrageenan blends for sustainable food packaging

Sandeep Paudel and Srinivas Janaswamy\*

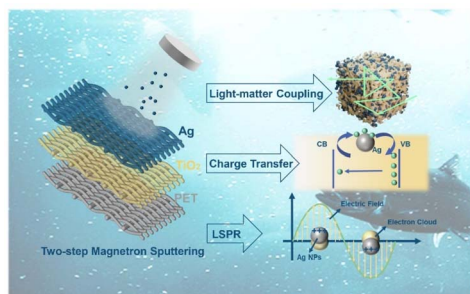
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### Intra-myocellular lipid enrichment of differentiated bovine satellite cells through beef-like fatty acid mixtures

Waris Mehmood, Anupam Abraham, Polina Rabinovich-Toidman, Neta Lavon, Margrethe Therkildsen, Jette Feveile Young and Martin Krøyer Rasmussen\*

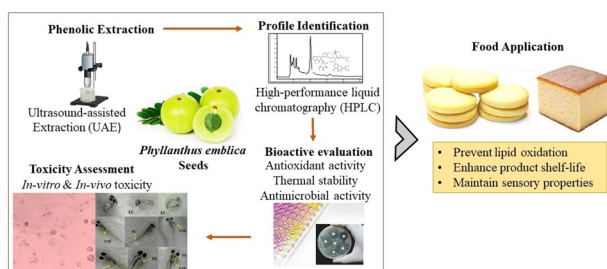
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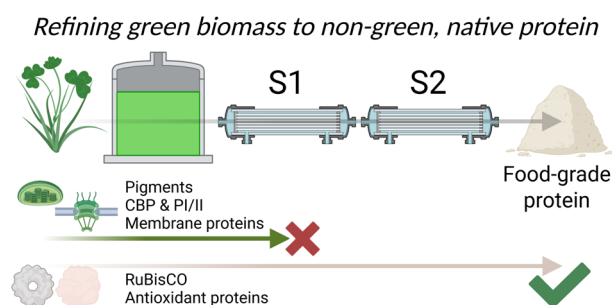
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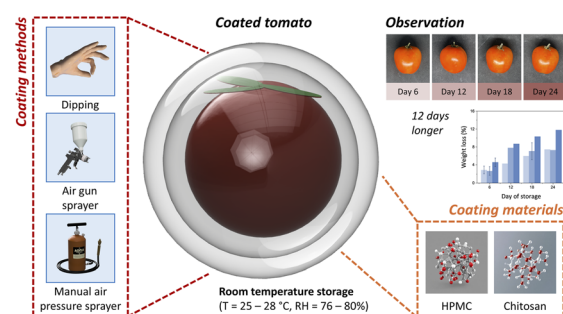
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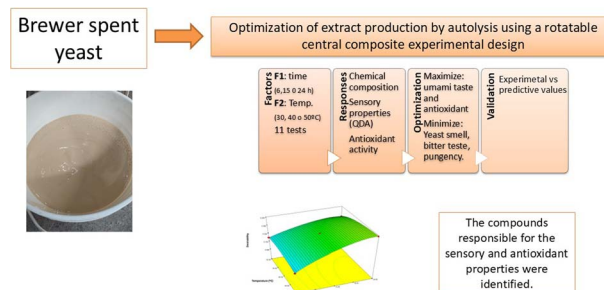
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## Valorization of brewing by-products: obtaining flavor-enhancing and antioxidant compounds from spent yeast

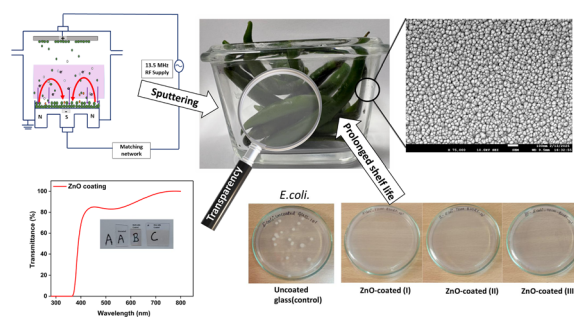
Antonela G. Garzón,\* Yanina Pavón, Marilyn E. Aquino and Silvina R. Drago



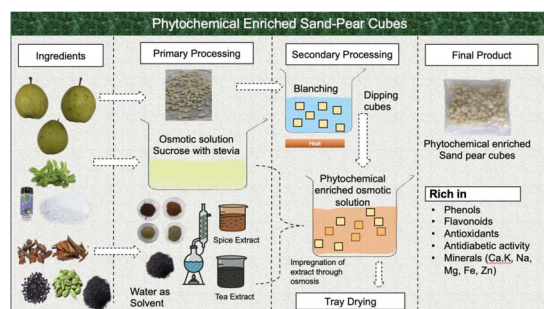
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## Investigation of the antibacterial activity of sputtered ZnO coating on borosilicate glass: a nanostructured approach for food packaging

Jyoti Pandey and Suchitra Rajput\*



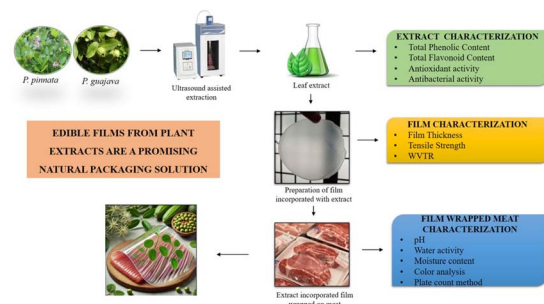
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## Phytochemical improvement of sand pear cubes through impregnation of spices and tea extract: characterization using *in vitro* bioactivity, FTIR, ICP-AES, and SEM

Rajat Chandel, Vikas Kumar,\* Ramandeep Kaur, Satish Kumar, Sandeep Janghu and Jasleen Bhasin

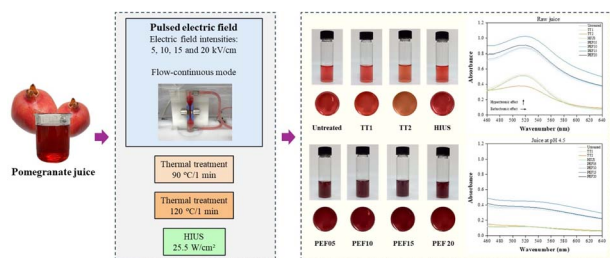
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## Plant-extract-infused edible films as natural antimicrobial and antioxidant packaging for chicken meat

Kanimozhi N. V., Sivabharathi M., Ragulya K., Livetha G. and Sukumar M.\*

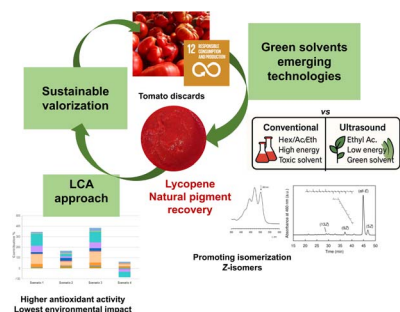
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## Pulsed electric field-assisted copigmentation *via* endogenous phenolic acids enhances the chemical stability of anthocyanins in pomegranate juice

Iuri Procopio Castro Brito and Eric Keven Silva\*

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## Sustainable valorization of tomato waste through life cycle assessment of lycopene extraction methods

Natalia A. Di Clemente, Andrea Gomez-Zavaglia\* and Esteban Gerbino

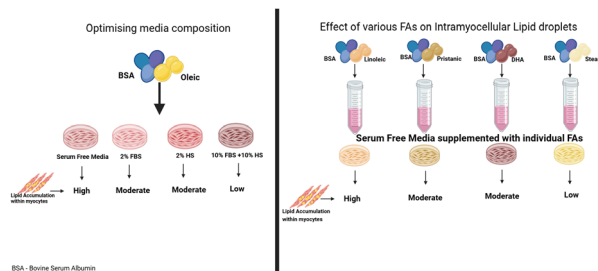


1801

### Serum-free media drive lipid accumulation in porcine satellite cells intended for cultivated meat

Anupam Abraham, Marc Auguet-Lara, Stig Skrivergaard, Margrethe Therkildsen, Martin Krøyer Rasmussen and Jette Feveile Young\*

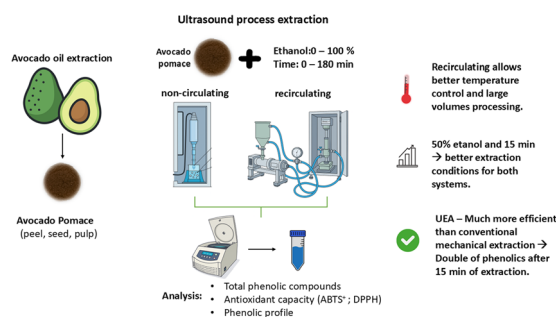
#### Optimising Intramyocellular Lipid Accumulation in Cultivated Porcine Muscle cells



1813

### Enhanced recovery of antioxidant compounds from avocado pomace using ultrasound-assisted extraction systems

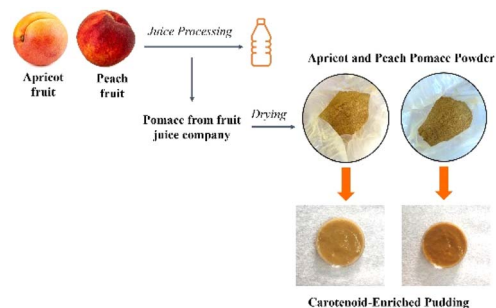
Dayvison Mendes Moreira, Jailton Ribeiro dos Santos Junior, Luiz Carlos Corrêa-Filho, Lourdes Maria Correa Cabral and Renata Valeriano Tonon\*



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### Valorization of apricot and peach pomaces as sustainable ingredients for the formulation of carotenoid-enriched puddings

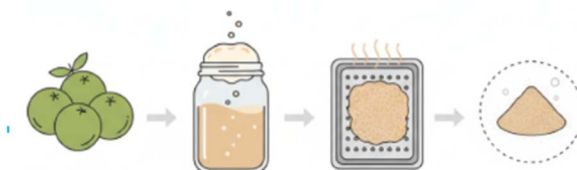
Aslı Yıldırım Vardin and Dilara Konuk Takma\*



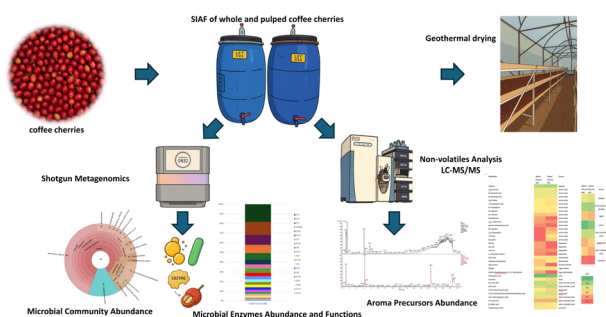
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### Physicochemical and bioactive characterization of microencapsulated *Phyllanthus emblica* kombucha powder through foam mat drying

Nur Haniza Ewandi Jong, Norhayati Muhammad,\* Norazlin Abdullah and Dayang Norulfairuz Abang Zaidel



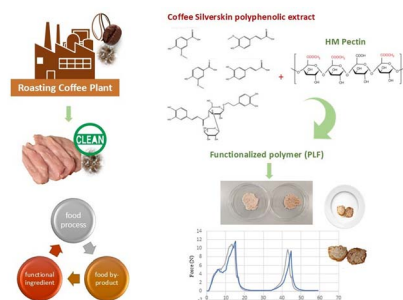
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### The effect of microbial community in the self-induced anaerobic fermentation on the aroma precursor development of geothermal coffee

Zikrina Istighfarah, C. Hanny Wijaya,\* Lilis Nuraida, Erliza Noor and Wisnu Ananta Kusuma

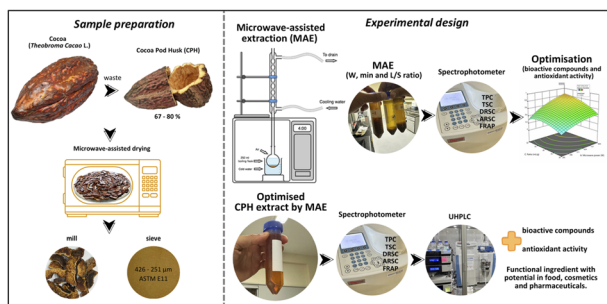
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### Coffee silverskin extract-functionalised pectin: a sustainable substrate to obtain chicken meatballs with antioxidant and improved sensory properties

U. Gianfranco Spizzirri, Eva Scarcelli, Matteo Carletta, Rosa Nicoletti, Cinzia Benincasa, Donatella Restuccia, Domizia Vescovo, Maria Stefania Sinicropi, Annalisa Serio, Rosa Di Capua, Francesca Aiello\* and Maria Martuscelli

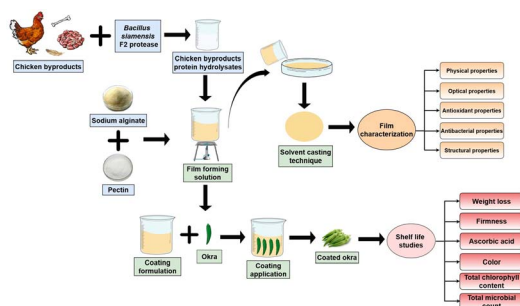
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### Optimisation of the microwave-assisted extraction process of bioactive compounds with antioxidant activity from cocoa pod husk (*Theobroma cacao* L.)

Esteban Jurado-Beizaga, Erick Alvarez-Yanamango,\* Oscar Herrera-Calderon and Alfredo Ibañez

1883



### Valorization of chicken byproducts for bioactive coatings to extend the shelf life of okra (*Abelmoschus esculentus*)

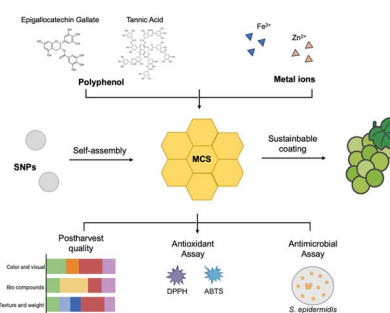
Aparna Ramadoss, Venkata Giridhar Poosarla,\* Ananya Kumari, Shaik Sadiya, Manisha Kalita and Nagaveni Shivshetty



1898

## Systematic investigation of metal–phenolic network-capped starch nanoparticles as sustainable coatings for postharvest fruit preservation

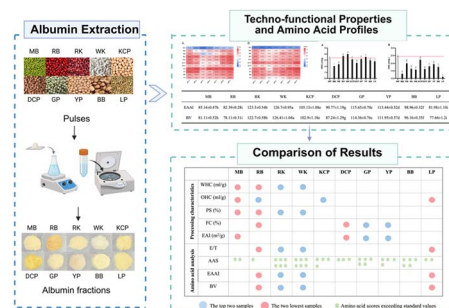
Tianyi Jin, Tianyu Wang, Sangeun Park, Danielle Morgan Schultze, Siyun Wang, Dangzhi Han and Tianxi Yang\*



1909

## Comparative assessment of albumins from ten pulses: techno-functional properties and amino acid profiles for sustainable food applications

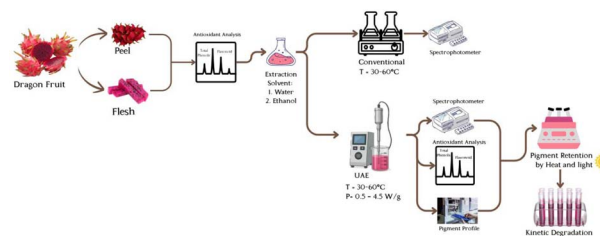
Yun Luo, Yue Zhang, Chuang Zhang, Wei Li, Benjamin K. Simpson and Xin Rui\*



1921

## Ultrasound assisted extraction of betacyanin from dragon fruit (*Hylocereus polyrhizus*) for sustainable natural colorant production

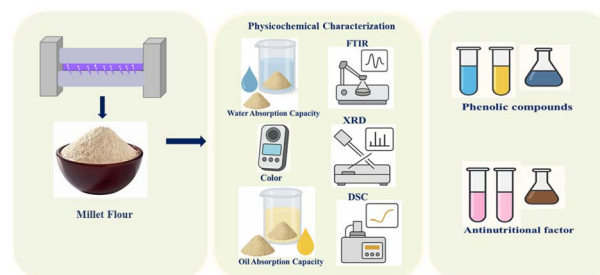
Ruri Aditya Sari, Yudi Pranoto,\* Arima Diah Setiowati and Indriana Kartini



1939

## Non-equilibrium cold plasma as a sustainable approach to improve functional and thermal properties of pearl and sorghum millet flours

Ritesh Mishra, Sushma Jangra, Abhijit Mishra, Shikha Pandey, Meenu Chhabra and Ram Prakash



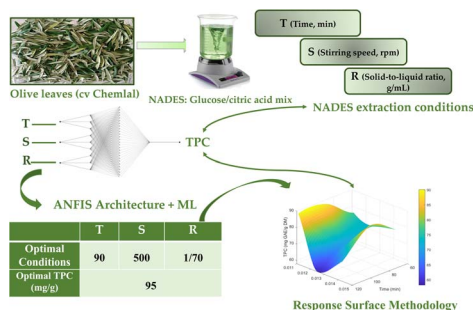
1953



## Transparent and water-resistant edible coatings for sustainable post-harvest preservation of banana

Yilun Weng,\* Yan Zhu, Yue Ren, Hale Oguzlu, Heather Shewan and Alberto Baldelli\*

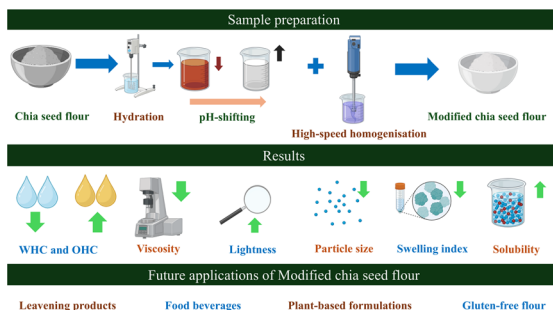
1967



## NADES-based extraction of olive leaf phenolics using RSM, ANFIS and machine learning techniques

Fatiha Brahmi,\* Lokesh Kumar Ramasamy, Selvaraj Kunjiappan, Hayate Guemghar-Haddadi, Kahina Djaoud, Tinhinane Haddad, Hadjer Lamri, Lila Boulekbache-Makhlouf and Federica Blando\*

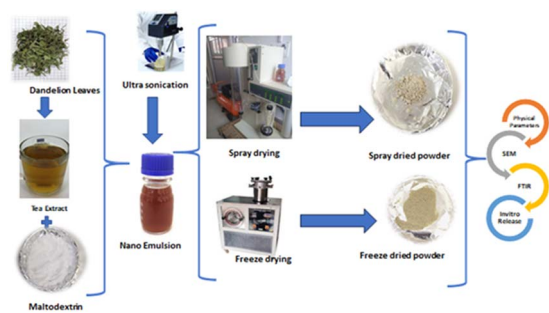
1979



## Enhancing functional and structural properties of chia seed flour through combined pH shifting and high-speed homogenization

Divyang Solanki, Bhesh Bhandari, Pratheep K. Annamalai, Jatindra K. Sahu and Sangeeta Prakash\*

1996



## Optimization and nanoencapsulation of dandelion leaf extract for herbal tea: a comparative study of spray and freeze drying

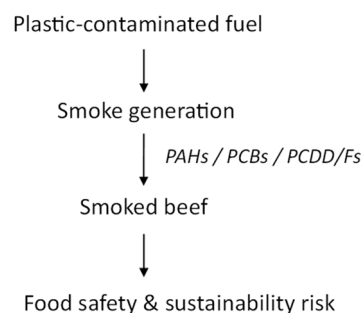
Qudsiya Ayaz, Nadira Anjum, Sehrish Mustafa, Abdul Rouf, Imtiaz Ahmad Zargar and Sajad Mohd Wani\*



2012

### Impact of plastic-contaminated fuels on persistent organic pollutants in smoked beef: implications for sustainable food processing

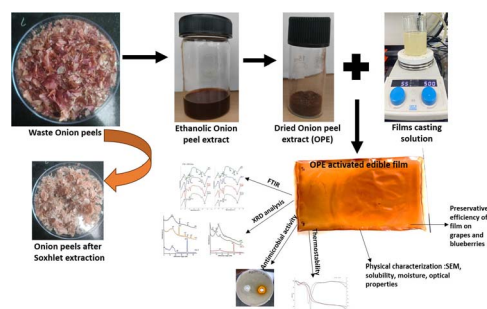
Do Hoang Giang, Nguyen Thu Uyen, Nguyen Thi Luyen, Nguyen Thi Thu Minh, Hoang Thuy Duong, Bui Thi Nhat Le, Luu Hai Nhi, Hoang Le Tuan Anh, Nguyen Ngoc Tung and Nguyen Tien Dat\*



2022

### Valorization of onion peels into sustainable preservative films for enhanced food shelf-life

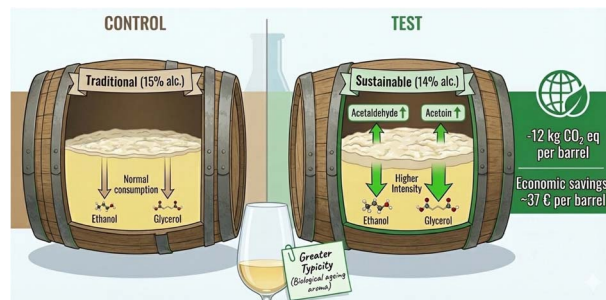
Neera Agarwal and Meena Krishania\*



2040

### Static biological aging as a sustainable method for low-alcohol sherry wines: impact on composition and typicity

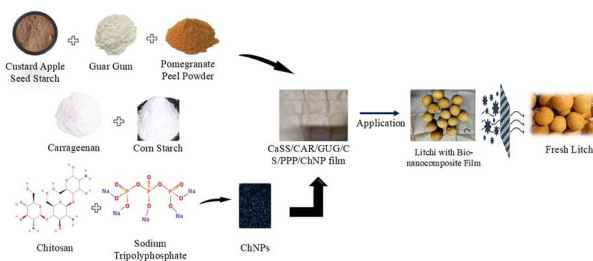
Lourdes Vega-Espinar, Raquel Muñoz-Castells, Victor Palacios, Juan Moreno and Cristina Lasanta\*



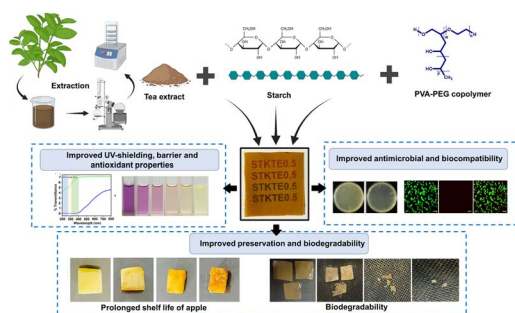
2055

### Fabrication and characterization of custard apple seed starch/ corn starch bio-nanocomposite films immobilized with chitosan nanoparticles and pomegranate peel powder for extending the shelf life of *Litchi chinensis* fruit

Sachin P. Shinde,\* Swapnali S. Bhole, Namita S. Patil, Gurunath V. Mote\* and Vikramsinh M. Ingale



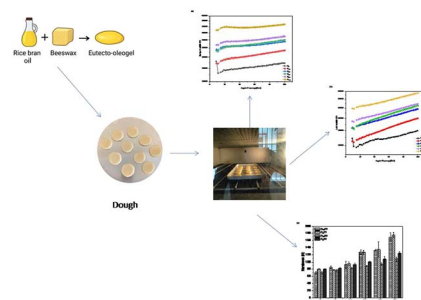
2076



### Development of multifunctional and sustainable starch/polyvinyl alcohol–polyethylene glycol copolymer films reinforced with green tea extract for food packaging

Neha Rana, Ruchika and Ankit Saneja\*

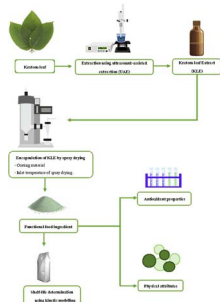
2090



### Impact of eutecto-oleogel on functional, textural and rheological attributes of wheat flour cookies as a fat replacer

Deepali Deepali, Poonam Mishra\* and Amit Baran Das\*

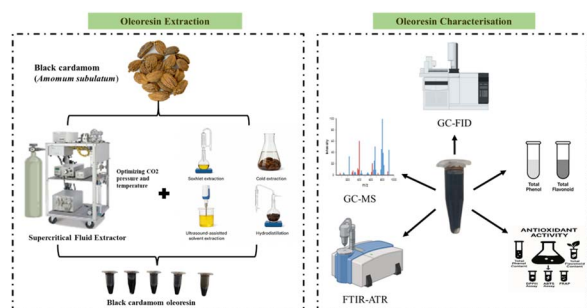
2099



### Microencapsulation of kratom leaf extract via spray drying: impact of inlet temperature and wall materials on stability and shelf life

Supanit Khongtongsang, Mohammad Fikry, Saeid Jafari, Sochanet Chheng, Isaya Kijpatanasilp and Kitipong Assatarakul\*

2116



### Supercritical fluid extraction of black cardamom (*Amomum subulatum*) oleoresin: a sustainable approach for enhanced yield, phytochemical composition, and antioxidant potential

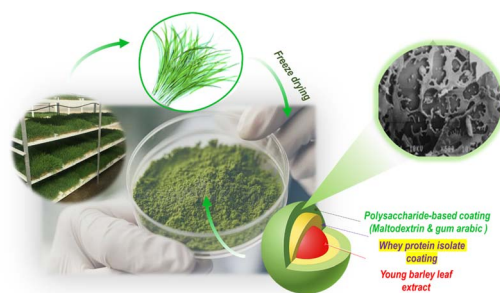
Sakkaravarthy Abishek, Parameswaran Gurumoorthi\* and Kumar Lekshmi R. G.



2129

### Optimization of maltodextrin–gum arabic–whey protein systems for freeze-drying microencapsulation of young barley leaf extract

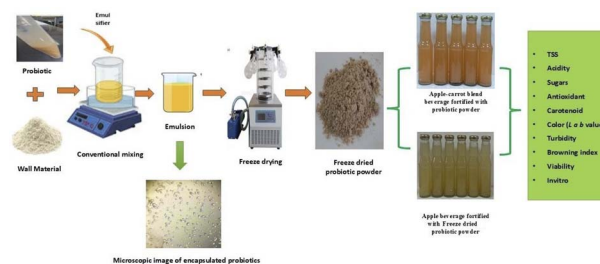
Elham Azarpazhooh,\* Yeganeh Sabeghi, Masoud Najaf Najafi,\* Shahin Zomorodi, Soodabeh Einafshar, Danial Gandomzadeh and Xin Rui



2146

### Sustainable delivery of encapsulated probiotics and their survival in fruit-based beverages and under simulated gastrointestinal conditions

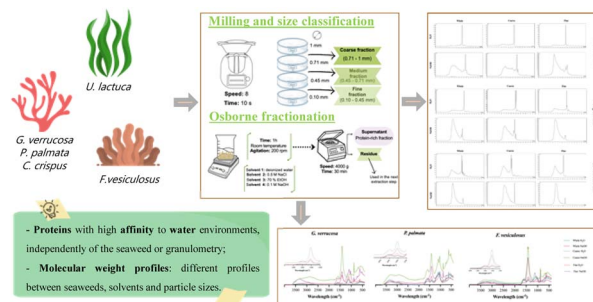
Zahida Naseem,\* Sajad Mohd Wani,\* Sajad Ahmad Mir and Naseh Nisar



2159

### Fractionation and characterization of marine macroalgae proteins

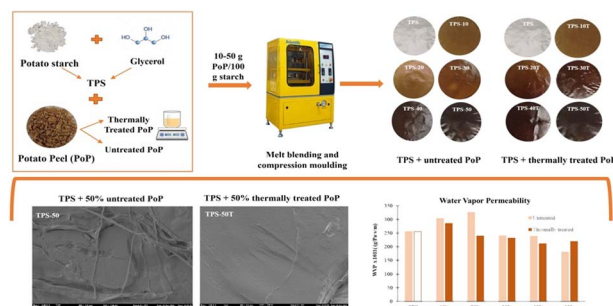
Rafaela Nunes, Catarina Moreira, José A. Teixeira and Cristina M. R. Rocha\*



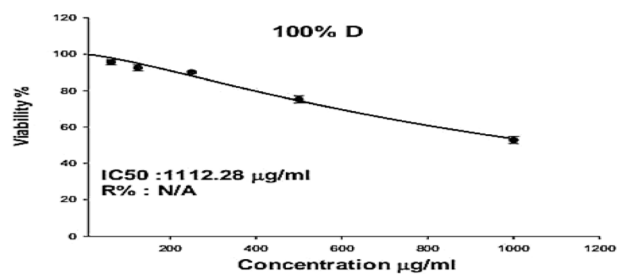
2171

### Low-starch potato peel for the development of starch-based composites obtained by thermocompression moulding

Marta Santos-Iparraguirre,\* Amparo Chiralt, M. Eugenia Martín-Esparza and Chelo González-Martínez



2187



## Utilization of the date seed powder in food manufacturing

Mona M. A. Bashir

