

Conference of Food Engineering 2024 Program At-A-Glance

Sunday, August 25, 2024

Time	Event
9:00 AM-5:00 PM	Pre-Conference Workshops, at City University of Seattle
5:00 PM-8:00 PM	Registration desk open (2 nd floor)
6:00 PM – 8:00 PM	Opening Mixer (2 nd floor)

Monday, August 26, 2024

Time	Event			
8:20-8:30 AM	Opening remarks (Grand Ballroom, 4 th floor)			
8:30-10:00 AM	Plenary Session I: (Grand Ballroom, 4 th floor) Panel members: Sheyla Ramsay, Paul Singh, Hongda Chen, Yaroslav Chudnovsky Moderators: Juming Tang & Sudhir Sastry			
10:00 -10:20 AM	Morning break (Cascade 2, 2nd floor), Posters can be put up.			
Rooms	Grand Ballroom	<i>Cascade 1A</i>	<i>Cascade 1B</i>	<i>Cascade 1C</i>
10:20-12:00 PM	Session 1: Thermal Processing Technologies	Session 2: Modeling and Computer Simulation	Session 3: Alternative Processing Technologies	Session 4: Advances in Food Packaging
12:00 PM-1:20 PM	Lunch (5th avenue, 4th floor)			
1:20- 3:00 PM	Session 5: Food Materials Science	Session 6: Advanced Thermal Processing Technologies	Session 7: Rheology for food quality and health	Session 8: Innovations in Plant Protein Technology
3:00-4:20 PM	Afternoon break + Poster Session (Cascade 2, 2nd floor)			
4:20-6:00 PM	Session 9: Sensors and imaging technologies	Session 10: Food Engineering and health	Session 11: Food engineering education	Session 12: Encapsulation and delivery of bioactive compounds

Tuesday, August 27, 2024

Time	Event			
8:20-8:30 AM	Announcements (Grand Ballroom)			
8:30-10:00 AM	Plenary Session II: (Grand Ballroom) Sustainability in the Food World Plenary 1: Keys to a Sustainable Food System, Isaac Emery Plenary 2: Advancing Innovative Processing and Preservation Technologies: The Food Safety and Regulatory Conundrum, Larry Keener Moderator: Kumar Mallikarjunan			
10:00 -10:20 AM	<i>Morning break (Cascade 2, 2nd floor), Posters can be put up.</i>			
	Grand Ballroom	<i>Cascade 1A</i>	<i>Cascade 1B</i>	<i>Cascade 1C</i>
10:20-12:00 PM	Session 13: Sustainable Food Systems	Session 14: 3D Food Printing	Session 15: Baking and Drying	Session 16: Artificial Intelligence/Machine Learning
12:00-1:20 PM	<i>Lunch (5th avenue, 4th floor)</i>			
1:20- 3:00 PM	Session 17: Microbial and Chemical Kinetics	Session 18: Waste Utilization	Session 19: Value added foods	Session 20: Advances in Cold Plasma
3:00-4:20 PM	<i>Afternoon break + Poster Session (Cascade 2, 2nd floor)</i>			
4:20-6:00 PM	-	Session 21: Cellular Agriculture and Precision Fermentation	Session 22: Advances in Food and Tissue Preservation	Session 23: Advances in Food Technologies I
	<i>Gala Dinner (Grand ballroom)</i>			

Wednesday, August 28, 2024

Time	Event			
8:00-9:30 AM	Plenary Session III: (Grand Ballroom) Information Technologies in Food Industry Plenary 1: Artificial Intelligence/Machine Learning and Robotics in Food Industries, Sean Sims Plenary 2: Brand Purpose in Technology Driven Marketing: E-commerce Challenges, Jay Picconatto Panel Discussion Members: Sean Sims, Jay Picconatto, Hongwei Zhang, Balunkeswar (Balu) Nayak, Jordan Pennells Moderator: Balu Nayak & Kumar Mallikarjunan			
9:30-10:20 AM	Closing Ceremony (Grand Ballroom)			
10:20-10:40 AM	<i>Morning Break (Cascade 2, 2nd floor)</i>			
10:40 AM-12:00 PM	Grand Ballroom	<i>Cascade 1A</i>	<i>Cascade 1B</i>	
	Session 24: Advances in Food Technologies II	Session 25: High Pressure Processing	Session 26: Food Systems Modeling	

CoFE' 24 Technical Program

Abstract #	Time	Title	Authors
Monday, August 26, 2024			
Plenary Session 1. Research Needs and Funding Opportunities for the Food Industry of the Future. Grand Ballroom			
	8:30-8:35	Moderators: Juming Tang & Sudhir Sastry	
	8:35-9:35	Panel members: Sheyla Ramsay, Paul Singh, Hongda Chen, Yaroslav Chudnovsky	
	9:35-10:00	Q&A	
Session 1. Thermal processing technologies. Co-chairs: H.S. Ramaswamy/Anubhav Pratap Singh. 10:20 am-12:00 pm. Grand ballroom			
264	10:20-10:40	Heat transfer considerations in short-time steam heating suitable for surface decontamination	Hosahalli Ramaswamy, McGill Univ
369	10:40-11:00	Reciprocating agitation - Thermal Processing (RA-TP) Sterilization of dairy milk: Impact on	Anubhav Pratap-Singh and M. A. Soegiarto, University of British Columbia
495	11:00-11:20	Energy Efficient Spray Drying of High Solids Food Products – Enabled by Filament	David M. Johnson, E. Weflen, G. Anderson, A. Sangli, R. Neelakantan, D. Timucin, M.
538	11:20-11:40	Pasteurization of bottled low moisture foods with RF-heating	Mithila Anugolu, Fengsen Wang, Shivam Ubale, Surabhi Wason, Jeyam Subbiah,
525	11:40-12:00	Evolution of Particle Flow Monitoring and Safety Validation of Low Acid Multiphase Aseptic	Pablo Coronel, CRB Group, Josip Simunovic, Sinnovatek
Session 2. Modeling and computer simulation. Co-chairs: Francesco Marra/Ferruh Erdogdu. 10:20 am-12:00 pm. Cascade 1A			
270	10:20-10:40	Digital Technologies in Sustainable Innovative Food Processing for Beyond the Industry x.0	Ferruh Erdoglu, University of Ankara, Turkey
387	11:20-11:40	Mathematical models and digital tools for food product design	Francesco Marra, Fabrizio Sarghini, University of Salerno, Italy
499	11:00-11:20	Is Food Manufacturing ready for Digital Twins	Nicholas Watson and Alexander Bowler, University of Leeds, UK
307	10:40-11:00	Quick Response (QR) tags kinetics and potential utilization for remote quality monitoring	I. Sam Saguy & Eli Cohen, Hebrew University of Jerusalem, Israel
440	11:40-12:00	Why solid-state microwave generators are the future of microwave heating?	Xu Zhou, Juming Tang, Washington State University
Session 3. Alternative Processing Technologies: Limitations and Opportunities. Co-chairs: Carmen Moraru/Sergio Martinez-Montegudo. 10:20 am-12:00 pm. Cascade 1B			
504	10:20-10:40	Combining membrane filtration and gentle heating to improve food quality and safety	Carmen I. Moraru, Cornell University
341	10:40-11:00	Thermal and Nonthermal Effects of Pulsed Electric Fields and Ohmic Heating	Sudhir K. Sastry, The Ohio State University
410	11:00-11:20	Can ultraviolet-C processing inactivate microorganisms while preserving bioactive proteins in	Ningjian Liang, Hussein Mohamed, Rachel F. Pung, Joy Waite-Cusic and David C. Dallas,
433	11:20-11:40	Changes in functional properties of dairy ingredients with pulsed electric field procesing	Kumar Mallikarjunan, Sonali Raghunath, University of Minnesota
310	11:40-12:00	Modeling Salmonella inactivation in paprika powder by ultra-high irradiance blue light	Martha Minor; Luis Sabillon; Sergio I. Martinez-Montegudo, New Mexico State
Session 4. Advances in Food Packaging . Co-chairs: Yanyun Zhao/Shyam Sablani. 10:20 am-12:00 pm. Cascade 1C			
276	10:20-10:40	Plantic, The High Barrier Natural Polymers option for extension of shelf life	Kevin A. Laux and David Chacon, Kuraray America
292	10:40-11:00	Sustainable packaging to protect environment and provide convenience to consumers	Yanyun Zhao, Oregon State University
406	11:00-11:20	Transforming Lignocellulosic Waste into Sustainable Cellulose Fiber Packaging Solutions	Jerry Lin, Yanyun Zhao, Jooyeoun Jung, Oregon State University
349	11:20-11:40	Active and Biodegradable Antimicrobial Packaging as a Hurdle Technology	Luis J. Bastarrachea, Michael J. Bodily, Utah State University
468	11:40-12:00	Assessing novel high barrier packaging for high pressure assisted thermal sterilization of low	Ashutos Parhi, Michail Dolgovskij , Diana Maya , Shyam S. Sablani, Washington State
Session 5. Food materials science. Co-chairs: Johan Ubbink/Osvaldo Campanella. 1:20 pm-3:00 pm. Grand ballroom			
362	1:20-1:40	Application of the isoviscosity concept in modeling the temperature and water-content	J. Ubbink, University of Minnesota, St. Paul
476	1:40-2:00	Exploring the Influence of Liquid Oil Feeds on High-Moisture Extrusion Processing	Lutz Grossmann, University of Massachusetts, Amherst
494	2:00-2:20	Methods to study the physicochemical properties of foods, their role in food processing, and	Osvaldo Campanella, The Ohio State University
461	2:20-2:40	Continuum Physics Based Modeling of Transport Processes and Material Behavior of Food	Pawan S. Takhar, University of Illinois, Urbana-Champaign
505	2:40-3:00	Overcoming Moisture Challenges in the Food Industry from Start to Finish	Zachary Cartwright, AQUALAB by Addium
Session 6. Advanced Thermal processing technologies. Co-chairs: KP Sandeep/Dharmendra Misra. 1:20 pm-3:00 pm. Cascade 1A			
506	1:20-1:40	Advancement of Smart Solid-state Microwave Processing in Domestic Heating Applications	Jia Jia Chen, University of Tennessee, Knoxville
539	1:40-2:00	Sterilization of Particulate Aseptic Products: Practical Considerations	Dharmendra Mishra, Purdue University
536	2:00-2:20	Microwave Processing as a Sustainable Alternative for High-Quality, Shelf-Stable Foods	Michael Druga, Josip Simunovic Ph.D., SinnovaTek Inc.
567	2:20-2:40	Challenge between cutting-edge green technology to conventional technology: a case study in th	F. Ali, M. R. Zareifard, J. Plamondon, C. Lapointe, T. Savard, K. Hubbard, J. Houde, L.
336	2:40-3:00	Preliminary study of fruit dehydration using refractance window (RW) coupled with	Sánchez, C., Núñez, H., Belmonte, K., Pinto, M., Almonacid, S., Marra, F., and Ramirez,

Session 7. Rheology for food quality and health. Co-chairs: Jin Hong Mok/Paul Takhistov. 1:20 pm-3:00 pm. Cascade 1B

321	1:20-1:40	Tribology, friction, and hard surface cleaning	Perrakis Bistis, Zhenyu Jason Zhang, Peter J Fryer
338	1:40-2:00	A Physics-Informed Image Analysis Framework to Infer the Rheology and Mechanical	Han Chen, Yao Liu, Brian Guthrie, Murielle Hayert and Olivier Vitrac, INRAE, France,
460	2:00-2:20	Continuous-flow viscoelastic profiling of calcium alginate hydrogel microspheres using a	Jin Hong Mok, Ye Niu, Sudhir K. Sastry, Yi Zhao, Pukyong National University, Korea
537	2:20-2:40	Effect of non-thermal processes on protein interfacial properties and formation of novel food	Mchael Shen, Paul Takhistov, Ruthers University
289	2:40-3:00	Incorporation of corn stover-derived nanocellulose and Beeswax to improve Polyvinyl	Lingling Liu, Iowa State University

Session 8. Innovations in Plant Protein Technology. Co-chairs: Girish Ganjyal/Sajid Alavi. 1:20 pm-3:00 pm. Cascade 1C

398	1:20-1:40	Use of machine learning in predicting protein solubility	Hyukjin Kwon and Yonghui Li, Kansas State University
401	1:40-2:00	Ultrasonication based extraction and processing of plant proteins	Mahfuzur Rahman, University of Arkansas
402	2:00-2:20	Characterization of Structural Attributes of Plant-Based Meat Using Machine Learning Based	Shirin Sheikhzadeh, Sanjoy Das and Sajid Alavi, Kansas State University
417	2:20-2:40	Extrusion Processing of Plant Proteins for the Development of High Moisture Meat Analogs	Caleb Wagner, Jana Richter, Josh Bernin, Aniket Kamboj, Preston Watanabe, Leon Levine,
275	2:40-3:00	Optimizing the extrusion of pea protein isolate for novel meat analogue applications	Belal Hasan, Job Ubbink, Cal Poly , Pomona, Univ. of Minnesota

Session 9. Sensors and imaging technologies. Co-chairs: Colm O'Donnell/Jose Reyes-De-Corcuera. 4:20 pm-6:00 pm. Grand ballroom

454	4:20-4:40	Categorizing Crispness/Crunchiness of Snack Foods with Audio Sensors	William L. Kerr and Toby R. M. Serrano, University of Georgia
523	4:40-5:00	Electrochemical Biosensors for Food-Borne Pathogen Detection	Baviththira Suganthan, Dilmeet Kaur, Or Zolti, Malak Esseili, Ramaraja P. Ramasamy,
565	5:00-5:20	Investigation of Spectral Technologies for Scorched Particle Detection in Dairy and Infant	Ming Zhao, Colm O'Donnell, University College Dublin, Belfield, Ireland
455	5:20-5:40	Electrochemical Biosensors – An Overview in the Context of the Food Supply Chain	Spencer Serrano, Jose I. Reyes-De-Corcuera, Ziyet Boz, University of Florida
318	5:40-6:00	Contactless assessment of intramuscular fat content in pork loin by using air-coupled	Anabella S. Giacomozz, Jose Benedito ,Luis Calvo, Tomás Gomez, Jose V. Garcia-Perez,

Session 10. Food Engineering and health. Co-chairs: Ilce Medina Meza/Fanbin Kong. 4:20 pm-6:00 pm. Cascade 1A

247	4:20-4:40	Effects of specific volume and lipid level on indicators of satiety in engineered food systems	Ann Barrett, C. C. Whitney, A. Hatch-McChesney, M. Richardson, J. Philip Karl
432	4:40-5:00	Improved lipid quality of human breast milk after High-pressure processing	Medina-Meza, I. G.; V.M. Balasubramaniam; Kaven, M.; Gomes Da Silva, A., and Sai
507	5:00-5:20	Engineering the gut microbiome using designer prebiotics and consumer-resource modeling	Clay Swackhamer, T. Cantu-Jungles, N. Bulut, B. R. Hamaker, Purdue University
515	5:20-5:40	Food Process Engineering for Health Impact: Application of Standard In-Vitro Assays for	Josip Šimunović, NC State University
472	5:40-6:00	Impact of Nanocellulose on Food Digestion and Nutrient Absorption	Fanbin Kong, University of Georgia, Athens

Session 11. Food engineering education. Co-chairs: K. Niranjan/Jorge Welti Chanes. 4:20 pm-6:00 pm. Cascade 1B

466	4:20-4:40	Food Engineering Education – its evolution	Keshavan Niranjan, University of Reading, UK
457	4:40-5:00	Challenge-based learning, a new approach to teaching Food Engineering	Jorge Welti-Chanes, Rebeca García-García, Cristina Chuck- Hernandez, Tecnológico de
286	5:00-5:20	Virtual and Remote Laboratory Kits as Innovative Pedagogies for Enhanced Student Learning	S. Sablani, J. Goddard, Yao Olive Li, M. Pascall, K. Yam, and O. Adesope, Cal Poly
286	5:20-5:40	Cranking up training in food physics and modeling in industry and academia: Novel resources	Ashim Datta, Cornell University
555	5:40-6:00	Panel discussion	Keshavan Niranjan

Session 12. Encapsulation and delivery of bioactive compounds. Co-chairs: Youngsoo Lee/Kang Huang. 4:20 pm-6:00 pm. Cascade 1C

283	4:20-4:40	Bio-inspired carrier systems for enhanced delivery of bacteriophages	Kang Huang, Shanshan Liu, Washington State University
409	4:40-5:00	Enhancing Bioactive Potential through Food Gel Encapsulation	Da Chen, Purdue University
554	5:00-5:20	Enhanced gastrointestinal stability, persistence, and colonization of probiotic cells by growing b	Rewa Rai and Nitin Nitin, University of California, Davis
556	5:20-5:40	Food structure design towards encapsulation application: protein assembly, gelation, and interfa	Haotian Zheng, NC State University
291	5:40-6:00	Fabrication of zein nanoparticles using a nozzle simulation chip and their application for	Yanlin Lei, Sean Killer, Youngsoo Lee, Washington State University

Tuesday, August 27, 2024

Plenary Session 2. Sustainability in the Food World. Grand Ballroom

	8:30-8:35	Moderator: Kumar Mallikarjunan	
	8:35-9:10	Keys to a Sustainable Food System, Isaac Emery	
	9:10-9:45	Advancing Innovative Processing and Preservation Technologies: The Food Safety and Regulatory Conundrum, Larry Keener	
	9:45-10:00	Q&A	

Session 13. Sustainable food systems. Co-chairs: Jen-Yi Huang/Giovanna Ferrari. 10:20 am-12:00 pm. Grand ballroom

242	10:20-10:40	Conceptual approaches to reduce footprint of combat rations	Tom Yang, Ann Barrett, Lauren O'Connor, Danielle Anderson, Michelle Richardson,
332	10:40-11:00	Environmental impact analysis and development scenarios to increase the sustainability of	E. Eslami, E. Abdurrahman, G. Pataro and Giovanna Ferrari, University of Salerno, Italy
340	11:00-11:20	Sustainability of Frozen Foods	Dennis R. Heldman, The Ohio State University
351	11:20-11:40	Close the nutrient loop for sustainable blue food production	Jen-Yi Huang, Purdue University
423	11:40-12:00	Waste Valorization for Food System Circularity	Roger Ruan, L. Dai, J. Chen, S. Lata, H. Fei, L. Wang, J. Liu, K. Cobb, P.Chen, H. Lei,

Session 14. 3D food printing. Co-chairs: Maria Corradini/Ali Ubeyitogullari. 10:20 am-12:00 pm. Cascade 1A

287	10:20-10:40	Enhancing the bioaccessibility of lutein by loading into food-grade biopolymer gels using 3D	Safoura Ahmadzadeh and Ali Ubeyitogullari, University of Arkansas
367	10:40-11:00	Interest of functional starch in the development of starch-based 3D printing inks; presentation	Alain Le-Bail, Bianca Chierigato Maniglia, Patricia Le-Bail, ONIRIS, Nantes, France
490	11:00-11:20	Food components structuring and their role in food stability using 3D printing	M.G. Corradini, L.A. Colaruotolo, C. Chen C., A. Homez-Jara. and J. Stobbs, U. of
521	11:20-11:40	Optimization of 3D food printing processing parameters to modulate texture of future military	Michael Okamoto, US Army Development Command Soldier Center
553	11:40-12:00	Digitally customized. 3D/4D food printing as an opportunity to reshape the way in which food	Antonio Derossi, Rosella Caporizzi, Carla Severini, University of Foggia, Italy

Session 15. Baking and drying. Co-chairs: Hao Feng/Joao Laurindo. 10:20 am-12:00 pm. Cascade 1B

453	10:20-10:40	Novel Drying, Baking, and Heating Technologies for Food Industry	Jamal S. Yagoobi, Worcester Polytechnic Institute
347	10:40-11:00	Mathematical modeling bread baking: correlating temperature with color and 5-	Silva, T.H.; Monteiro, R.L.; Costa, A.C.O.; Laurindo, J.B.; Carciofi, B.A.M., University of
297	11:00-11:20	Challenges and Promising Solutions for Açai Pulp Drying	Simao, R.S.; De Moraes, J.O.;Carciofi, B.A.M.; Laurindo, J. B., Federal Univ of Santa
446	11:20-11:40	Atmospheric plasma pretreatment for enhanced drying of blueberry	Chenxin Wang, Yi-Cheng Wang, University of Illinois
381	11:40-12:00	Drying of protein solutions and emulsions with high intensity ultrasound	Hao Feng, Ragya Kapoor, and Vedant Mundada, North Carolina A&T University

Session 16. Artificial Intelligence/Machine Learning. Co-chairs: Hongwei Zhang/Balu Balunkeshwar. 10:20 am-12:00 pm. Cascade 1C

390	10:20-10:40	Deep Learning-Powered Model Predictive Control of Beer Fermentation Dynamics	Alexander O'Brien, Hongwei Zhang, Andrew Rawsthorne, and Daniel Allwood, Sheffield
465	10:40-11:00	AI-based surrogate models of digital twins for food and drink manufacturing systems	Emmanuel Lwele, Alex Shenfield, Da Silva Carlos and Howarth Martin, Sheffield Hallam
566	11:00-11:20	Development of an Intelligent Extrusion Platform for Food and Feed Applications	Jordan Pennells, Danyang Ying, CSIRO Food Innovation Centre, 671 Sneydes Rd,
334	11:20-11:40	Potential utilization of AI in food industry for consumer centric goals	Balunkeshwar (Balu) Nayak, PepsiCo, Plano, TX
419	11:40-12:00	Predicting Physicochemical Properties of Papayas (Carica papaya L.) using a Convolutional	Sujin An, and Soojin Jun, University of Hawaii

Session 17. Microbial and chemical kinetics . Co-chairs: Kirk Dolan/Ren Yang. 1:20 pm-3:00 pm. Grand ballroom

451	1:20-1:40	Mild heating and ambient storage following gaseous chlorine dioxide treatment of chia seeds er	Surabhi Wason and Jeyam Subbiah, U of Arkansas
429	1:40-2:00	One-step dynamic inverse analysis and microbial growth kinetics	Lihan Huang, USDA Agricultural Research Service Eastern Regional Research Center
445	2:00-2:20	Developing thermal control of Salmonella in food drying and roasting processes using	Ren Yang and Juming Tang, South Dakota State University, Washington State University
491	2:20-2:40	Sequential Estimation of Salmonella Inactivation Parameters in Flaxseed During	Kirk D. Dolan, Y. Lin, H. Zeng, S. Rump, N. Schinderle, T. M. Bergholz, Michigan State
298	2:40-3:00	Improving process performance of food fermentations by pulsed electric fields	Felix Schottroff, BOKU University, Vienna, Austria

Session 18. Waste utilization . Co-chairs: Ozan Ciftci/Kiruba Krishnaswamy. 1:20 pm-3:00 pm. Cascade 1A

481	1:20-1:40	Developing an integrated green biorefinery for harnessing a high-stability and high-	Ozan Ciftci, University of Nebraska, Lincoln
526	1:40-2:00	Seeding Circular Economy for Upcycling Greek Yogurt Acid Whey	Nani, Mercy and Krishnaswamy, Kiruba, University of Missouri, Columbia
543	2:00-2:20	Soymeal waste as an effective encapsulating agent for Vitamin B12	Priya Singh, Chung-Ho Lin, and Kiruba Krishnaswamy, University of Missouri, Columbia
557	2:20-2:40	Comprehensive Utilization of Olive Byproducts	Yiming Feng, Stephanie Jung, Selina Wang, Haibo Huang, Virginia Tech
559	2:40-3:00	Develop highly fermentable insoluble dietary fibers from oat husks	Jung Mun Yang, Xuanbo Liu, Hongchen Shen, Haibo Huang, Virginia Tech

Session 19. Value added foods . Co-chairs: Soojin Jun/Srinivas Janaswamy. 1:20 pm-3:00 pm. Cascade 1B

295	1:20-1:40	Valorization of Agricultural Biomass: Toward Designing Eco-Friendly Films to Address	Srinivas Janaswamy, South Dakota State University
469	1:40-2:00	A study of plant meat made of soy protein isolate and defatted soybean flour	HM. Chang, K.C. Jan, Jenshinn Lin, National Pingtung Univ. of Sci and Tech, Taiwan
413	2:00-2:20	Next-Generation Dairy Foods: Unlocking the Potential of Nutrient-Dense Dairy By-products	Gulustan Ozturk, University of Wisconsin, Madison
420	2:20-2:40	Supercritical/subcritical CO2 as green extraction technology for the retrieval of value-added	Elizabeth Ordóñez-Quintana, Ivan Salmerón, David Chávez-Flores, Victor Ramos, Néstor
378	2:40-3:00	Exergo-economic Performance of Moderate Electric Field Extraction of Oleuropein	Omer Faruk Cokgezme and Filiz Icier, Ege University, Turkey

Session 20. Advances in Cold Plasma. Co-chairs: Deepti Salvi/Roopesh Syamaladevi. 1:20 pm-3:00 pm. Cascade 1C

330	1:20-1:40	Cold plasma technologies to enhance food safety, quality, and functionality	Brendan A. Niemira, USDA-ARS
353	1:40-2:00	Plasma activated water bubble technology for the inactivation of bacterial biofilms	H. K. Dhaliwal, B. Tiwari, X. Yang, M. S. Roopesh , University of Alberta
496	2:00-2:20	Microbial decontamination of Black Pepper - Cold Plasma processing as a minimal processing	G. De Silva, N. Amunugoda, S. Gunawardena, Ajith de Alwis , Industrial Technology
540	2:20-2:40	Enhancing Food Safety and Quality through Cold Plasma Technology: Applications in Wheat	Kaliramesh Siliveru, Kansas State University
519	2:40-3:00	Cold plasma and plasma activated water for sanitizing food and food contact surfaces	Deepti Salvi, North Carolina State University

Session 21. Cellular Agriculture and Precision Fermentation. Co-chairs: Nitin Nitin/Reza Ovissipour. 4:20 pm-6:00 pm. Cascade 1A

308	4:20-4:40	Biomanufacturing Future Foods: Cell-Based Meat Production via Serum-Free Media	A. Amirvaresi, A. Amanipour, C. Jones, R. Sarkarat, A. Shahsavari, B. Yao, Reza
403	4:40-5:00	Cultivated meat: A bird's eye view	Claire Bomkamp, The Good Food Institute
405	5:00-5:20	Life cycle assessment of Beefy-9 and Beefy-R serum-free culture media for cell-cultivated	Amin Nikkhah, Kirsten Trinidad, David L. Kaplan, Nicole Tichenor Blackstone, Tufts
480	5:20-5:40	Plant biomaterial scaffolds for cellular agriculture	Nitin Nitin, Inyoung Choi, Wooju Kim, Reza Ovissipour, Begum Koysuren, Mursalin
249	5:40-6:00	Nutritional Profile, Anti-nutritional Factors, and Digestibility of Proteins in Non-Conventional	Soumya Ranjan Purohit

Session 22. Advances in Food and Tissue Preservation. Co-chairs: Valerie S. McGraw/Juzhong Tan. 4:20 pm-6:00 pm. Cascade 1B

572	4:20-4:40	Freezing of Living Cells and Tissues: A great challenge for science and technology	Dayong Gao, University of Washington
374	4:40-5:00	Postharvest washing using Plasma Microbubble to Inactivate Escherichia coli on Fresh	Fariha Chowdhury Meem, Kalmia Kniel, and Juzhong Tan , University of Delaware
348	5:00-5:20	Evaluation of Synergistic Bactericidal Activity of Nanobubbles And Peracetic Acid and the	Aprajeeta Jha, Rohan V. Tikekar and Jose-Luis Izursa, University of Maryland, College
315	5:20-5:40	Isochoric impregnation of calcium to enhance the quality of postharvest blueberries	Valerie S. McGraw, USDA WRRC, Albany CA
333	5:40-6:00	Assessing the Impact of Isochoric Freezing as a Preservation Method on the Quality	Sumeyye Atci, Valerie S. McGraw, Gary Takeoka, Vivian C.H. Vu, Tara McHugh, Boris

Session 23. Advances in Food Technologies I. Co-chairs: Gönül Kaletunc/Rohan Tikekar. 4:20 pm-6:00 pm. Cascade 1C

569	4:40-5:00	Innovative Technology To Make Plant-based Meat Price & Quality Competitive with Animal M	Christie D. Lagally
570	5:00-5:20	Development and Characterization of Nutrition Bars Produced by Ultrasonic Compression	Kaletunc, G., Liu, X., Thomas, J., Adesina, J.
571	5:20-5:40	Investigation into survival of natural microbiome in emulsion and other food matrices during si	Zhujun Gao; Ryan Blaustein; Gail Bornhorst; Rohan V. Tikekar
239	5:40-6:00	Development and validation of an improved model for listeria monocytogenes growth	NA Nanje Gowda, Saurabh Kumar, Eelco Heintz, Jeyamkondan Subbiah
564	4:20-4:40	Utilization of microwave dielectric microscopy for assessing compositional and technological q	Ahmed M. Rady, Georgios Dimitrakis, Nik Watson, Brijesh Tiwari, Ruth M. Hamill,

Wednesday, August 28, 2024

Plenary Session 3. Information Technologies in Food Industry. Grand Ballroom

	8:30-8:35	Moderators: Balunkeswar (Balu) Nayak & Kumar Mallikarjunan	
	8:35-9:05	Artificial Intelligence/Machine Learning and Robotics in Food Industries, Sean Sims	
	9:05-9:35	Brand Purpose in Technology Driven Marketing: E-commerce Challenges, Jay Picconatto	
	9:35-10:00	Panel Discussion. Sean Sims, Jay Picconatto, Hongwei Zhang, Balu Nayak, Jordan Pennells	

Session 24. Advances in Food Technologies II . Co-chairs: Naveen Kumar Navani /Ningjian Liang. 10:40 am-12:00 pm. Grand ballroom

487	10:40-11:00	A novel heat-stable nano-in-micro platform as a delivery vehicle for probiotics, bioactives and	Vishakha Bisht and Naveen Kumar Navani , Indian Institute of Technology, Roorkee,
266	11:00-11:20	Extraction of proteins, lipids, chlorophylls, total carotenoids and total phenolic compounds	Shaba Noore , B. K. Tiwari, J. Wanigasekara, K. McKeever , R. Cama-Moncunill , E.
411	11:20-11:40	Life-cycle assessment and cost analysis of different non-thermal food preservation	Minliang Yang, North Carolina State University
319	11:40-12:00	A model-based study on the sustainability of local food chains	K. Colquhoun, A. Sells, S. Bakalis, P.J. Fryer, E. Lopez-Quiroga

Session 25. High pressure processing. Co-chairs: Marcello Cristianini/Bala Balasubramaniam. 10:40 am-12:00 pm. Cascade 1A

322	10:40-11:00	Impact of High Hydrostatic Pressure coupled to pH-shifting on the protein structure and	Valente, Beatriz Lederman; Cristianini, Marcelo
509	11:00-11:20	Effect of Ultra High Pressure Homogenization in Reconstituted Infant Milk Formula Fortified	Md Abdul Wazed, Mohammed Farid, Oregon State University
535	11:20-11:40	Impact of thermal, high-pressure, and ultra-shear pasteurization technologies on beetroot juice	Sai Sasidhar Guduru, V.M. Balasubramaniam, E. Hatzakis, Ohio State U.
434	11:40-12:00	Non-enzymatic Degradation Kinetics at Hyperbaric Storage Conditions: The Direct and	Or Shapira, R. Levy, H. Shkolnikov, V. Weiss, Z. Okun and Avi Shpigelman, Technion,

Session 26. Food Systems Modeling. Co-chairs: Sungil Ferreira/Snehasis Chakraborty. 10:40 am-12:00 pm. Cascade 1B

456	10:40-11:00	Atomization to Curing: Mathematical Insights into Microencapsulation	Sungil Ferreira, University of Arkansas System
522	11:00-11:20	Quantifying the Temporal Variability of Dry Roasters by Season and Location in Roaster	Kaitlyn Casulli, University of Georgia
448	11:20-11:40	Cold Plasma Induced Inactivation Kinetics of Peroxidase in Whole Wheat Flour	Snehasis Chakraborty, Kaliramesh Siliveru, Kansas State University
573	11:40-12:00	Modeling & Simulation Efforts in Academia and Food Industry	Sohan Birla, S2D Technologies

Posters

Monday, August 26, 2024. 3:00-4:20 PM. Cascade 2, 2nd floor

Abstract # Poster # Title

Authors

Topic: Processing

484	1	Development of an eco-efficient integrated continuous extraction-reaction process using supercritical carbon dioxide for value-added processing of tomato processing waste	Yue Wang, Ozan N. Ciftci, University of Nebraska, Lincoln
485	2	Microbial Inactivation In Cold-Filled Acid Foods	Pratiksha Kotkar, Dr. Kaitlyn Casulli, University of Georgia, Athens
492	3	Improving Heating Uniformity in Radio Frequency Heating by Dynamically Adjusting Electrode Gap and Investigating Density	Azin Farmanfarmaee- Fanbin Kong, University of Georgia, Athens
527	4	Design and Development of a Refractive Window Drying System Coupled with Vacuum: Production of Bioactive Fruit Powders	Rodrigo Retamal, Cristian Ramirez, Helena Nuñez
531	5	Enhancing Bioactive Extraction from Cold Brew Spent Coffee Grounds: Optimizing Time-Temperature Combinations for Nutritious Energy Bar Production	Sai Nisetha Masilamani, Kumar Mallikarjunan, University of Minnesota
314	6	Physical and chemical properties of pork loin (<i>M. longissimus dorsi</i>) during roasting in a temperature controlled oven	Wolf, M.; Carciofi, B.A.M.; Laurindo, J.B., Federal University of Santa Catarina (UFSC), Brazil
568	7	Challenges of rapid baking in the case of flat breads and non-conventional baking	Patricia Le-Bail, Alain Le-Bail, Alejandra Velasquez, Nour Doumani, Safia Bedre Dine
534	8	Production of functional navy bean protein concentrates through dry fractionation and air classification	Rania Marie Buenavista, Jared Lou Rivera, Kaliramesh Siliveru, Kansas State University
532	9	Significance of tempering conditions on the E. coli load of milling fractions during lab-scale milling	Jared Rivera, Shivaprasad D.P., and Kaliramesh Siliveru, Kansas State University
365	10	Manufacture of Ice Cream by altering the whey protein-to-casein ratio	Muhammad Azeem Ur Rehman Alvi, and Sergio I. Martinez-Monteagudo
497	11	Mapping of Hygienic Design Standards, Guidelines, and Practices for Equipment	Daniela Segura, Rossana Villa Rojas and Curtis L. Weller, University of Nebraska, Lincoln
408	12	Optimization of radio frequency heating treatment for inactivating <i>Aspergillus</i> mold and securing quality and safety of hazelnut inshells for the long-term storage	Xiaofang Bai, Yanyun Zhao and Jooyeoun Jung
441	13	Vacuum Microwave Drying of Concord Grape Pomace: Study Of Drying Kinetics For The Preservation Of Bioactive Compounds	Viral Shukla, Olga I Padilla-Zakour, Chang Chen, Cornell University
462	14	Potential of Radio Frequency Dried Spent Grains as a Carrier for Functional Compounds from Spent Hops	Yu-Hsuan Ko and Tsai-Hua Kao, Fu-Jen Catholic University, Taiwan
467	15	In situ fabrication method of functional bacterial cellulose with enhanced productivity using statistical modeling	Yoonho Cho, Jaejoon Han, Korea University, Seoul, Korea
370	16	Extraction of Minerals from Seaweed (<i>Mazzaella japonica</i>) Using Reciprocation Agitation Thermal Processing	Anubhav Pratap-Singh and Melinda Ren, University of British Columbia
541	17	Effect of High Pressure Processing on the Secondary Structures of Sesame Isolate Protein (<i>Sesamum indicum</i> L.)	Valente, B. L; Moraes, I. A.; Barbin, D. F.; Cristianini, M., University of Campinas, Brazil
265	18	Convective and infrared drying of banana: kinetics, color and water activity	Beatriz Amorim Vieira de Melo, Shirley Clyde Rupert Brandão, João Henrique Fernandes da Silva, and Patricia Moreira Azoubel, Federal University of Pernambuco, Brazil
279	19	Sensors help uncover value-added ingredients in waste streams from breweries	Veeramani Karuppuchamy; Shreya M. Nuguri; Luis Rodriguez-Saona; Osvaldo H. Campanella, The Ohio State University
294	20	Extraction of Anthocyanins from Purple Sweet Potatoes via Co-Solvent Modified Supercritical Carbon Dioxide	Gabriel Laquete de Barros and Ali Ubeyitogullari, University of Arkansas
300	21	Selective extraction of waxes from bioethanol production side-stream via supercritical carbon dioxide: Thermal characterization and modeling	Arda Tuhanioglu, Andy Mauromoustakos, Ali Ubeyitogullari, University of Arkansas
304	22	Inactivation of <i>Enterococcus faecium</i> NRRL B-2354 on different material surfaces used in food industry employing superheated steam	Shruthy Seshadrinathan, V.M. Balasubramaniam, Abigail B. Snyder, The Ohio State University

377	23	Impact of Combined Laser and Ultrasound Treatments on the Germination and Nutritional Quality of Broccoli, Radish, and Kale Seeds	Gulcin Yildiz, Hanieh Sadeghi, and Hao Feng, North Carolina A&T University
372	24	Chicken Myofibrillar Proteins: Enhancement of Functional and Physicochemical Properties during Vacuum Microwave Thawing and High-Intensity Ultrasound	Anubhav Pratap-Singh, Amir Amiri, Anika Singh University of British Columbia
368	25	Guided-Ultrasound-Enhanced-Evaporation (GUEE): Reducing Energy Consumption During Falling Film Evaporation	Ehsan Dehghan-Niri, and Sergio I. Martinez-Monteagudo
358	26	Spray-dried unripe acerola juice: an evaluation of the effect of different carriers on the product quality and stability	Mario Luis Zocatelli, Gabrielly da Silva Mendes, Igor Kohn Lanciote Concilio, Giustino Tribuzi, Federal University of Santa Catarina, Brazil
344	27	Minimization of microwave power reflection in the continuous-flow heating of mango puree by modeling the effect of the tuner stubs heights	Guilherme Russo, Jorge Gut, Dorin Boldor, University of Sao Paulo, Louisiana State University
389	28	A phenomenological understanding of MEF assisted heating of heterogeneous food system	Pia Viceconte and Francesco Marra
388	29	A Comparative Analysis of Steam Condensation, Electric Resistance, and Induction Heating Heat Exchangers	Fabrizio Sarghini and Angela De Vivo, University of Naples, Italy
458	30	Power-to-food: Advanced bioreactor design for controlled hydrogen fermentation	Carlos Woern, Lutz Grossmann, University of Massachusetts, Amherst
510	31	Lipids, shear stress, and fibrous texturization of plant-based meat analogs produced by high moisture extrusion	Ana M. Velasquez-Giraldo, Dennis Heldman, Osvaldo Campanella, The Ohio State University
259	32	Integrated production by extrusion of biodegradable materials from cassava (<i>Manihot esculenta</i>)	Marenco-Orozco, G. A.; Tadini, C. C.
326	33	Convective drying and shrinking effects on papaya slices	Giulliana Petean Torrano, Carmen Cecilia Tadini, Universidade de Sao Paulo, Brazil
407	34	Extruded High Moisture Meat Analog (HMMA) Fiber Qualities are Dictated by the Product Temperature Gradient at the Cooling Die Entrance	Caleb Wagner, Leon Levine, and Girish Ganjyal, Washington State University
430	35	Edible Mushroom's Spoilage Kinetics: Linking Structure to Extent and Rate of Deterioration	Angie Homez-Jara, Jarvis Stobbs, Weilun Lin, Yuelin He, & Maria G. Corradini, University of Guelph, Canada
435	36	Degradation Kinetics and Bioaccessibility of Beta-carotene from Potato Crisp Fried in Beta-carotene Fortified Sunflower Oil	Rahul Kumar, Maria Jose Oruna Concha, Dimitris P. Balagiannis, Kim G. Jackson, Nicholas Michael and Kesavan Niranjana, University of Reading, UK
394	132	Ultrasound assisted sequential extraction of water and alkali soluble proteins	Animesh Singh Sengar, Sheila Alves, Brijesh K. Tiwari, Uma Tiwari, Shivani Pathania,

Topic: Modeling

399	37	Machine learning for calculating microbial survival curves during thermal processing from data obtained under constant conditions with come-up times	Bing Li, Si Zhu, Guibing Chen, North Carolina A&T University
422	38	Measuring the thermal death kinetics of <i>Salmonella</i> Enteritidis and <i>Enterococcus faecium</i> in finish drying conditions at constant temperatures and humidities	Rajesh Dangal, Tejaswi Boyapati, Kasiviswanathan Muthukumarappan, and Ren Yang, South Dakota State University
428	39	Optimization, characterization and kinetics of cold pressed linseed oil extracted using novel freeze thaw pretreatment	Monika Chand, Rajni Chopra, Anupama Singh, National Institute of Food Technology Entrepreneurship and Management, Kundli, 131028, Haryana, India
473	40	Real time quality assessment, fault detection and process optimization of rice milling using computer vision and artificial intelligence	Benjamin Ilo, Hongwei Zhang, Alex Sheffield, Sheffield Hallam University, UK
474	41	Modeling the Inactivation Kinetics of <i>Salmonella typhimurium</i> , <i>E. coli</i> , and <i>Listeria monocytogenes</i> in Model Acidified Solutions using High Pressure Processing	Madhuparna Deb, University of Georgia
254	42	Digitalization and Automation for Food Industry – Training Challenges	Ferruh Erdogan, Luis Mayor, Olav Aarna, Zbigniew Krejpcio, Gemma Cornuau, Joshua Bugeja, Anet R. Jambrak and Rui Costa, Ankara University
397	43	Computational Modeling of Curcumin Release from Yeast-Based Microcarriers Patterned by 3D-printing	Fidele Abedi, Yixing Lu, Nitin Nitin, University of California, Davis
391	44	Rapid detection of yeasts in food: An AI-based approach using convolutional neural network and generative adversarial network	Hyeon Woo Park, Nitin Nitin
380	45	Comparing Nutrient Permeability in Purified and Native Mucus Using a Dynamic Mucus Model	Zijin Qin, Fanbin Kong, University of Georgia

350	46	Inactivation Kinetics of Bacillus cereus spores in peracetic acid for aseptic package sterilization	Amandeep Singh, Harneel Kaur, Manoj Sawale, Patnarin Benyathiar, Dharmendra Mishra, Purdue University
396	47	Integrating Machine Learning and Simulation for Enhanced Torrefaction Process Optimization: A Study on Agri-Food Residues	Ahmad Adeel Arshad, Michele Miccio and Bartolomeo Cosenza, University of Salerno, Italy
311	48	Modeling the inactivation kinetics of Bacillus cereus spores in solubilized fibroin solution	Luis Sabillon; Sergio I. Martinez-Monteagudo, New Mexico State University
384	49	Robust quality and safety prediction in a blink: A deep-learning based tool	Debmalya Ghosh and Ashim Datta
335	50	Microwave drying and frying of foods: Predicting the heat and mass transfer by solving multiscale transport equations coupled with Maxwell's equations of electromagnetism	Yash Shah, Juming Tang, and Pawan S. Takhar, University of Illinois
357	51	Evaluation of multiscale mechanisms of ultrasound-assisted extraction from porous plant materials: Experiment and modeling on this intensified process	Jiaheng Li, Wenjun Wang, Donghong Liu, Zhejiang University
364	52	Studying and modeling the meltdown behavior of frozen desserts	Joy I. Agbawodike, Andrea G. Soler-Sanchez, Muhammad Azeem Ur Rehman Alvi, and Sergio I. Martinez-Monteagudo, New Mexico State University

Topic: Packaging

488	53	Effect of dual-mode modified atmosphere packaging on extension of shelf life for assorted fresh-cut fruits	Feng-Yen An, Bang-Yuan Chen, and Shaun Chen, Fu Jen Catholic University, Taiwan
546	54	Development and characterization of pullulan biofilms using the response surface method for product stability	Esther Santamaría, Juan Roy Valerio, Alicia Maestro, and Carme González, University of Barcelona
477	55	Developing a market specific shelf life model for 'Bing' sweet cherry (Prunus avium) under Modified atmosphere packaging (MAP) throughout the supply chain	Smit Patel and Shyam Sablani, Washington State University
489	56	Development of Dual-Function Label for Temperature Indication and Antibacterial Activities	Cheng-Tao Chang, Bang-Yuan Chen, and Shaun Chen, Fu Jen Catholic University
372	57	Extrusion processed corn starch film reinforced with ginkgo biloba leaves-derived carbon nanodot for	Ji Sou Lyu, Yoonho Cho, Jaejoon Han, Korea University
301	58	Development of antimicrobial biopad for enhancing storability of fresh strawberry packaged in clamshells	Chieh-Yi Lin, Yanyun Zhao, Jooyeoun Jung, Oregon State University
345	59	Biodegradable and Light-activated Antimicrobial Materials for Food Preservation	Michael Bodily and Luis Bastarrachea, Utah State University
513	60	Exploring the Utilization of Upcycled Almond Protein in Extrusion Processing to Create Nutritious Direct Expanded Snacks	Preston Watanabe, Dr. Girish Ganjyal, Brasathe Jeganathan, Washington State University
248	61	Engineering packaging for a sustainable food chain	Ezekiel Olukayode Akintunde
320	62	Water demand in food manufacturing – usage and trends	D. Madden, R. Osman, P.J. Fryer, E. Lopez-Quiroga
324	63	Application of turmeric and propolis extract for smart and active sheets based on potato starch obtained using extrusion technology	Gutierrez-Oppe, E.E.; Marencó-Orozco, G. A.; Medrano de Jara, E. ; Quequezana-Bedregal, M.J.; Pessoa Filho Pedro de Alcantara Universidad Nacional de San Agustín de Arequipa,

Tuesday, August 27, 2024. 3:00-4:20 PM. Cascade 2, 2nd floor

Topic: Engineering properties

278	64	Impact of Acidification and Calcium Addition on the High-Pressure and Thermal Gelation of Pulse Protein Concentrates	April Huang and Carmen I. Moraru, Cornell University
529	65	Structural and Functional Analysis of Potato Starch and Protein Blends for Plant Based-Meat Analog Applications.	Kartik Verma and Dr. Osvaldo Campanella, The Ohio State University
524	66	Exploring the mechanism of protein texturization: Role of additives (L-ascorbic Acid, azodicarbonamide, and hydrogen peroxide) in modifying the texture of high moisture meat	Aniket Kamboj, Jana K. Richter, and Girish M. Ganjyal, Washington State University
424	67	Investigating the stability of supercooled states under mechanical stress	Dongyoung Lee and Soojin Jun
442	68	Characterizing and predicting the foaming properties of dairy ingredients using Hyperspectral Imaging technique	Abiy Dadi and Kumar P. Mallikarjunan, University of Minnesota
444	69	The Application of Radio-Frequency Cold Plasma on Modification of Pea Protein Isolate	Jawadul Misir, Kumar Mallikarjunan, University of Minnesota
447	70	Comparative gel ability and emulsifying capacity analysis on 20 different soybean genotype varieties	Shima Momen , Benjamin D. Fallen , and Audrey L. Girard, University of Wisconsin, Madison
470	71	Impact of Corn Meal Particle Size on Mechanical and Physical Properties of Ultrasonically Compacted Nutrition Bars	Jamaka Thomas, Allison Lewis, Micah Graham, Gonul Kaletunc
475	72	Mushroom protein nanoaggregates with enhanced functional properties: Combined treatments of ultrasonication with pH-shifting or transglutaminase cross-linking	Hanieh Sadeghi, Si Zhu, Gulcin Yildiz, Guibing Chen, and Hao Feng, North Carolina A&T University
479	73	Formation of hollow solid lipid particles: Next generation food ingredients	Purlen Sezer Okur and Ozan N. Ciftci, University of Nebraska, Lincoln
252	74	Development of 3D-printed probes for food texture analysis	Robina Rai and George Cavender, Clemson University
363	75	Rheological Properties of Greek-Style Yogurt Manufactured by Hydrodynamic Cavitation	Andrea G. Soler-Sanchez, Joy I. Agbawodike, Muhammad Azeem Ur Rehman Alvi, Luis Sabillon, and Sergio I. Martinez-Montegudo, New Mexico State University
360	76	Exploring the Impact of Ultrasound Treatment on the Drying Kinetics and Physicochemical Properties of Spirulina	Mariana Demarco, Gabrielly da Silva Mendes, Angelo Paggi Matos, Giustino Tribuzi Federal University of Santa Catarina, Brazil
356	77	Effect of UV-A Dehydration on Quality and Structure of Food Products	Sajad Karami (Graduate Student), Luis J. Bastarrachea (Associate Professor), Utah State University
339	78	X-ray Micro Tomography-Based Microstructural Characterization and Pore-Scale Modeling of Antimicrobial Gas Flow in a Bed of Low Moisture Food	Ramin Nemati, Jeyamkondan Subbiah, Pawan S. Takhar, University of Arkansas and University of Illinois
325	79	Utilizing Small Angle X-Ray Scattering to Investigate the Structural Alterations in β -Lactoglobulin, Lectin Proteins, and Their Mixtures Induced by High-Pressure Processing	Hetian Hu; Jerish Joyner Janahar; Susana C. M. Teixeira; V.M. Balasubramaniam, The Ohio State University
385	80	Ice recrystallization inhibition behavior and ice shaping effect of kappa carrageenan in model ice cream solution at long-term storage	Shafi Ahmed and Shingo Matsukawa
400	81	3D-printed reusable hydroponic substrate for space and industrial plant cultivation	Henrik H. Øvrebø and Anna Olsen, Norwegian University of Science and Technology, Trondheim, Norway

Topic: Nonthermal, Alternative Processing

493	82	The impact of cold plasma treatment on the gelation properties of nanocellulose	Jiannan Feng, Fanbin Kong, University of Georgia, Athens
508	83	UV-C Light on Controlling Botrytis cinerea in Postharvest Blueberries	Makayla Bellino, Dr. Qingyang Wang
514	84	Gaseous ozone to improve the microbial safety of spices, seeds, and nuts	Arshpreet Kaur Khattri, Surabhi Wason, Nanje Gowda, Jeyam Subbiah, Jennifer C. Acuff, University of Arkansas
517	85	Evaluating the Thermal and Nonthermal Effects of Cold Plasma Activated Water in Inactivation of Salmonella Spp. and Enterococcus faecium	Tejaswi Boyapati, Rajesh Dangal, Kasiviswanathan Muthukumarappan*, Ren Yang*, South Dakota State University
404	86	Evaluation of High Pressure Processing for Microbial Inactivation in Concord Grape Juice Concentrate	Mark Emile H. Punzalan and Olga I. Padilla-Zakour, Cornell University
500	87	Thermostabilizing Effect of High Hydrostatic Pressure on Lactate Oxidase	Spencer J. Serrano, Felicity B. Meranda, Sebastian G. Irizarry-Rivera and José I. Reyes-De-Corcuera, University of Florida
516	88	Evaluation of Cloud 320 and Flavoset 5400L for Salmonella Interventions in Fresh Poultry	Surabhi Wason, Kaylee Rumbaugh, Rebecca Furbeck, Joyjit Saha, Saurabh Kumar, Kerry
418	89	Application oscillating magnetic field-based supercooling treatment on solid lipid nanoparticles	Heejin So, Dongyoung Lee, and Soojin Jun, University of Hawaii
426	90	Exploring the Effect of Cold Atmospheric Plasma on Proteins and Allergenicity: A Scoping Review	Zahra Shahbazi, Curtis L. Weller, University of Nebraska, Lincoln
459	91	Reducing Salmonella Contamination in Pizza Dough through Cold Plasma-Based Hurdle Interventions	Shivaprasad DP, Jared Rivera, Snehasis Chakraborty, and Kaliramesh Silveru, Kansas State University
482	92	Inactivation of Escherichia coli AW 1.7 in Water by Light Activated Graphene Oxide Nanoparticles and Nanochitosan	Rahul Chetry, Aman Ullah, M. S. Roopesh, University of Alberta, Edmonton, Canada
251	93	Biomimetic hybrid porous microspheres with plant membrane-wall structure for evaluating multiscale mechanisms of ultrasound-assisted mass transfer	Jiaheng Li, Wenjun Wang, Donghong Liu, Zhejiang University
284	94	Modeling the Inactivation Kinetics of Escherichia coli on Pecan Halves Treated by Intense Pulsed Light	Ajit K. Mahapatra, Fort Valley State University
305	95	Combined effect of mechanical shear and moderate electric field on the inactivation of pathogenic microorganisms in fresh orange juice	Ali, M. M., Samaranayake, C. P., Singh, S., Mok, J. H., S., Liu, H., Yousef A., Sastry, S.K., The Ohio State University
379	96	Effect of Electrode Shapes on Spore Inactivation and Quality Properties During Atmospheric Cold Plasma	Omer Faruk Çokgezme, Ozan Aydın, Furkan Çelik, Eren Deniz Konak, Ece Halat, Deniz Döner, Güven Özdemir, Filiz İçier, Ege University, Turkey
373	97	Evaluation of novel cold plasma treatment to reduce rotten tissue in sugar beets for improving postharvest storage	Priyanshi Chaturvedi, P. Kumar Mallikarjunan, Ashok Chanda, University of Minnesota, Twin Cities
366	98	Intense Pulsed Light Treatment for Microbial Safety of Fresh Lettuce	Rabin Gyawali, Kumudini Talari, Hema L. Degala, and Ajit K. Mahapatra, Fort Valley State University
359	99	Effect of Cold Plasma on Corn Grains (Zea Mays L.): Fungal Inactivation, Microstructure Stability, and Germination Capacity	Bruna Aparecida da Silva, Denise Adamoli Laroque, Amanda Galvão, Vildes Maria Scussel, Bruno Augusto Mattar Carciofi, Giustino Tribuzi, Federal University of Santa Catarina, Brazil
328	100	Inactivation of Clostridium sporogenes PA 3679 spores by combined pressure, thermal, and antimicrobial compounds	Liz Astorga-Oquendo, Hetian Hu, Ahmed Yousef, V.M Balasubramaniam, The Ohio State University
312	101	The Synergistic effect of mechanical shear and moderate electric field on the inactivation of Listeria monocytogenes in peach puree	Ali, M. M., Samaranayake, C. P., Singh, S., Mok, J. H., S., Liu, H., Yousef A., Sastry, S.K., The Ohio State University
352	102	Effects of Cold Plasma Fumigation Treatments on the Inactivation of Escherichia coli on Food Contact Surfaces	Fariha Chowdhury Meem, Kaitlin Smith, Alexis N. Omar, Kalmia E. Kniel, Juzhong Tan, University of Delaware
511	103	Efficacy of plasma-activated mist technology against Escherichia coli biofilms on stainless steel surface	Prithviraj. V, Shivani Sonkar, M. S. Roopesh, University of Alberta, Edmonton, Canada
346	104	Cold Atmospheric Plasma for Controlling Pathogenic Bacteria in Cooked Ham	Seo, S.T.; Roma, G.P; Simão, R.S.; Laroque, D.A.; Carciofi, B.A.M., University of California, Davis
355	105	Cold plasma-assisted extraction of phenolics and polysaccharides	Yiwen Bao & Jen-Yi Huang, Purdue University

382	106	Measurement of Far-Uvc (222 NM) Intensity Using Chemical Actinometry and Quantification Fluence Required for Microbial Inactivation	Prasad Chavan, Dushyanth Kumar Tammineni, Deepthi Salvi
288	107	Bacterial spore proteins and their role in influencing spore inactivation during ohmic heating	Shyam K Singh, Mohamed Ali, George Korza, Peter Setlow, Sudhir K Sastry, The Ohio State University
255	108	Computational Design of a Continuous Flow Microwave System for Thermal Processing of Ice-Cream Mixtures	Elif Nida Cakir, Eda Coskun, M. Talha Akbulut, Tuncay Yilmaz, Behic Mert and Ferruh Erdogdu , Ankara University, Ankara, Turkiye
478	109	Production of carotenoids from sotol bagasse (<i>Dasyilirion</i> sp.) pre-treated by non-thermal plasma	Muñoz-Jiménez, I, Villegas-Méndez, M, Reyes-Acosta, K, Reyes-Acosta, A, Montanez, J, Salmerón-Ochoa , I, Morales-Oyervides, L, Autonomous University of Coahuila, Mexico

Topic: Sustainability and waste utilization

513	110	Exploring the Utilization of Upcycled Almond Protein in Extrusion Processing to Create Nutritious Direct Expanded Snacks	Preston Watanabe, Dr. Girish Ganjyal, Brasathe Jeganathan, Washington State University
414	111	The effect of liquid properties on microbubble size distribution and concentration in decompression type generation	Haknyeong Hong, Joseph Heng, Jiakai Lu, University of Massachusetts, Amherst
415	112	Influence of microbubbles on impinging jet cleaning efficiency	Haknyeong Hong, Carlos Parra-Escudero, Jiakai Lu, University of Massachusetts, Amherst
248	113	Engineering packaging for a sustainable food chain	Ezekiel Olukayode Akintunde
320	114	Water demand in food manufacturing – usage and trends	D. Madden, R. Osman, P.J. Fryer, E. Lopez-Quiroga
375	115	Fermentation of Fish By-Products and Acid Whey: Microbial Dynamics and Protein Hydrolysis for Sustainable Waste Management	Chih-Chun Kuo, Rafael Jimenez-Flores, Osvaldo Campanella, The Ohio State University
427	116	A Community to Sustain Digital Food Engineering	Ashim Datta and Debamalya Ghosh, Cornell University
483	117	Sotol bagasse (<i>Dasyilirion</i> spp.) a renewable biomass for biofuels production: ABE fermentation by cellulolytic microbial consortium	Marina I. Piñón-Muñiz, Sergio A. Medina-Gonzalez, Sergio Cisneros-de la Cueva, Nestor Gutiérrez-Méndez, Samuel B. Pérez-Vega, Victor H. Ramos-Sánchez, Julio C. Sacramento-Rivero, Julio C. Montañez-Sáenz, Ivan Salmerón, South Dakota School of Mines

Topic: Encapsulation systems

240	118	Biomimetic hybrid porous microspheres with plant membrane-wall structure for evaluating multiscale mechanisms for ultrasound-assisted extraction	Jiaheng Li, Wenjun Wang, Donghong Liu; Zhejiang University
545	119	Formation of Microcapsules Pullulan by Emulsion Template Mechanism: Evaluation as Vitamin C	Esther Santamaria, Naroa Lizarreta, Susana Vilchez, Carme Gonzalez* and Alicia Maestro, University of Barcelona, Spain
546	120	Development and characterization of pullulan biofilms using the response surface method for protection of blueberry and its phenolic compounds	Esther Santamaria, Juan Roy Valerio, Alicia Maestro, and Carme Gonzalez, University of Barcelona
244	121	Biocompatible hydrophobic cross-linked cyclodextrin-based metal-organic framework as quercetin nanocarrier for enhancing stability and controlled release	Ru-Nan Zhao, Wen-Jun Wang, Jiang-Ning Hu, Dong-Hong Liu and Bei-Wei Zhu
246	122	Chitosan-Oligosaccharide based Nanoemulsion for Thymol encapsulation: Long-term Stability, Enhanced Antimicrobial Properties for Food Preservation	Ru-Nan Zhao, Dong-Hong Liu and Wen-Jun Wang
303	123	Cell surface display of <i>Geobacillus</i> sp. laccase in <i>Pichia pastoris</i>	Ya-Zhu Tang, Lu-Sheng Hsieh, Chuan-Liang Hsu, Tughai University, Taiwan
309	124	Impact of dynamic gastrointestinal conditions and food matrices on survival and release of encapsulated <i>Lactobacillus rhamnosus</i> GG	Toshifumi Udo, Jinru Chen, Rakesh K. Singh, Fanbin Kong, University of Georgia, Athens
316	125	Enhancing the physical stability of O/W emulsions through the interaction of mung bean protein aggregates and soy lecithin	Yeon-Ji Jo, Ju Yeon Ha, Chang-Geun Son, Gangneung-Wonju National University, Korea
313	126	Development of cellulosic particles converted from spent coffee grounds (SCG) for fabricating stable Pickering emulsions (PE) to enhance antimicrobial activity of essential oils (EOs)	Cecilia Hernandez-Hosaka, Jooyeoun Jung, Bo-ram Park, Oregon State University

Topic : Food & Health

331	127	Dietary exposure assessment of oxidized sterols in ready-to-eat foods commercially available in the USA	Ilce Medina Meza, Lisaura Maldonado-Pereira, Michigan State University
503	128	Fabrication of casein-inulin conjugates for improved physicochemical properties and investigation of delayed digestion thereof	Rahul Kamath & Dharmendra Mishra, Purdue University
329	129	In vitro digestion of starch and protein based nanoporous aerogels generated from defatted rice bran via supercritical carbon dioxide technology	Sumanjot Kaur and Ali Ubeyitogullari, University of Arkansas
393	130	Understanding Microplastics' Interactions with Various Nutrients in Food during Digestion: An In Vitro Investigation	Gopinath Mummaleti, Fanbin Kong
371	131	An Ionic Gelation method to produce Chitosan and polyethylene glycol containing resveratrol nanoparticles from Blueberries: Enhancing resveratrol bioavailability and intestinal uptake	Anika Singh, Yigong Guo, Dorsa Dolati, David D. Kitts, Anubhav Pratap-Singh, University of British Columbia