Osvaldo Campanella

The Ohio State University

Education

- University of Massachusetts, Amherst, Massachusetts, Food Engineering, Ph.D., 1987
- University of Buenos Aires, Buenos Aires, Argentina, Chemical Engineer Diploma (six years degree), 1978.

Professional Experience

- Professor in Food Engineering. Carl E. Haas Endowed Chair in Food Industries at the Department of Food Science and Technology, The Ohio State University, 2019-current.
- Professor in Food Process Engineering, Department of Agricultural & Biological Engineering, Purdue University, 2005-2018
- Associate Professor in Food Process Engineering, Department of Agricultural & Biological Engineering, Purdue University, 2002 – 2005
- Assistant Professor in Food Process Engineering, Department of Agricultural & Biological Engineering, Purdue University, 1999 – 2002
- Senior Lecturer in Food Engineering, Food Technology Department Massey University, New Zealand, 1992-1998
- Lecturer in Food Engineering, Food Technology Department, Massey University, New Zealand, January 1990-1992
- Research Associate. Argentina Research Council (CONICET), 1989-1990
- Postdoctoral Fellow. University of Massachusetts, Amherst, MA, 1987-1989
- Research Assistant. University of Massachusetts, Amherst, 1983-1987.
- Research Assistant. Argentina Research Council (CONICET), 1979-1983

Academic Experience

Professor Osvaldo H. Campanella has specialized in Food Engineering. He has worked on modeling the fluid-mechanics of coating flows and rheology of coating dispersions before obtaining a scholarship to carry out graduate studies at the University of Massachusetts in Food Engineering. On completion of his PhD, he worked as a postdoctoral fellow in the same University working in the characterization of food powders. In 1990, Professor Campanella was appointed in the Department of Food Technology, Massey University, New Zealand as a Lecturer and was promoted to the range of Senior Lecturers in the highest range of that position. He focused his research on Food Engineering, Heat Transfer Modeling, Food Extrusion and Rheology. Professor Campanella was appointed at Purdue University in 1999 where he continued working on areas of Rheology, Food Engineering and Thermal Processing. He is also actively involved in research related to new methods to characterize the formation of complex compounds using novel acoustic/ultrasound techniques. Professor Campanella has published 265 articles related to rheology, extrusion, cereal processing, food engineering, thermal processing, physicochemical characterization of biomaterials and other areas of engineering and science and technology. He was awarded the Best Engineering Teacher Award in Agricultural and Biological Engineering in 2000-2001, 2011-2012 and 2017-2018. In 2007, and was named Purdue

University Scholar, a distinction given to faculties that have shown excellence in research and teaching. Professor Campanella has been awarded twice (2008 and 2010) as one the faculties to receive grants for more than one million dollars. In 2018, he received the Spotlight Educator from the College of Agriculture, Purdue University. In 2019, Dr. Campanella was honored with the Lifetime Achievement Award by the International Association for Engineering and Food (IAEF) to recognize his exceptional, long-lasting achievements and contributions to the progress of food engineering. Professor Campanella moved to the Department of Food Science and Technology at The Ohio State University in January 2019 as the Carl E. Haas Endowed Chair in Food Industries.

Memberships in Academic, Professional and Scholarly Societies

- Institute of Food Technologist (IFT) 1999-2021 – *Member at Large of the Food Engineering* Division 2003-2007.
- Cereals & Grains (former AACCI) 1999-2021 - *Chair of the Rheology Division 2001-2002*
- American Institute of Chemical Engineers (AIChE) 1999 – 2021

Editorial Boards

- Cereal Chemistry 2003-2005 (Associate Editor)
- Journal of Food Processing Engineering (Member of the Editorial Board)
- Food Engineering Reviews (Member of the Editorial Board)
- Gels (Member of the Editorial Board)
- Frontiers in Sustainable Food Systems (Member of the Editorial Board)

Journal Referee

- AIChE Journal
- Carbohydrate Polymers
- Carbohydrate Research
- Cereal Chemistry
- Critical Reviews in Food Science and Nutrition
- Chemical Engineering Science
- Chemical Engineering Progress
- Food Hydrocolloids
- Food Science and Technology International
- Food Engineering Reviews
- International Journal of Food Properties
- International Dairy Journal
- International Journal of Food Science and Technology
- Innovative Food Science and Emerging Technologies
- Journal of Food Science
- Journal of Non-Newtonian Fluid Mechanics
- Journal of Textures Studies
- Journal of Food Processing Engineering

- Journal of Food Engineering
- Journal of Cereal Science
- Rheological Acta

Awards

- Best Engineering Teacher College of Engineering, 1999-2000, Purdue University
- Best Engineering Teacher College of Engineering 2011-2012, Purdue University
- Best Engineering Teacher College of Engineering 2017-2018, Purdue University
- Purdue University Research Scholar 2007-2012
- Purdue Faculty Seed for Success Award 2010
- Nomination for Potter Award for excellence in teaching 2017 – College of Engineering, Purdue University
- Nomination for Potter Award for excellence in teaching 2018 – College of Engineering, Purdue University
- Spotlight Educator 2018 - College of Agriculture, Purdue University.
- Lifetime Achievement Award 2019. International Association for Engineering and Food (IAEF)
- 2022-2023 Distinguished International Research and Engagement Award from the College of Food, Agricultural, and Environmental Sciences at the Ohio State University
- 2024 Professor of the year award, Food Science Club at the Department of Food Science and Technology at the Ohio State University
- 2024 Fellow of the International Academy of Food Science and Technology (IAFoST)

Presentations

Dr. Campanella and his research group has given more than 250 presentations in Conferences (IFT, AACC, AIChE) and he has given more than 50 plenary conferences and courses in Latin America (Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay), Australia, China, England, France, Korea, Italy, Netherlands, New Zealand, Switzerland, Spain, Taiwan. He also holds several patents and disclosure related to food processing.

Research

Peer-Reviewed Journal Articles

1. Chen, D., Stone, S., Ilavsky, J., & Campanella, O. (2024). Effect of polyphenols on the rheology, microstructure and in vitro digestion of pea protein gels at various pH. *Food Hydrocolloids*, *151*, 109827.
2. Chen, G., Khan, I. M., Zhang, T., Campanella, O. H., & Miao, M. (2024). Alternansucrase as a key enabling tool of biotransformation from molecular features to applications: A review. *International Journal of Biological Macromolecules*, 135096.
3. Donmez, D., Limon, J., Russi, J. P., Relling, A. E., Riedl, K., Manubolu, M., & Campanella, O. H. (2024). Encapsulation of fish oil, a triglyceride rich in polyunsaturated fatty acids, within a maillard reacted lecithin-dextrose matrix. *Journal of Agriculture and Food Research*, *18*, 101283.

4. Kuo, C. C., Chen, D., Jiménez-Flores, R., Wick, M., & Campanella, O. (2024). Valorization of byproducts from meat and dairy industries through fermentation to produce peptides. *Sustainable Food Technology*, *2*(5), 1469-1475.
5. López, A. M. M., Campanella, O. H., & Simsek, S. (2024). Effects of cooking and market classes on nutritional and antioxidant properties of dry bean flours and soluble dietary fiber-rich fractions. *Bioactive Carbohydrates and Dietary Fibre*, *32*, 100454.
6. Nourmohammadi, N., Campanella, O. H., & Chen, D. (2024). Effect of limited proteolysis and CaCl2 on the rheology, microstructure and in vitro digestibility of pea protein-carboxymethyl cellulose mixed gel. *Food Research International*, 114474.
7. Pinho, L. S., Lima, P. M., Fang, F., Cooperstone, J. L., Favaro-Trindade, C. S., & Campanella, O. H. (2024). Effect of extrusion process conditions on extrudates enriched with carotenoids encapsulated by different methods using gum arabic and vegetable fat as carriers. *International Journal of Biological Macromolecules*, *267*, 131200.
8. Rolandelli, G., Shan, S., & Campanella, O. H. (2024). Effects of alkalinization and addition of pea protein as a co-protein to zein for the development of gluten-free doughs. *Food Hydrocolloids*, *146*, 109313.
9. Rolandelli, G., Ozturk, O. K., Giraldo, A. M. V., Hamaker, B. R., & Campanella, O. H. (2024). Textural improvement of pea protein-based high-moisture extrudates with corn zein and rice starch. *International Journal of Biological Macromolecules*, *281*, 135960.
10. Shan, S., Heldman, D. R., & Campanella, O. H. (2024). Specific Heat Smoothing Methods for Numerical Heat Transfer Analysis Involving Phase Change in a Model Food System. *Food Engineering Reviews*, *16*(1), 116-128.
11. Teng, C., Chen, D., & Campanella, O. H. (2024). Structural and textural properties of a novel animal fat-trimming analog based on salted butter and alginate. *LWT*, *192*, 115538.
12. Zhang, D., Chen, D., & Campanella, O. H. (2024). Effect of pH on the gelling properties of pea protein-pectin dispersions. *Food Hydrocolloids*, *151*, 109731.
13. Zhang, D., Chen, D., & Campanella, O. H. (2024). The Effect of CaCl2 on the Gelling Properties of Pea Protein–Pectin Dispersions. *Gels*, *11*(1), 18.
14. Chen, D., Jones, O. G., & Campanella, O. H. (2023). Plant protein-based fibers: Fabrication, characterization, and potential food applications. *Critical Reviews in Food Science and Nutrition*, *63*(20), 4554-4578.
15. Dent, T., Campanella, O., & Maleky, F. (2023). Enzymatic hydrolysis of soy and chickpea protein with Alcalase and Flavourzyme and formation of hydrogen bond mediated insoluble aggregates. Current Research in Food Science, 6, 100487.
16. Feng, W., Wang, Z., Campanella, O. H., Zhang, T., & Miao, M. (2023). Fabrication of phytoglycogen-derived core-shell nanoparticles: Structure and characterizations. *Food Chemistry*, *423*, 136317.
17. Feng, W., Wang, Z., Zhang, T., Campanella, O. H., & Miao, M. (2023). Biomimetic synthesis of maltodextrin-derived dendritic nanoparticle and its structural characterizations. *Carbohydrate Polymers*, *312*, 120816.
18. Foret, S., Mazian, B., Bekas, V., Martins, F. C., Campanella, O. H., Perré, P., & Augusto, P. E. (2023). Thermoplastic starch biocomposites reinforced with hemp shives obtained via extrusion. *Industrial Crops and Products*, *206*, 117707.

19. Florowska, A., Florowski, T., & Campanella, O. H. (2023). Editorial on the Special Issue "Novel Gels for Food Product Development". *Gels*, *9*(7), 520.
20. Janahar, J. J., Balasubramaniam, V. M., Jiménez-Flores, R., Campanella, O. H., Patel, B., & Ortega-Anaya, J. (2023). Impact of ultra-shear technology on quality attributes of model dairy-pea protein dispersions with different fat levels. Current Research in Food Science, 6, 100439.
21. Pinho, L. S., Patel, B. K., Campanella, O. H., Rodrigues, C. E. D. C., & Favaro-Trindade, C. S. (2023). Microencapsulation of Carotenoid-Rich Extract from Guaraná Peels and Study of Microparticle Functionality through Incorporation into an Oatmeal Paste. *Foods*, *12*(6), 1170.
22. Ozturk, O. K., Salgado, A. M., Holding, D. R., Campanella, O. H., & Hamaker, B. R. (2023). Dispersion of zein into pea protein with alkaline agents imparts cohesive and viscoelastic properties for plant-based food analogues. Food Hydrocolloids, 134, 108044.
23. Salgado, A. M., Ozturk, O. K., Hamaker, B. R., & Campanella, O. H. (2023). Matching textural properties of commercial meat and cheese products using zein as the viscoelastic agent and calcium hydroxide as the textural modifier in plant-based formulations. *Food Hydrocolloids*, *137*, 108323.
24. Shan, S., Heldman, D. R., & Campanella, O. H. (2023). Specific Heat Smoothing Methods for Numerical Heat Transfer Analysis Involving Phase Change in a Model Food System. *Food Engineering Reviews*, 1-13.
25. Shan, S., Teng, C., Chen, D., & Campanella, O. (2023). Insights into protein digestion in plant-based meat analogs. *Current Opinion in Food Science*, 101043.
26. Shan, S., & Campanella, O. H. (2023). The effects of freeze-thaw cycles on the rheological properties of yeasted and non-yeasted frozen bread doughs. *Journal of Cereal Science*, *112*, 103691.
27. Teng, C., Chen, D., & Campanella, O. H. (2023). Structural and textural properties of a novel animal fat-trimming analog based on salted butter and alginate. *LWT*, 115538.
28. Teng, C., & Campanella, O. H. (2023). A Plant-Based Animal Fat Analog Produced by an Emulsion Gel of Alginate and Pea Protein. *Gels*, *9*(5), 393.
29. Brito-Oliveira, T. C., Moraes, I. C., Pinho, S. C., & Campanella, O. H. (2022). Modeling creep/recovery behavior of cold-set gels using different approaches. *Food Hydrocolloids*, *123*, 107183.
30. Chen, G., Khan, I. M., He, W., Li, Y., Jin, P., Campanella, O. H., ... & Miao, M. (2022). Rebuilding the lid region from conformational and dynamic features to engineering applications of lipase in foods: Current status and future prospects. *Comprehensive Reviews in Food Science and Food Safety*.
31. Chen, D., Pinho, L. S., Federici, E., Zuo, X., Ilavsky, J., Kuzmenko, I., ... & Campanella, O. (2022). Heat accelerates degradation of β-lactoglobulin fibrils at neutral pH. *Food Hydrocolloids*, *124*, 107291.
32. Chen, D., & Campanella, O. H. (2022). Limited enzymatic hydrolysis induced pea protein gelation at low protein concentration with less heat requirement. *Food Hydrocolloids*, *128*, 107547.

33. Chen, D., Kuzmenko, I., Ilavsky, J., Pinho, L., & Campanella, O. (2022). Structural evolution during gelation of pea and whey proteins envisaged by time-resolved ultra-small-angle X-ray scattering (USAXS). *Food Hydrocolloids*, *126*, 107449.
34. Chen, D., Rocha-Mendoza, D., Shan, S., Smith, Z., García-Cano, I., Prost, J., ... & Campanella, O. (2022). Characterization and Cellular Uptake of Peptides Derived from In Vitro Digestion of Meat Analogues Produced by a Sustainable Extrusion Process. *Journal of Agricultural and Food Chemistry*, *70*(26), 8124-8133.
35. Fang, F., Mukherjee, I., Okoniewska, M., Yao, T., Campanella, O. H., & Hamaker, B. R. (2022). Soluble corn arabinoxylan has desirable material properties for high incorporation in expanded cereal extrudates. *Food Hydrocolloids*, *133*, 107939
36. Fang, F., Diatta, A., Simsek, S., Torres-Aguilar, P., Watanabe, H., Higashiyama, T., Campanella, O.H. and Hamaker, B.R. (2022). Effect of isomaltodextrin on dough rheology and bread quality. *International Journal of Food Science & Technology*, *57*(3), 1554-1562.
37. Janahar, J. J., Balasubramaniam, V. M., Jimenez-Flores, R., Campanella, O. H., García-Cano, I., & Chen, D. (2022). Pressure, shear, thermal, and interaction effects on quality attributes of pea–dairy protein colloidal dispersions. *Food Hydrocolloids*, 107811.
38. Kim, W. J., Campanella, O., & Heldman, D. R. (2022). A stepwise approach to predict the performance of forward osmosis operation: Effect of temperature and flow direction. *Desalination*, *538*, 115889.
39. Maldonado-Rosas, R., Tejada-Ortigoza, V., Cuan-Urquizo, E., Mendoza-Cachú, D., Morales-de La Pena, M., Alvarado-Orozco, J. M., & Campanella, O. H. (2022). Evaluation of rheology and printability of 3D printing nutritious food with complex formulations. *Additive Manufacturing*, *58*, 103030.
40. Mendes-Oliveira, G., Jin, T. Z., & Campanella, O. H. (2022). Microbial safety and shelf-life of pulsed electric field processed nutritious juices and their potential for commercial production. *Journal of Food Processing and Preservation*, *46*(10), e16249
41. Moussa, M., Ponrajan, A., Campanella, O. H., Okos, M. R., Martinez, M. M., & Hamaker, B. R. (2022). Novel pearl millet couscous process for West African markets using a low-cost single-screw extruder. *International Journal of Food Science & Technology*.
42. McCaw, John CS, Trevor J. Fleck, Viridiana Tejada-Ortigoza, Bhavesh Patel, Steven F. Son, I. Emre Gunduz, Osvaldo Campanella, and Jeffrey F. Rhoads. "Vibration-assisted printing of highly viscous food." *Additive Manufacturing* 56 (2022): 102851.
43. Park, C., Campanella, O., & Maleky, F. (2022). The effects of whey protein and oleogel interactions on mechanical properties of oleocolloids and hydro-oleocolloids matrices. *Food Hydrocolloids*, *124*, 107285.
44. Pinho, L. S., de Lima, P. M., de Sá, S. H. G., Chen, D., Campanella, O. H., da Costa Rodrigues, C. E., & Favaro-Trindade, C. S. (2022). Encapsulation of Rich-Carotenoids Extract from Guaraná (Paullinia cupana) Byproduct by a Combination of Spray Drying and Spray Chilling. *Foods*, *11*(17), 2557.
45. Shan, S., Chen, D., Federici, E., Jones, O. G., & Campanella, O. H. (2022). The effects of whey protein fibrils on the linear and non-linear rheological properties of a gluten-free dough. *Frontiers in Nutrition*, *9*.
46. Tejada-Ortigoza, V., Garcia-Amezquita, L. E., Campanella, O. H., Hamaker, B. R., & Welti-Chanes, J. (2022). Extrusion effect on in vitro fecal fermentation of fruit peels used as dietary fiber sources. *LWT*, *153*, 112569

47. Wang, Y., Chen, C., Hu, X., Campanella, O. H., & Miao, M. (2022). Fabrication and characterizations of cyclic amylopectin-based delivery system incorporated with β-carotene. *Food Hydrocolloids*, *130*, 107680.
48. Zhang, D., Chen, D., Patel, B., & Campanella, O. H. (2022). Pectin as a natural agent for reinforcement of pea protein gel. *Carbohydrate Polymers*, *298*, 120038.
49. Chen D, Zhu, X., Ilavsky, J., Whitmer, T., Hatzakis, E. Jones, O.J & Campanella, O.H. (2021). Polyphenols weaken pea protein gel by formation of large aggregates with diminished non-covalent interactions. *Biomacromolecules,* 22 (2), 1001-1014,
50. Chen, D., Jones, O. G., & Campanella, O. H. (2021). Plant protein-based fibers: Fabrication, characterization, and potential food applications. *Critical Reviews in Food Science and Nutrition*, 1-25.
51. Donmez, D., Pinho, L., Patel, B., Desam, P., & Campanella, O. H. (2021). Characterization of starch–water interactions and their effects on two key functional properties: starch gelatinization and retrogradation. *Current Opinion in Food Science*, 39, 103-109.
52. Erickson, D.P.; Dunbar, M.; Hamed, E.; Ozturk, O.K.; Campanella, O.H.; Keten, S.; Hamaker, B.R. (2021). Atomistic modeling of peptide aggregation and b-sheet structuring in corn zein for viscoelasticity. Biomacromolecules, 22 (5), 1856-1866.
53. Fang, F.; Hayes, A.M.R.; Watanabe, H.; Higashiyama, T.; Campanella, O.H.; Hamaker, B.R. (2021). Isomaltodextrin strengthens model starch gels and moderately promotes starch retrogradation. International Journal of Food Science and Technology, 56 (4), 1631-1640.
54. Fang, F., Diatta, A., Simsek, S., Torres-Aguilar, P., Watanabe, H., Higashiyama, T., Campanella, O.H. & Hamaker, B. R. (2021) Effect of isomaltodextrin on dough rheology and bread quality. *International Journal of Food Science & Technology*.
55. Federici, E., Selling, G.W., Campanella, O.H & Jones, O.J. (2021). Thermal treatment of dry zein to improve rheological properties in gluten-free dough. *Food Hydrocolloids,* 115, 106629.
56. Fei, X.; Jones, O.G.; Reuhs, B.L.; Campanella, O.H. (2021). Soluble pectin acts as a particle stabilizer of tomato suspensions: The impact on tomato products rheological characterization. LWT, 139.
57. He, Y., Chen, F., Shi, Y., Guan, Z., Zhang, N., & Campanella, O. H. (2020). Physico-chemical Properties and Structure of Rice Cultivars Grown in Heilongjiang Province of China. *Food Science and Human Wellness*.
58. Kim, W. J., Campanella, O., & Heldman, D. R. (2021). Predicting the performance of direct contact membrane distillation (DCMD): Mathematical determination of appropriate tortuosity based on porosity. Journal of Food Engineering, 110400.
59. Mendes-Oliveira, G., Jin, T. Z., & Campanella, O. H. (2021). Microbial safety and shelf-life of pulsed electric field processed nutritious juices and their potential for commercial production. *Journal of Food Processing and Preservation*, e16249.
60. Pinho, L.S.; da Silva, M.P.; Thomazini, M.; Cooperstone, J.L.; Campanella, O.H.; da Costa Rodrigues, C.E.; Favaro-Trindade, C.S. (2021). Guaraná (Paullinia cupana) by-product as a source of bioactive compounds and as a natural antioxidant for food applications. *Journal of Food Processing and Preservation*, 45(10), e15854.

61. Pinho, L.S.; Rodrigues, C.E.C.; Favaro-Trindade, C.S.; Campanella, O.H. (2021). The Incorporation of Carotenoids on Ready to Eat Foods Studied Through Their Stability During Extrusion Processing. *Food Engineering Reviews*, 1-14.
62. Tandazo, A. S., Ozturk, O. K., Hamaker, B. R., & Campanella, O. H. (2021). Rice starch and Co-proteins improve the rheological properties of zein dough. *Journal of Cereal Science*, 102, 103334.
63. Tarhan, Ö., Hamaker, B. R., & Campanella, O. H. (2021) Structure and Binding Ability of Self-assembled α-Lactalbumin Protein Nanotubular Gels. *Biotechnology Progress*, e3127.
64. Teng, C., Chen, D., Wu, G., & Campanella, O. (2021). Non-invasive techniques to study starch structure and starchy products properties. *Current Opinion in Food Science*, 38, 196-202.
65. Zhou, X.; Campanella, O.H.; Hamaker, B.R.; Miao, M. (2021). Zhou, X., Campanella, O. H., Hamaker, B. R., & Miao, M. (2021). Deciphering molecular interaction and digestibility in retrogradation of amylopectin gel networks. *Food & Function*, 12(22), 11460-11468.
66. Zhu, S., Campanella, O., & Chen, G. (2021) Estimation of parameters in the Weibull model from microbial survival data obtained under constant conditions with come-up times. *Journal of Food Engineering*, 292, 110364.
67. Castanha, N., Miano, A. C., Jones, O. G., Reuhs, B. L., Campanella, O. H., & Augusto, P. E. (2020). Starch modification by ozone: Correlating molecular structure and gel properties in different starch sources. *Food Hydrocolloids*, 106027.
68. Chen, G., Zhang, Q., Chen, H., Lu, Q., Miao, M., Campanella, O. H., & Feng, B. (2020). In situ and real-time insight into Rhizopus chinensis lipase under high pressure and temperature: Conformational traits and bio behavioral analysis. *International Journal of Biological Macromolecules*, 154, 1314-1323.
69. Chen, D., Fang, F., Federici, E., Campanella, O., & Jones, O. G. (2020). Rheology, microstructure and phase behavior of potato starch-protein fibril mixed gel. *Carbohydrate Polymers*, 116247.
70. Chen, D., Narayanan, N., Federici, E., Yang, Z., Zuo, X., Gao, J., Fang, F., Deng, M., Campanella, O.H. and Jones, O.G. (2020). Electrospinning Induced Orientation of Protein Fibrils. *Biomacromolecules*, 21(7), 2772-2785.
71. Desam, G. P., Li, J., Chen, G., Campanella, O., & Narsimhan, G. (2020). Swelling kinetics of rice and potato starch suspensions. *Journal of Food Process Engineering*, 43(4), e13353.
72. Erickson, D. P., Ozturk, O. K., Selling, G., Chen, F., Campanella, O. H., & Hamaker, B. R. (2020). Corn zein undergoes conformational changes to higher β-sheet content during its self-assembly in an increasingly hydrophilic solvent. *International Journal of Biological Macromolecules*.

73. Fang, F., Luo, X., Fei, X., Mathews, M., Lim, J., Hamaker, B. and Campanella, O.H. (2020). A stored gelatinized waxy potato starch forms a strong retrograded gel at low pH with formation of intermolecular double helices. *Journal of Agricultural and Food Chemistry,* 68(13), 4036-4041.
74. Fang, F., Martinez, M. M., Campanella, O. H., & Hamaker, B. R. (2020). Long-term low shear-induced highly viscous waxy potato starch gel formed through intermolecular double helices. *Carbohydrate Polymers*, 232, 115815.
75. Fang, F., Luo, X., BeMiller, J. N., Schaffter, S., Hayes, A. M., Woodbury, T. J., Hamaker, B.R. & Campanella, O. H. (2020). Neutral hydrocolloids promote shear-induced elasticity and gel strength of gelatinized waxy potato starch. *Food Hydrocolloids*, 105923.
76. Fang, F., Hayes, A. M., Watanabe, H., Higashiyama, T., Campanella, O. H., & Hamaker, B. R. (2020). Isomaltodextrin strengthens model starch gels and moderately promotes starch retrogradation. *International Journal of Food Science & Technology*.
77. Favaro-Trindade, C. S., Patel, B., Silva, M. P., Comunian, T. A., Federici, E., Jones, O. G., & Campanella, O. H. (2020). Microencapsulation as a tool to producing an extruded functional food. *LWT, Food Science and Technology* 109433.
78. Federici, E., Jones, O. G., Selling, G. W., Tagliasco, M., & Campanella, O. H. (2020). Effect of zein extrusion and starch type on the rheological behavior of gluten-free dough. *Journal of Cereal Science*, 91, 102866.
79. Federici, E., Selling, G. W., Campanella, O. H., & Jones, O. G. (2020). Incorporation of Plasticizers and Co-proteins in Zein Electrospun Fibers. *Journal of Agricultural and Food Chemistry*.
80. Fevzioglu, M., Ozturk, O. K., Hamaker, B. R., & Campanella, O. H. (2020). Quantitative approach to study secondary structure of proteins by FT-IR spectroscopy, using a model wheat gluten system. *International Journal of Biological Macromolecules*, 164, 2753-2760.
81. Mendes-Oliveira, G., Deering, A.J., San Martin-Gonzalez, M.F.& Campanella, O.H. (2020). Microwave pasteurization of apple juice: Modeling the inactivation of Escherichia coli O157:H7 and Salmonella Typhimurium at 80-90 degrees C. *Food Microbiology,* 87.
82. Mendes-Oliveira, G., Jin, T. Z., & Campanella, O. H. (2020). Modeling the Inactivation of Escherichia coli O157: H7 and Salmonella Typhimurium in Juices by Pulsed Electric Fields: The Role of the Energy Density. *Journal of Food Engineering*, 282, 110001.
83. Ndiaye, C., Martinez, M. M., Hamaker, B. R., Campanella, O. H., & Ferruzzi, M. G. (2020). Effect of edible plant materials on provitamin A stability and bioaccessibility from extruded whole pearl millet (P. typhoides) composite blends. *LWT*, *123*, 109109.
84. Park, C., Campanella, O. & Maleky, F. (2020). Use of Fractal Analysis to Characterize the Structure of Whey Protein Colloidal Gels. *Journal of the American Oil Chemists' Society*, 97, 1, Sp. Iss., 39-40.
85. Ponrajan, A., Tonner, T., Okos, M., Campanella, O., & Narsimhan, G. (2020). Comparing inline extrusion viscosity for different operating conditions to offline capillary viscosity measurements. *Journal of Food Process Engineering*, 43(5), e13199.
86. Tarhan, O. & Campanella, O.H. (2020). Microstructure and Rheology of Whey Protein Based Hydrogels. *Hacettepe Journal of Biology and Chemistry*, 48(3), 301-307.

87. Tejada-Ortigoza, V., Welti-Chanes, J., Campanella, O. H., & Peleg, M. (2020). Estimating equilibrium moisture content from relatively short sorption experiments. *LWT, Food Science and Technology*, 132, 109832.
88. Xu, E., Campanella, O. H., Ye, X., Jin, Z., Liu, D., & BeMiller, J. N. (2020). Advances in conversion of natural biopolymers: A reactive extrusion (REX)–enzyme-combined strategy for starch/protein-based food processing. *Trends in Food Science & Technology*, 99, 167-180.
89. Castanha, N., Lima, D.C., Matta Junior, M.D., Campanella, O.H. and Augusto, P.E.D. (2019). Combining ozone and ultrasound technologies to modify maize starch. *International Journal of Biological Macromolecules*, 139, 63-74.
90. Cheng, L., Zhu, X., Hamaker, B.R., Zhang, H., Campanella, O.H. (2019). Complexation process of amylose under different concentrations of linoleic acid using molecular dynamics simulation. *Carbohydrate Polymers*, 216, 157-166.
91. Chen, G., Huang, K., Miao, M., Feng, B., Campanella, O.H. (2019). Molecular Dynamics Simulation for Mechanism Elucidation of Food Processing and Safety: State of the Art. *Comprehensive Reviews in Food Science and Food Safety*, 18 (1), 243-263.
92. Fang, F., Tuncil, Y.E., Luo, X., Tong, X., Hamaker, B.R., Campanella, O.H. (2019). Shear-thickening behavior of gelatinized waxy starch dispersions promoted by the starch molecular characteristics. *International Journal of Biological Macromolecules*, 121, 120-126.
93. Garcia-Amezquita, L.E., Tejada-Ortigoza, V., Pérez-Carrillo, E., Serna-Saldivar, S.O., Campanella, O.H., Welti-Chanes, J. (2019). Functional and compositional changes of orange peel fiber thermally treated in a twin extruder. *LWT, Food Science and Technology*, 111, 673-681.
94. Griebel, S., Webb, M.M., Campanella, O.H., Craig, B.A., Weil, C.F. & Tuinstra, M.R. (2019). The alkali spreading phenotype in Sorghum bicolor and its relationship to starch gelatinization. *Journal of Cereal Science*, 86, 41-47.
95. Griebel, S., Westerman, R.P., Adeyanju, A., Addo-Quaye, C., Craig, B.A., Weil, C.F., Cunningham, S.M.: Patel, B., Campanella, O.H. & Tuinstra, M.R. (2019). Mutations in sorghum SBEIIb and SSIIa affect alkali spreading value, starch composition, thermal properties and flour viscosity. *Theoretical and Applied Genetics*, 132 (12), 3357-3374.
96. Hu, Z., Feng, T., Zeng, X., Janaswamy, S., Wang, H. & Campanella, O. (2019). Structural characterization and digestibility of curcumin loaded octenyl succinic nanoparticles. *Nanomaterials*, 9(8), 1073.
97. Kuang, L., Damayanti, N., Jiang, C., Fei, X., Liu, W., Narayanan, N. Irudayaraj, J., Campanella, O. & Deng, M. (2019). Bioinspired glycosaminoglycan hydrogels via click chemistry for 3D dynamic cell encapsulation. *Journal of Applied Polymer Science*, 136, 47212.
98. Lu, J., Ferri, M., Ubal, S., Campanella, O., & Corvalan, C. M. (2019). Contraction of a shear-thinning axisymmetric cavity. Physics of Fluids, 31(12), 123103.
99. Mendes-Oliveira, G., Jensen, J.L., Keener, K.M. & Campanella, O.H. (2019). Modeling the inactivation of Bacillus subtilis spores during cold plasma sterilization. *Innovative Food Science and Emerging Technologies*, 52, 334-342.

100. Roman, L., Campanella, O.H. & Martinez, M. (2019). Shear-induced molecular fragmentation decreases the bioaccessibility of fully gelatinized starch and its gelling capacity. *Carbohydrate Polymers*, 215, 198-206.
101. Tejada-Ortigoza, V., Garcia-Amezquita, L.E., Kazem, A.E., Campanella, O.H., Pilar Cano, M. & Hamaker, B.R. (2019). In vitro fecal fermentation of high pressure-treated fruit peels used as dietary fiber sources. *Molecules*, 24 (4), 697.
102. Tunçil, Y.E., Fevzioglu, M., Arioglu-Tunçil, S., Ejeta, G., Campanella, O.H. & Hamaker, B.R. (2019). Transglutaminase shows better functionality on high digestible, high lysine sorghum-wheat composite dough and bread, compared to normal sorghum-wheat composites. *Turkish Journal of Agriculture-Food Science and Technology*, 7(6), 877-882.
103. Zhang, X., Chen, T., Lim, J., Gu, F., Fang, F., Cheng, L., Campanella, O.H. & Hamaker, B.R. (2019). Acid gelation of soluble laccase-crosslinked corn bran arabinoxylan and possible gel formation mechanism. *Food Hydrocolloids*, 92, 1-9.
104. Brito-Oliveira, T. C., Bispo, M., Moraes, I. C., Campanella, O. H., & Pinho, S. C. (2018). Cold-set gelation of commercial soy protein isolate: Effects of the incorporation of locust bean gum and solid lipid microparticles on the properties of gels. Food Biophysics, 13(3), 226-239.
105. Cheng, L., Feng, T., Zhang, B., Zhu, X., Hamaker, B., Zhang, H. & Campanella, O. (2018). A molecular dynamics simulation study on the conformational stability of amylose-linoleic acid complex in water. *Carbohydrate Polymers*, 196, 56-65.
106. Chen, G., Miao, M., Jiang, B., Jin, J., Campanella, O.H. & Feng, B. (2018). Effects of high hydrostatic pressure on Rhizopus chinensis lipase: II. Intermediate states during unfolding. *Innovative Food Science and Emerging Technologies*, 45, 152-160.
107. Desam, G.P., Li, J., Chen, G., Campanella, O. & Narsimhan, G. (2018). Prediction of swelling behavior of crosslinked maize starch suspensions. *Carbohydrate Polymers*, 199, 331-340.
108. Elegbede, J.L., Li, M., Jones, O.G., Campanella, O.H. & Ferruzzi, M.G. (2018). Interactions Between Flavonoid-Rich Extracts and Sodium Caseinate Modulate Protein Functionality and Flavonoid Bioaccessibility in Model Food Systems. *Journal of Food Science*, 83 (5), 1229-1236.
109. Desam, G.P., Li, J., Chen, G., Campanella, O. & Narsimhan, G. (2018). A mechanistic model for swelling kinetics of waxy maize starch suspension. *Journal of Food Engineering*, 222, 237-249.
110. Garcia-Amezquita, L.E., Tejada-Ortigoza, V., Campanella, O.H. & Welti-Chanes, J. (2018). Influence of Drying Method on the Composition, Physicochemical Properties, and Prebiotic Potential of Dietary Fibre Concentrates from Fruit Peels. *Journal of Food Quality*, 2018.
111. Luciano, C.G., Valencia, G.A., Campanella, O.H., Sobral, P.J.D.A. & Moraes, I.C.F. (2018). Influence of Extraction Method on the Rheological Properties of Jackfruit (Artocarpus heterophyllus) Seed Starch Dispersions. *Food Biophysics*, 13 (2), 155-162.
112. Wang, L., Campanella, O., Patel, B., Ma, S., Liu, D.& Jia, C. (2018). Rheological Properties of Film-Forming Solutions and Mechanical Properties of Edible Composite Films Based on Sodium Alginate, Sodium Carboxymethyl Cellulose and Gelatin. J*ournal of Biobased Materials and Bioenergy*, 12 (1), 28-33.

113. Wu, B., Patel, B.K., Fei, X., Jones, O., Campanella, O.H.& Reuhs, B.L. (2018). Variations in physical-chemical properties of tomato suspensions from industrial processing. *LWT, Food Science and Technology*, 93, 281-286.
114. Xu, E., Wu, Z., Jin, Z. & Campanella, O.H. (2018). Bioextrusion of Broken Rice in the Presence of Divalent Metal Salts: Effects on Starch Microstructure and Phenolics Compounds. *ACS Sustainable Chemistry and Engineering*, 6 (1), 1162-1171.
115. Yuksel, F. & Campanella, O.H. (2018). Textural, rheological and pasting properties of dough enriched with einkorn, cranberry bean and potato flours, using simplex lattice mixture design. *Quality Assurance and Safety of Crops and Foods*, 10 (4), 389-398.
116. Brito-Oliveira, T.C., Bispo, M., Moraes, I.C.F., Campanella, O.H. & Pinho, S.C. (2017). Stability of curcumin encapsulated in solid lipid microparticles incorporated in cold-set emulsion filled gels of soy protein isolate and xanthan gum. *Food Research International*, 102, 759-767.
117. Colantuono, A., Vitaglione, P., Ferracane, R., Campanella, O.H. & Hamaker, B.R. (2017). Development and functional characterization of new antioxidant dietary fibers from pomegranate, olive and artichoke by-products. *Food Research International*, 101, 155-164.
118. Ye, F., Miao, M., Jiang, B., Campanella, O.H., Jin, Z.& Zhang, T. (2017). Elucidation of stabilizing oil-in-water Pickering emulsion with different modified maize starch-based nanoparticles. *Food Chemistry*, 229, 152-158.
119. Chen, G., Miao, M., Jiang, B., Jin, J., Campanella, O.H. & Feng, B. (2017). Effects of high hydrostatic pressure on lipase from Rhizopus chinensis: I. Conformational changes. *Innovative Food Science and Emerging Technologies*, 41, 267-276.
120. Garcia-Lucas, K.A., Méndez-Lagunas, L.L., Rodriguez-Ramirez, J., Campanella, O.H., Patel, B.K. & Barriada-Bernal, L.G. (2017). Physical properties of spray dryed Stenocereus griseus pitaya juice powder. *Journal of Food Process Engineering*, 40 (3),
121. Spotti, M.J.& Campanella, O.H. (2017). Functional modifications by physical treatments of dietary fibers used in food formulations. *Current Opinion in Food Science*, 15, 70-78.
122. Spotti, M.J., Tarhan, O, Schaffter, S., Corvalan, C. & Campanella, O.H. (2017). Whey protein gelation induced by enzymatic hydrolysis and heat treatment: Comparison of creep and recovery behavior. *Food Hydrocolloids*, 63, 696-704.
123. Guo, W. & Campanella, O.H. (2017). A relaxation model based on the application of fractional calculus for describing the viscoelastic behavior of potato tubers. *Transactions of the ASABE*, 60 (1), 259-264.
124. Tarhan, O., Spotti, M.J., Schaffter, S., Corvalan, C.M.& Campanella, O.H. (2016). Rheological and structural characterization of whey protein gelation induced by enzymatic hydrolysis. *Food Hydrocolloids*, 61, 211-220.
125. Ayala-Soto, F.E., Campanella, O.H., Serna-Saldivar, S.O. & Welti-Chanes, J. (2016). Changes in the structure and gelling properties of maize fiber arabinoxylans after their pilot scale extraction and spray-drying. *Journal of Cereal Science*, 70, 275-281.
126. Chen, J., Miao, M., Campanella, O., Jiang, B. & Jin, Z. (2016). Biological macromolecule delivery system for improving functional performance of hydrophobic nutraceuticals. *Current Opinion in Food Science*, 9, 56-61.

127. Feng, T., Zhu, X. & Campanella, O. (2016). Molecular modeling tools to characterize the structure and complexation behavior of carbohydrates. *Current Opinion in Food Science*, 9, 62-69.
128. Khalef, N., Campanella, O.H. & Bakri, A. (2016). Isothermal calorimetry: methods and applications in food and pharmaceutical fields. *Current Opinion in Food Science*, 9, 70-76.
129. Wang, L., Ma, S., Jia, C., Patel, B., Campanella, O., You, L. et al. (2016). The Effects of Calcium Propionate and Cinnamaldehyde on the Mechanical, Physical and Antimicrobial Properties of Composite Films Based on Potato Starch. *Journal of Biobased Materials and Bioenergy*, 10 (3), 176-183. doi:10.1166/jbmb.2016.1597.
130. Eren, N.M., Narsimhan, G. & Campanella, O.H. (2016). Protein adsorption induced bridging flocculation: The dominant entropic pathway for nano-bio complexation. *Nanoscale*, 8 (6), 3326-3336.
131. Kahn, J.L., Eren, N.M., Campanella, O., Voytik-Harbin, S.L. & Rickus, J.L. (2016). Collagen-fibril matrix properties modulate the kinetics of silica polycondensation to template and direct biomineralization. *Journal of Materials Research*, 31(3), 311-320.
132. Demirkesen, I., Puchulu-Campanella, E., Kelkar, S., Campanella, O.H., Sumnu, G. & Sahin, S. (2016). Production and characterisation of gluten-free chestnut sourdough breads. *Quality Assurance and Safety of Crops and Foods*, 8 (3), 349-358.
133. Taylor, J.R.N., Taylor, J., Campanella, O.H. & Hamaker, B.R. (2016). Functionality of the storage proteins in gluten-free cereals and pseudocereals in dough systems. *Journal of Cereal Science*, 67, 22-34.
134. Eren, N.M., Santos, P.H.S. & Campanella, O. (2015). Mechanically modified xanthan gum: Rheology and polydispersity aspects. *Carbohydrate Polymers*, 134, 475-484.
135. Eren, N.M., Jones, O.G. & Campanella, O.H. (2015). Changes in the rheology of nano-structured suspensions by adsorption of the protein a-lactalbumin on the surface of silica particles. *Rheologica Acta*, 54 (8), 735-744. doi:10.1007/s00397-015-0857-8
136. Bhopatkar, D., Feng, T., Chen, F., Zhang, G., Carignano, M., Park, S.H. et al. (2015). Self-assembled nanoparticle of common food constituents that carries a sparingly soluble small molecule. *Journal of Agricultural and Food Chemistry*, 63 (17), 4312-4319.
137. Feng, T., Li, M., Zhou, J., Zhuang, H., Chen, F., Ye, R., Campanella, O. & Fang, Z (2015). Application of molecular dynamics simulation in food carbohydrate research - A review. *Innovative Food Science and Emerging Technologies*, 31, 1-13.
138. Klein, M. I., Hwang, G., Santos, P. H., Campanella, O. H., & Koo, H. (2015). Streptococcus mutans-derived extracellular matrix in cariogenic oral biofilms. *Frontiers in cellular and infection microbiology*, 5, 10.
139. Wang, L., Campanella, O., Patel, B. & Lu, L. (2015). Preparation and Sealing Processing of Sodium Alginate Based Blending Film. *Mathematical Problems in Engineering*, 2015, 1-7.
140. Yoon, C., Heister, S.D. & Campanella, O.H. (2014). Modeling gelled fluid flow with thixotropy and rheological hysteresis effects. *Fuel*, 128, 467-475.
141. Abiad, M.G., Campanella, O.H. & Carvajal, M.T. (2014). Effect of spray drying conditions on the physicochemical properties and enthalpy relaxation of a-lactose. *International Journal of Food Properties*, 17 (6), 1303-1316.

142. Demirkesen, I., Kelkar, S., Campanella, O.H., Sumnu, G., Sahin, S. & Okos, M. (2014). Characterization of structure of gluten-free breads by using X-ray microtomography. *Food Hydrocolloids*, 36, 37-44.
143. Demirkesen, I., Campanella, O.H., Sumnu, G., Sahin, S. & Hamaker, B.R. (2014). A Study on Staling Characteristics of Gluten-Free Breads Prepared with Chestnut and Rice Flours. *Food and Bioprocess Technology*, 7 (3), 806-820.
144. Bello-Perez, L.A., Flores-Silva, P.C., Agama-Acevedo, E., de Dios Figueroa-Cardenas, J., Lopez-Valenzuela, J.A.& Campanella, O.H. (2014). Effect of the nixtamalization with calcium carbonate on the indigestible carbohydrate content and starch digestibility of corn tortilla. *Journal of Cereal Science*, 60 (2), 421-425.
145. De la Pena, E., Manthey, F.A., Patel, B.K. & Campanella, O.H. (2014). Rheological properties of pasta dough during pasta extrusion: Effect of moisture and dough formulation. *Journal of Cereal Science*, 60 (2), 346-351.
146. Erickson, D.P., Renzetti, S., Jurgens, A., Campanella, O.H.& Hamaker, B.R. (2014). Modulating state transition and mechanical properties of viscoelastic resins from maize zein through interactions with plasticizers and co-proteins. *Journal of Cereal Science*, 60 (3), 576-583.
147. Gilbert, J., Campanella, O. & Jones, O.G., 2014. Electrostatic stabilization of b-lactoglobulin fibrils at increased Ph with cationic polymers. *Biomacromolecules*, 15(8), 3119-3127.
148. Lee, S. & Campanella, O. (2013). Impulse viscoelastic characterization of wheat flour dough during fermentation. *Journal of Food Engineering*, 118 (3), 266-270.
149. Janaswamy, S., Gill, K.L., Campanella, O.H. & Pinal, R. (2013). Organized polysaccharide fibers as stable drug carriers. *Carbohydrate Polymers*, 94 (1), 209-215.
150. Dennis, J.D., Kubal, T.D., Campanella, O., Son, S.F. & Pourpoint, T.L. (2013). Rheological Characterization of Monomethylhydrazine Gels. *Journal of Propulsion and Power*, 29 (2), 313-320.
151. Patel, B.K., Campanella, O.H. & Janaswamy, S. (2013). Impact of urea on the three-dimensional structure, viscoelastic and thermal behavior of iota-carrageenan. *Carbohydrate Polymers*, 92 (2), 1873-1879.
152. Kale, M.S., Hamaker, B.R. & Campanella, O.H. (2013). Alkaline extraction conditions determine gelling properties of corn bran arabinoxylans. *Food Hydrocolloids*, 31 (1), 121-126.
153. Santos, P.H.S., Campanella, O.H.& Carignano, M.A. (2013). Effective attractive range and viscoelasticity of colloidal gels. *Soft Matter*, 9 (3), 709-714.
154. Yang, Y., Campanella, O.H., Hamaker, B.R., Zhang, G. & Gu, Z. (2013). Rheological investigation of alginate chain interactions induced by concentrating calcium cations. *Food Hydrocolloids*, 30 (1), 26-32.
155. Yu, J., Santos, P.H.S. & Campanella, O.H. (2012). A Study to characterize the mechanical behavior of semisolid viscoelastic systems under compression chewing - case study of agar gel. *Journal of Texture Studies*, 43 (6), 459-467.
156. Goodall, M.A., Campanella, O.H., Ejeta, G. & Hamaker, B.R. (2012). Grain of high digestible, high lysine (HDHL) sorghum contains kafirins which enhance the protein network of composite dough and bread. *Journal of Cereal Science*, 56 (2), 352-357.

157. Fevzioglu, M., Hamaker, B.R. & Campanella, O.H. (2012). Gliadin and zein show similar and improved rheological behavior when mixed with high molecular weight glutenin. *Journal of Cereal Science*, 55 (3), 265-271.
158. Santos, P.H.S., Bhopatkar, D. & Campanella, O.H. (2012). Rheological characterization of bio-based materials. *Chemical Engineering Progress*, 108 (5), 56-62.
159. Chen, G., Campanella, O.H. & Barbosa-Canovas, G.V. (2012). Estimating microbial survival parameters under high hydrostatic pressure. *Food Research International*, 46 (1), 314-320.
160. Erickson, D.P., Campanella, O.H. & Hamaker, B.R. (2012). Functionalizing maize zein in viscoelastic dough systems through fibrous, Î²-sheet-rich protein networks: An alternative, physicochemical approach to gluten-free breadmaking. *Trends in Food Science and Technology*, 24 (2), 74-81.
161. Mejia, C.D., Gonzalez, D.C., Mauer, L.J., Campanella, O.H. & Hamaker, B.R. (2012). Increasing and stabilizing b-sheet structure of maize zein causes improvement in its rheological properties. *Journal of Agricultural and Food Chemistry*, 60 (9), 2316-2321.
162. Chen, G. & Campanella, O.H. (2012). An optimization algorithm for estimation of microbial survival parameters during thermal processing. *International Journal of Food Microbiology*, 154 (1-2), 52-58.
163. Rumpagaporn, P., Kaur, A., Campanella, O. H., Patterson, J. A., & Hamaker, B. R. (2012). Heat and pH stability of alkali-extractable corn arabinoxylan and its xylanase-hydrolyzate and their viscosity behavior. *Journal of food science*, *77*(1), H23-H30.
164. Santos, P.S., Abiad, M.G., Carignano, M.A. & Campanella, O.H. (2012). Viscoelastic properties of dibenzylidene sorbitol (DBS) physical gels at high frequencies. *Rheologica Acta*, 51 (1), 3-11.
165. Arnold, R., Santos, P.H.S., Campanella, O.H. & Anderson, W.E. (2011). Rheological and thermal behavior of gelled hydrocarbon fuels. *Journal of Propulsion and Power*, 27 (1), 151-161.
166. Chen, G., Campanella, O.H. & Peleg, M. (2011). Calculation of the total lethality of conductive heat in cylindrical cans sterilization using linear and nonlinear survival kinetic models. *Food Research International*, 44 (4), 1012-1022.
167. Dechelette, A., Campanella, O., Corvalan, C. & Sojka, P.E. (2011). An experimental investigation on the breakup of surfactant-laden non-Newtonian jets. *Chemical Engineering Science*, 66 (24), 6367-6374.
168. Moussa, M., Qin, X., Chen, L.F., Campanella, O.H. & Hamaker, B.R. (2011). High-quality instant sorghum porridge flours for the West African market using continuous processor cooking. *International Journal of Food Science and Technology*, 46 (11), 2344-2350.
169. Santos, P.H.S., Carignano, M.A. & Campanella, O.H. (2011). Qualitative study of thixotropy in gelled hydrocarbon fuels. *Engineering Letters*, 19(1), 13-19.
170. Shah, A., Zhang, G., Hamaker, B.R. & Campanella, O.H. (2011). Rheological properties of a soluble self-assembled complex from starch, protein and free fatty acids. *Journal of Food Engineering*, 105 (3), 444-452.
171. Takhar, P.S., Maier, D.E., Campanella, O.H. & Chen, G. (2011). Hybrid mixture theory-based moisture transport and stress development in corn kernels during drying: Validation and simulation results. *Journal of Food Engineering*, 106 (4), 275-282.

172. Zhang, Y., Simsek, S., Campanella, O.H., Ohm, J.B., Chang, H., Reuhs, B.L. & Mergoum, M. (2011). Rheological changes in refrigerated dough during storage in relation to proteins. *Journal of Food Process Engineering*, 34 (3), 639-656.
173. Kale, M.S., Pai, D.A., Hamaker, B.R. & Campanella, O.H. (2010). Structure-function relationships for corn bran arabinoxylans. *Journal of Cereal Science*, 52 (3), 368-372.
174. Santos, P.H.S., Campanella, O.H. & Carignano, M.A. (2010). Brownian dynamics study of gel-forming colloidal particles. *Journal of Physical Chemistry B*, 114 (41), 13052-13058.
175. Simsek, S., Zhang, Y., Campanella & O.H. (2010). Physicochemical properties of arabinoxylans in refrigerated dough. *Food Research International*, 43 (8), 2119-2125.
176. Abiad, M.G., Gonzalez, D.C., Mert, B., Campanella, O.H. & Carvajal, M.T. (2010). A novel method to measure the glass and melting transitions of pharmaceutical powders. *International Journal of Pharmaceutics*, 396 (1-2), 23-29.
177. Abiad, M.G., Campanella, O.H. & Teresa Carvajal, M. (2010). Assessment of thermal transitions by dynamic mechanical analysis (DMA) using a novel disposable powder holder. *Pharmaceutics*, 2 (2), 78-90.
178. Basu, S., Diwan, M., Abiad, M.G., Zheng, Y., Campanella, O.H. & Varma, A. (2010). Transport characteristics of dehydrogenated ammonia borane and sodium borohydride spent fuels. International *Journal of Hydrogen Energy*, 35 (5), 2063-2072.
179. Gonzalez, D.C., Khalef, N., Wright, K., Okos, M.R., Hamaker, B.R. & Campanella, O.H. (2010). Physical aging of processed fragmented biopolymers. *Journal of Food Engineering*, 100 (2), 187-193.
180. Santos, P.H.S., Arnold, R., Anderson, W.E., Carignano, M.A. & Campanella, O.H. (2010). Characterization of JP-8/SiO2 and RP-1/SiO2 gels. *Engineering Letters*, 18(1), 41.
181. Zhang, G., Maladen, M., Campanella, O.H. & Hamaker, B.R. (2010). Free fatty acids electronically bridge the self-assembly of a three-component nanocomplex consisting of amylose, protein, and free fatty acids. *Journal of Agricultural and Food Chemistry*, 58 (16), 9164-9170.
182. Abiad, M.G., Carvajal, M.T. & Campanella, O.H. (2009). A review on methods and theories to describe the glass transition phenomenon: Applications in food and pharmaceutical products. *Food Engineering Reviews*, 1 (2), 105-132.
183. Chen, G., Maier, D.E., Campanella, O.H. & Takhar, P.S. (2009). Modeling of moisture diffusivities for components of yellow-dent corn kernels. *Journal of Cereal Science*, 50 (1), 82-90.
184. Jebson, S., Chen, H. & Campanella, O. (2009). Fouling in a centritherm evaporator with whey solutions. *Heat Transfer Engineering*, 30 (10-11), 859-867.
185. Matalanis, A.M., Campanella, O.H. & Hamaker, B.R. (2009). Storage retrogradation behavior of sorghum, maize and rice starch pastes related to amylopectin fine structure. *Journal of Cereal Science*, 50 (1), 74-81.
186. Pai, D.A., Blake, O.A., Hamaker, B.R. & Campanella, O.H. (2009). Importance of extensional rheological properties on fiber-enriched corn extrudates. *Journal of Cereal Science*, 50 (2), 227-234.
187. Penner, A., Hailemariam, L., Okos, M. & Campanella, O. (2009). Lateral growth of a wheat dough disk under various growth conditions. *Journal of Cereal Science*, 49 (1), 65-72.

188. Simsek, S., Mert, B., Campanella, O.H.& Reuhs, B. (2009). Chemical and rheological properties of bacterial succinoglycan with distinct structural characteristics. *Carbohydrate Polymers*, 76 (2), 320-324.
189. Chen, G., Campanella, O.H., Corvalan C.M. & Haley, T.A. (2008). On-line correction of process temperature deviations in continuous retorts. *Journal of Food Engineering*, 84 (2),
190. Kim, Y. R., Cornillon, P., Campanella, O. H., Stroshine, R. L., Lee, S., & Shim, J. Y. (2008). Small and large deformation rheology for hard wheat flour dough as influenced by mixing and resting. *Journal of food science*, *73*(1), E1-E8.
191. Mert, B. & Campanella, O.H. (2008). The study of the mechanical impedance of foods and biomaterials to characterize their linear viscoelastic behavior at high frequencies. *Rheologica Acta*, 47 (7), 727-737.
192. Carcione, J.M., Campanella, O.H. & Santos, J.E. (2007). A poroelastic model for wave propagation in partially frozen orange juice. *Journal of Food Engineering*, 80 (1), 11-17.
193. Chen, G., Campanella, O.H. & Purkayastha, S. (2007). A dynamic model of crosslinked corn starch granules swelling during thermal processing. *Journal of Food Engineering*, 81 (2), 500-507.
194. Chen, G., Campanella, O.H. & Corvalan, C.M. (2007). A numerical algorithm for calculating microbial survival curves during thermal processing. *Food Research International*, 40 (1), 203-208.
195. Hailemariam, L., Okos, M.& Campanella, O. (2007). A mathematical model for the isothermal growth of bubbles in wheat dough. *Journal of Food Engineering*, 82 (4), 466-477.
196. Mert, B. & Campanella, O.H. (2007). Monitoring the rheological properties and solid content of selected food materials contained in cylindrical cans using audio frequency sound waves. *Journal of Food Engineering*, 79 (2), 546-552.
197. Mert, B., Gonzalez, D. & Campanella, O.H. (2007). A new method to determine viscoelastic properties of corn grits during cooking and drying. *Journal of Cereal Science*, 46 (1), 32-38.
198. Haddish-Berhane, N., Nyquist, C., Haghighi, K., Corvalan, C., Keshavarzian, A., Campanella, O., Rickus, J. & Farhadi, A. (2006). A multi-scale stochastic drug release model for polymer-coated targeted drug delivery systems. *Journal of Controlled Release*, 110(2), 314-322.
199. Ross, K.A., Pyrak-Nolte, L.J. & Campanella, O.H. (2006). The effect of mixing conditions on the material properties of an agar gel - Microstructural and macrostructural considerations. *Food Hydrocolloids*, 20 (1), 79-87.
200. Chen, G., Corvalan, C., Campanella, O.H. & Haley, T.A. (2005). An improved method to estimate temperatures and lethality during the cooling stage of sterilized cylindrical cans. *Food and Bioproducts Processing*, 83 (1 C), 36-42.
201. Hardacre, A.K., Campanella, O.H., Budiman, M. & Hemar, Y. (2004). Roux sauce composition: Effects of Roux composition on the viscosity of roux sauces. *Food New Zealand*, 4(1), 29-34.
202. Mert, B., Sumali, H. & Campanella, O.H. (2004). A new method to measure viscosity and intrinsic sound velocity of liquids using impedance tube principles at sonic frequencies. *Review of Scientific Instruments*, 75 (8), 2613-2619.

203. Lee, S., Pyrak-Nolte, L.J. & Campanella, O.H. (2004). Determination of ultrasonic-based rheological properties of dough during fermentation. *Journal of Texture Studies*, 35 (1), 33-52.
204. Lee, S., Pyrak-Nolte, L.J., Cornillon, P. & Campanella, O.H. (2004). Characterisation of frozen orange juice by ultrasound and wavelet analysis. *Journal of the Science of Food and Agriculture*, 84(5), 405-410.
205. Levine, L., Campanella, O., Corvalan, C. & Okos, M. (2004). A model for predicting forces and work inputs in cereal flaking. *Cereal Foods World*, 49(1), 11.
206. Levine, L., Campanella, O.H., Okos, M.R. & Ross, K. (2004). Observations on physicochemical changes with flaking. *Cereal Foods World*, 49 (2), 65-70.
207. Li, P.X., Campanella, O.H. & Hardacre, A.K. (2004). Using an In-Line Slit-Die Viscometer to Study the Effects of Extrusion Parameters on Corn Melt Rheology. *Cereal Chemistry*, 81 (1), 70-76.
208. Ross, K.A., Pyrak-Nolte, L.J. & Campanella, O.H. (2004). The use of ultrasound and shear oscillatory tests to characterize the effect of mixing time on the rheological properties of dough. *Food Research International*, 37 (6), 567-577.
209. Singh, P.P., Maier, D.E., Cushman, J.H. & Campanella, O.H. (2004). Effect of viscoelastic relaxation on moisture transport in foods. Part II: Sorption and drying of soybeans. *Journal of Mathematical Biology*, 49 (1), 20-34.
210. Jebson, R.S., Chen, H. & Campanella, O.H. (2003). Heat transfer coefficients for evaporation from the inner surface of a rotating cone-II. *Food and Bioproducts Processing: Transactions of the Institution of Chemical Engineers*, Part C, 81 (4), 293-302.
211. Levine, L., Campanella, O.H., Corvalan, C.M., Okos, M.R. & Gonzalez, D. (2003). A model for predicting the aspect ratio of cereal flakes. *Cereal Foods World*, 48 (6), 289-299.
212. Mert, B., Sumali, H.& Campanella, O.H. (2003). A new method to determine viscosity of liquids using vibration principles. Rheologica Acta, 42 (6), 534-543.
213. Peleg, M., Normand, M.D. & Campanella, O.H. (2003). Estimating microbial inactivation parameters from survival curves obtained under varying conditions - *The linear case. Bulletin of Mathematical Biology*, 65 (2), 219-234.
214. Reid, J.D., Campanella, O.H., Corvalan, C.M. & Okos, M.R. (2003). The influence of power-law rheology on flow distributions in coathanger manifolds. *Polymer Engineering and Science*, 43 (3), 693-703.
215. Campanella, O.H. & Peleg, M. (2002). Squeezing flow viscometry for nonelastic semiliquid foods - Theory and applications. *Critical Reviews in Food Science and Nutrition*, 42 (3), 241-264.
216. Carr, A.J., Munro, P.A. & Campanella, O.H. (2002). Effect of added monovalent or divalent cations on the rheology of sodium caseinate solutions. *International Dairy Journal*, 12 (6), 487-492.
217. Han, X.Z., Campanella, O.H., Mix, N.C. & Hamaker, B.R. (2002). Consequence of starch damage on rheological properties of maize starch pastes. *Cereal Chemistry*, 79 (6), 897-901.
218. Han, X.Z., Campanella, O.H., Guan, H., Keeling, P.L.& Hamaker, B.R. (2002). Influence of maize starch granule-associated protein on the rheological properties of starch pastes.

Part I. Large deformation measurements of paste properties. *Carbohydrate Polymers*, 49 (3), 315-321.

219. Han, X.Z., Campanella, O.H., Guan, H., Keeling, P.L. & Hamaker, B.R. (2002). Influence of maize starch granule-associated protein on the rheological properties of starch pastes - Part II. Dynamic measurements of viscoelastic properties of starch pastes. *Carbohydrate Polymers*, 49 (3), 323-330.
220. Levine, L., Campanella, O.H., Corvalan, C.M., Okos, M.R. & Symes, S.T. (2002). A model for the formation of multiple flakes during cereal flaking. *Cereal Foods World*, 47 (6), 210-223.
221. Levine, L., Corvalan, C.M., Campanella, O.H. & Okos, M.R. (2002). A model describing the two-dimensional calendering of finite width sheets. *Chemical Engineering Science*, 57 (4), 643-650.
222. Ross, K.A., Campanella, O.H. & Okos, M.R. (2002). The effect of porosity on glass transition measurement. *International Journal of Food Properties*, 5 (3), 611-628.
223. Bugusu, B.A., Campanella, O. & Hamaker, B.R. (2001). Improvement of Sorghum-Wheat Composite Dough Rheological Properties and Breadmaking Quality Through Zein Addition. *Cereal Chemistry* 78 (1), 31-35.
224. Hoffner, B., Campanella, O.H., Corradini, M.G. & Peleg, M. (2001). Squeezing flow of a highly viscous incompressible liquid pressed between slightly inclined lubricated wide plates. Rheologica Acta, 40 (3), 289-295.
225. Campanella, O.H. & Peleg, M. (2001). Theoretical comparison of a new and the traditional method to calculate Clostridium botulinum survival during thermal inactivation. *Journal of the Science of Food and Agriculture*, 81 (11), 1069-1076.
226. Pereira, R.B., Bennett, R.J., Hemar, Y. & Campanella, O.H. (2001). Rheological and microstructural characteristics of model processed cheese analogues. *Journal of Texture Studies*, 32 (5-6), 349-373.
227. Reid, J.D., Corvalan, C.M., Levine, L., Campanella, O.H. & Okos, M.R. (2001). Estimation of final sheet width and the forces and power exerted by sheeting rolls. *Cereal Foods World*, 46 (2), 63-68
228. Singh, P. P., Maier, D. E., & Campanella, O. (2001). Effect of temperature and moisture on dynamic viscoelastic properties of soybeans. *Transactions of the ASAE*, *44*(6), 1713.
229. Zimmer, L.A., Haley, T.A. & Campanella, O.H. (2001). A comparative study of the performance of selected in-line viscometers on Newtonian and shear-thinning fluids. *Journal of Texture Studies*, 32 (2), 75-103.
230. Budiman, M., Stroshine, R.L. & Campanella, O.H. (2000). Stress relaxation and low field proton magnetic resonance studies of cheese analog. *Journal of Texture Studies*, 31 (5), 477-498.
231. Zheng, H., Morgenstern, M.P., Campanella, O.H. & Larsen, N.G. (2000). Rheological properties of dough during mechanical dough development. *Journal of Cereal Science*, 32 (3), 293-306.
232. Morgenstern, M.P., Zheng, H., Ross, M. & Campanella, O.H. (1999). Rheological properties of sheeted wheat flour dough measured with large deformations. *International Journal of Food Properties*, 2 (3), 265-275.

233. Duizer, L.M., Campanella, O.H. & Barnes, G.R.G. (1998). Sensory, instrumental and acoustic characteristics of extruded snack food products. *Journal of Texture Studies*, 29 (4), 397-411.
234. Havea, P., Singh, H., Creamer, L.K. & Campanella, O.H. (1998). Electrophoretic characterization of the protein products formed during heat treatment of whey protein concentrate solutions. *Journal of Dairy Research*, 65 (1), 79-91.
235. Ramkumar, C., Campanella, O.H., Watkinson, P.J., Bennett, R.J. & Creamer, L.K. (1998). The effects of pH and time on rheological changes during early cheese maturation. *Journal of Texture Studies*, 29 (6), 633-644.
236. Campanella, O.H. & Peleg, M. (1997). On the tanδ-frequency relationship of foods and agricultural commodities. *Journal of Texture Studies*, 28 (5), 585-592.
237. Chen, H., Jebson, R.S. & Campanella, O.H. (1997). Determination of heat transfer coefficients in rotating cone evaporators: Part I. F*ood and Bioproducts Processing: Transactions of the Institution of Chemical Engineers, Part C*, 75 (1), 17-22.
238. Govindasamy, S., Campanella, O.H. & Oates, C.G. (1997). The single screw extruder as a bioreactor for sago starch hydrolysis. *Food Chemistry*, 60 (1), 1-11.
239. Govindasamy, S., Campanella, O.H. & Oates, C.G. (1997). Enzymatic hydrolysis and saccharification optimisation of sago starch in a twin-screw extruder. *Journal of Food Engineering*, 32 (4), 427-446.
240. Govindasamy, S., Campanella, O.H. & Oates, C.G. (1997). Enzymatic hydrolysis of sago starch in a twin-screw extruder. *Journal of Food Engineering*, 32 (4), 403-426.
241. Govindasamy, S., Campanella, O.H. & Oates, C.G. (1997). High moisture twin screw extrusion of sago starch. II. Saccharification as influenced by thermomechanical history. *Carbohydrate Polymers*, 32 (3-4), 267-274.
242. Watkinson, P., Boston, G., Campanella, O., Coker, C., Johnston, K., Luckman, M. & White, N. (1997). Rheological properties and maturation of New Zealand Cheddar cheese. *Le Lait*, 77 (1), 109-120.
243. Campanella, O.H., Dorward, N.M. & Singh, H. (1995). A study of the rheological properties of concentrated food emulsions. *Journal of Food Engineering*, 25(3), 427-440.
244. Govindasamy, S., Campanella, O.H.& Oates, C.G. (1996). High moisture twin-screw extrusion of sago starch: 1. Influence on granule morphology and structure. *Carbohydrate Polymers*, 30 (4), 275-286.
245. Li, P.X.P., Hardacre, A.K., Campanella, O.H. & Kirkpatrick, K.J. (1996). Determination of endosperm characteristics of 38 corn hybrids using the Stenvert hardness test. *Cereal Chemistry*, 73 (4), 466-471.
246. Govindasamy, S., Campanella, O.H. & Oates, C.G. (1995). Influence of extrusion variables on subsequent saccharification behaviour of sago starch. *Food Chemistry*, 54 (3), 289-296.
247. McSwiney, M., Singh, H., Campanella, O. & Creamer, L.K. (1994). Thermal gelation and denaturation of bovine b-lactoglobulins A and B. *Journal of Dairy Research*, 61(2), 221-232.
248. McSwiney, M., Singh, H. & Campanella, O.H. (1994). Thermal aggregation and gelation of bovine β-lactoglobulin. *Food Hydrocolloids*, 8(5), 441-453.

249. Bhaskar, G. V., Campanella, O. H., & Munro, P. A. (1993). Effect of agitation on the coagulation time of mineral acid casein curd: application of Smoluchowski's orthokinetic aggregation theory. *Chemical Engineering Science*, 48(24), 4075-4080.
250. Beltramini, L., Campanella, O., Di Pentima, J. and Gribaudo, L. (1991). Sistema experto de interés en la conservación de manzanas con atmósfera controlada. *Revista de Agroquimica y Tecnologia de Alimentos*, 31(2), 125-133.
251. Calvo, N. & Campanella, O.H. (1990). A novel geometry for rheological characterization of viscoelastic materials. *Rheologica Acta*, 29 (4), 323-331.
252. Roy, I., Campanella, O.H., Normand, M.D. & Peleg, M. (1989). A research note: uniaxial compression of double-layers of solid foods. *Journal of Texture Studies*, 20 (4), 443-455.
253. Ak, M.M., Nussinovitch, A., Campanella, O.H. & Peleg, M. (1989). Crosslinking rates of thermally preset alginate gels. *Biotechnology Progress*, 5 (2), 75-77.
254. Lee, S., Campanella, O.H. & Peleg, M. (1989). Squeezing flow of a double layered array of two Newtonian liquids. *Chemical Engineering Science*, 44 (12), 2979-2986.
255. Peleg, M. & Campanella, O.H. (1989). The Mechanical Sensitivity of Soft Compressible Testing Machines. *Journal of Rheology*, 33 (3), 455-467.
256. Peleg, M., Roy, I., Campanella, O.H. & Normand, M.D. (1989). Mathematical characterization of the compressive stress-strain relationships of spongy baked goods. *Journal of Food Science*, 54(4), 947-949.
257. Popplewell, L.M., Campanella, O.H. & Peleg, M. (1989). Simulation of bimodal size distributions in aggregation and disintegration processes. *Chemical Engineering Progress*, 85 (8), 56-62.
258. Popplewell, L.M., Campanella, O.H., Sapru, V. & Peleg, M. (1989). Theoretical comparison of two segregation indices for binary powder mixtures. *Powder Technology*, 58 (1), 55-61.
259. Campanella, O.H. & Peleg, M. (1988). On food compression by soft machines. *Journal of Texture Studies*, 19 (1), 39-50.
260. Peleg, M. & Campanella, O.H. (1988). On the mathematical form of psychophysical relationships, with special focus on the perception of mechanical properties of solid objects. *Perception & Psychophysics*, 44 (5), 451-455.
261. Popplewell, L.M., Campanella, O.H., Normand M.D. & Peleg, M. (1988). Description of normal, log-normal and Rosin-Rammler particle populations by a modified version of the beta distribution function. *Powder Technology*, 54 (2), 119-125.
262. Popplewell, L.M., Campanella, O.H. & Peleg, M. (1988). Comparison between a modified beta and a modified normal distribution function for the description of populations with a finite size range. *Powder Technology*, 54 (2), 157-160.
263. Popplewell, L.M., Campanella, O.H. & Peleg, M. (1988). Quantitative Characterization of the Particle Size Distributions of Instant Coffee During Mechanical Attrition. *Journal of Food Science*, 53 (3), 877-881.
264. Campanella, O.H. & Peleg, M. (1987). Lubricated squeezing flow of a Newtonian liquid between elastic and rigid plates. *Rheologica Acta*, 26 (4), 396-400.
265. Campanella, O.H. & Peleg, M. (1987). Analysis of the transient flow of mayonnaise in a coaxial Viscometer. *Journal of Rheology*, 31 (6), 439-452.
266. Campanella, O.H. & Peleg, M. (1987). Determination of the yield stress of semiliquid liquid foods from squeezing flow data. *Journal of Food Science*, 52 (1), 214-215.

267. Campanella, O.H. & Peleg, M. (1987). On the relationship between the dynamic viscosity and the relaxation modulus of viscoelastic liquids. *Journal of Rheology*, 31 (6), 511-513.
268. Campanella, O.H. & Peleg, M. (1987). Squeezing flow viscosimetry of peanut butter. *Journal of Food Science*, 52 (1), 180-184.
269. Campanella, O.H., Popplewell, L.M., Rosenau, J.R. & Peleg, M. (1987). Elongational Viscosity Measurements of Melting American Process Cheese. *Journal of Food Science*, 52 (5), 1249-1251.
270. Rebouillat, S., Campanella, O.H. & Peleg, M. (1987). Mechanical characteristics of raw and processed peat. *Powder Technology*, 51 (3), 273-275.
271. Campanella, O.H., Galazzo, J.L. & Cerro, R.L. (1986). Viscous flow on the outside of a horizontal rotating cylinder-II. Dip coating with a non-Newtonian fluid. *Chemical Engineering Science*, 41 (11), 2707-2713.
272. Campanella, O.H. & Cerro, R.L. (1986). Viscous flow on the outside of a horizontal rotating cylinder-III. Selective coating of two immiscible fluids. *Chemical Engineering Science*, 41 (11), 2715-2721.
273. Campanella, O.H. & Cerro, R.L. (1984). Viscous flow on the outside of a horizontal rotating cylinder: The roll coating regime with a single fluid. *Chemical Engineering Science*, 39 (10), 1443-1449.

Books (Other than Edited Volumes)

1. Bouvier, J.M. and Campanella, O.H. (2014). Extrusion Processing Technology: Food and non-Food Biomaterials, J. Wiley.
2. Calvelo, A. and Campanella, O.H. (2024). Science and Technology df Dry Pasta Production. Food Engineering Series, Springer Nature, New York. To be published in January 2025 by Springer Nature

Edited Books

1. Welti-Chanes, J.; Serna-Saldívar, S.O.; Campanella, O.H. and Tejada-Ortigoza, V. (2020). Science and Technology of Fibers in Food Systems. Food Engineering Series, ISBN 978-3-030-38653-5. Springer Nature, New York.
2. Miao, M. & Campanella, O.H (2025). Starch based Materials 1st Edition. Elsevier. To be released September 2025.

Chapters in Edited Books

1. Spotti, M.J. & Campanella, O.H. (2020). Enzymatic Processes of Dietary Fibers. In "Science and Technology of Fibers in Food Systems". Eds. Welti-Chanes, J.; Serna-Saldívar, S.O.; Campanella, O.H.; Tejada-Ortigoza, V. Springer Nature, New York.
2. Campanella, O.H. & Tejada-Ortigoza (2020). Functional Properties in Industrial Applications. In "Science and Technology of Fibers in Food Systems". Eds. Welti-Chanes, J.; Serna-Saldívar, S.O.; Campanella, O.H.; Tejada-Ortigoza, V. Springer Nature, New York.
3. Duizer, L., West, R. & Campanella, O.H. (2020). Fiber addition to cereal based foods: Effects on sensory properties. In "Science and Technology of Fibers in Food Systems". Eds. Welti-Chanes, J.; Serna-Saldívar, S.O.; Campanella, O.H.; Tejada-Ortigoza, V. Springer Nature, New York.
4. Campanella, O.H.; Okos, M.R.; Narsimhan, G.; Singh, R.K.& Weitnauer, A.C. (2019). Food, Dehydration. In Heldman, D.; Lund, D.; Sabliov, C. (Eds.), *Handbook of Food Engineering.* CRC Press.
5. Campanella, O.H., Feng, T., Zhuang, H., Chen, F., Bhopatkar, D., Carignano, M. & Park, S.H. (2018). Starch-Lipid and Starch-Protein Complexes and Their Application. In Zhengyu, J. (Eds.), *Functional Starch and Applications in Food* (pp. 177-226). Springer, Singapore.
6. Campanella, O.H. (2016). Heat Treatment: Principles and Techniques. *The Encyclopedia of Food and Health.* Oxford: Academic Press.
7. Campanella, O.H., Zhang, G., Bhopatkar D. & Hamaker, B. (2015). Self-assembly of amylose, protein, and lipid as a nanoparticle carrier of hydrophobic small molecules. In Sabliov, C.; Chen, H.; Yada, R. (Eds.), *Nanotechnology and Functional Foods: Effective Delivery of Bioactive Ingredients* (pp. 263-271). IFT Press Series.
8. Patel, B. & Campanella, O.H. (2015). Dough Processing: Sheeting, Shaping, Flattening and Rolling. In "Conventional and Advanced Food Processing Technologies", Ed. S. Bhattacharya Ed., J. Wiley, pp 51-73.
9. Campanella, O.H., Hamaker, B. & Bhopatkar, D. (2012). Micro to macro level structures of food materials. In Bhandari, B.; Roos, Y. (Eds.). *Food Materials Science and Engineering.* Blackwell Publishing Ltd.
10. Campanella, O.H., Sumali, H., Mert, B. & Patel, B. (2011). The use of vibration principles to characterize the mechanical properties of biomaterials. In Pignatello, R. (Eds.), *Biomaterials - Physics and Chemistry* Intech Open Access Publisher.
11. Campanella, O.H., Kale, M., Pai, D. & Hamaker, B. (2011). Incorporation of Fibers in Foods: A Food Engineering Challenge. In Aguilera, J.; Simpson, R.; Welti-Chanes, J.; Bermudez-Aguirre, D.; Barbosa-Canovas, G. (Eds.), *Food Engineering Interfaces* (pp. 69-98). Springer.
12. Campanella, O.H. (2010). Instrumental Techniques for Measurement of Textural and Rheological Properties of Foods. In Kang, S.; Cho, Y-J. (Eds.), *Emerging Technologies for Evaluating Food Quality and Food Safety* (pp. 6-53). CRC Publisher.
13. Arnold, R., Santos, P.H. S., Kubal, T., Campanella, O. & Anderson, W.E. (2009). Investigation of Gelled JP-8 and RP-1 Fuels. WCECS 2009: World Congress on Engineering and Computer Science, Vols. I and II. Book Series: Lecture Notes in Engineering and Computer Science. Eds. Ao S.I., Douglas, C., Grundfest, W.S. and Burgstone J, pp 63-68.

14. Campanella, O.H., Rovedo, C., Bichier, J. & Pandelaers, F. (2009). Plant automation for automatic batch retort systems. In Simpson, R. (Eds.), *Engineering Aspects of Thermal Food Processing* CRC Press.
15. Campanella, O. H., & Chen, G. (2008). On-line correction of in-pack processing of foods and validation of automated processes to improve product quality. In *In-Pack Processed Foods* (pp. 154-185). Woodhead Publishing.
16. Corvalan, C. M., & Campanella, O. H. (2009). Squeezing and elongational flow. *Food engineering, encyclopedia of life support systems*, *2*, 91-191.
17. Mert, B., Gonzalez, D.C. a& Campanella, O.H. (2005). Novel methods to measure dough rheology. Proceedings of the Third International Wheat Conference, Chung, O.K. and Lookhart, G.L. Eds., May 22-26, 2005, pp 235-244.
18. Campanella, O. H., Li, P. X., Ross, K. A., & Okos, M. R. (2002). The role of rheology in extrusion. *Engineering and food for the 21st century*, 393-413.

Papers in Proceedings

1. Mert, I.D., Campanella, O.H., Sumnu G.& Sahin, S. (2014). *Gluten-free sourdough bread prepared with chestnut and rice flour* (pp. 239-242).
2. Santos, P.H.S., Carignano, M.A.& Campanella, O.H. (2011). *Fluid properties of organic-nanoparticle and fumed silica systems for gelled materials. 1373* (pp. 221-233). Peer Reviewed
3. Arnold, R., Santos, P.H.S., DeRidder, M., Campanella, O.H. & Anderson, W.E. (2010). *Comparison of monomethylhydrazine/hydroxypropylcellulose and hydrocarbon/silica gels.* Peer Reviewed
4. Santos, P.H.S. Arnold, R. Anderson, W.E., Carignano, M.A. & Campanella, O.H. (2010). *Rheology of JP-8/SiO2and RP-1/SiO2gels. 1247*(pp. 288-300) Peer Reviewed
5. Santos, P.H.S., Carignano, M.A. & Campanella, O.H. (2010). *Investigation of Thixotropy in Gelled Jet.* (pp. 661-+). Peer Reviewed
6. Campanella, O.H., Arnold, R., Santos, P.H.S., Kubal, T. & Anderson, W.E. (2009). *Investigation of Gelled JP-8 and RP-1 Fuels.* Paper presented at Investigation of Gelled JP-8 and RP-1 Fuels. (pp. 63-68). Peer Reviewed
7. Campanella, O.H. (2006). *Modeling food processes and behavior of food materials. Useful tools in food engineering.* Paper presented at XXII Iberoamerican Congress of Chemical Engineering,
8. Choongbae, P., Wereley, S.T., Campanella, O.H.,Nivens, D.E.; Little, K.M. & Sumali, H. (2006). *Measurement of mechanical properties of human red blood cells.* Peer Reviewed
9. Xue, Z. Dravid, V., Corvalan, C., Sojka, P.E. & Campanella, O.H. (2005). *Effect of surfactants on the breakup of a shear-thinning jet,* pp. 437. The 2005 Annual Meeting (Cincinnati, OH)
10. Hailemariam, L.M., Okos, M.R.& Campanella, O.H. (2005). *A mathematical description of bubble growth in bread dough,* pp. 12238). The 2005 Annual Meeting (Cincinnati, OH)
11. Campanella, O.H., Mert, B. & Gonzalez, D.C. (2005). *Novel methods to measure dough rheology.* Paper presented at Third International Wheat Conference, (pp. 235-244). Peer Reviewed

12. Campanella, O.H., Baker, M.A., & Okos, M.R. (1999). *Rheological properties of various wheat flours doughs under small and large deformations and their relationship to final product quality*. Paper presented at AIChE 1999 Annual Meeting, (pp. 211-216). Peer Reviewed
13. Campanella, O.H., Zheng, H. & Morgenstern, M.P. (1999). *Effect of Mixing on the Rheological Properties of Dough.* Paper presented at AIChE 1999 Annual Meeting, (pp. 224-230). Peer Reviewed
14. Campanella, O.H., Sterling, M.& Okos, M.R. (1999). *Determination of transition temperature of semolina using plate-plate viscometer*. Paper presented at AIChE 1999 Annual Meeting, (pp. 398-402). Peer Reviewed
15. Campanella, O.H., Willis, B.F. & Okos, M.R. (1999). *Effects of glass transition on stress development during drying of a shrinking food system.* Paper presented at AIChE 1999 Annual Meeting, (pp. 496-501). Peer Reviewed
16. Campanella, O.H., Faraay, F.M., McCarthy, O.J. & Bennett, R.J. (1997). *Determination of the fundamental rheological properties of processed cheese slices.* Paper presented at 2nd Pacific Rim Conference on Rheology, (pp. 17-19). Peer Reviewed
17. Campanella, O.H., Cleland, A.C. & Trinh, K.T. (1997). *Using the engineering design process to design a food engineering degree major.* In Jowitt, R. (Eds). Paper presented at ICEF 97 Seven International Congress on Engineering and Food, (pp. 5-8). Peer Reviewed
18. Campanella, O.H., Li, P.X., Kirpatrick, K.J.& Hardacre, A. (1997). *A design of a new online slit-die viscometer to use in food extrusion.* Paper presented at ICEF 97 Seven International Congress on Engineering and Food, (pp. 153-156). Peer Reviewed
19. Campanella, O.H., Zheng, H., Morgenstern, M.P. & Larsen, N.G. (1997). *Fundamental rheological properties of dough during mechanical dough development.* Paper presented at 2nd Pacific Rim Conference on Rheology, (pp. 319-320). Peer Reviewed
20. Rebouillat, S.; Campanella, O.H.; Leclerc, D.; SOC, H.C. (1996). The expression under constant rate of strain and the subsequent relaxation .1. Thin layers of biosemisolids. (pp. 112-121). Peer Reviewed
21. Campanella, O.H.; Jebson, S.J.; Chen, H. (1996). *Fouling in a centritherm evaporator with whey protein solutions.* Paper presented at 24th Australasian Chemical Engineering Conference. Peer Reviewed
22. Campanella, O.H.; Chen, H.; Jebson, R.S. (1994). *Factors affecting heat transfer in a centritherm evaporator*. Paper presented at Institution of Professional Engineering, New Zealand (IPENZ) Conference, (pp. 216-219). Peer Reviewed
23. Campanella, O.H.; Bhaskar, G.V.; Munro, P.A. (1992). *Fractal dimension of casein precipitate particles.* Paper presented at Australasian Chemical Engineering Conference, (pp. 263-270). Peer Reviewed
24. Campanella, O.H.; Bhaskar, G.V.; Munro, P.A. (1992). *Effect of agitation rate during batch precipitation on the particle size distribution of acid casein mineral curd. 2*Paper presented at 20th Australasian Chemical Engineering Conference, (pp. 583-90). Peer Reviewed
25. Campanella, O.H.; Rebouillat, S.; Schwartzberg, H.; Leclerc, D. (1990). *An Approach to the Pressing Mechanism Involved During Screw Expression of Food Products (Dewatering).* Paper presented at V World Filtration Congress. Peer Reviewed

26. Baker, M. A., Campanella, O.H. and Okos, M.R. 1999. Rheological properties of various wheat flours doughs under small and large deformations and their relationship to final product quality. Proceedings of the AIChE 1999 Annual Meeting, pp 211-216.
27. Campanella, O.H., Zheng, H. and Morgenstern, M.P. 1999. Effect of Mixing on the Rheological Properties of Dough. Proceedings of the AIChE 1999 Annual Meeting, pp 224-230.
28. Sterling, M., Okos, M.R. and Campanella, O.H. 1999. Determination of transition temperature of semolina using plate-plate viscometer. Proceedings of the AIChE 1999 Annual Meeting, pp 398-402.
29. Willis, B.F., Okos, M.R. and Campanella, O.H. 1999. Effects of glass transition on stress development during drying of a shrinking food system. Proceedings of the AIChE 1999 Annual Meeting, pp 496-501.
30. Campanella, O.H., Faraay, F.M., McCarthy, O.J. and Bennett, R.J. 1997. Determination of the fundamental rheological properties of processed cheese slices. 2nd Pacific Rim Conference on Rheology, Melbourne, July 1997, pp 17-19.
31. Cleland, A.C., Campanella, O.H. and Trinh, K.T. 1997. Using the engineering design process to design a food engineering degree major. ICEF 97 Seven International Congress on Engineering and Food, Edited by R. Jowitt, Section Q, pp 5-8.
32. Li, P.X., Campanella, O.H., Kirpatrick, K.J. and Hardacre, A. 1997. A design of a new online slit-die viscometer to use in food extrusion. ICEF 97 Seven International Congress on Engineering and Food, Edited by R. Jowitt, Section A, pp 153-156.
33. Zheng, H., Morgenstern, M.P., Campanella, O.H. and Larsen, N.G. 1997. Fundamental rheological properties of dough during mechanical dough development. 2nd Pacific Rim Conference on Rheology, Melbourne, July 1997, pp 319-320.
34. Chen, H., Jebson, S.J. and Campanella, O.H. 1996. Fouling in a centritherm evaporator with whey protein solutions. Proceedings of 24th Australasian Chemical Engineering Conference, Vol. (4), pp 87-92, Australia.
35. Chen, H., Jebson, R.S. and Campanella, O.H. 1994. Factors affecting heat transfer in a centritherm evaporator. Proceeding of the Institution of Professional Engineering, New Zealand (IPENZ) Conference, pp 216-219, New Zealand.
36. Bhaskar, G.V., Campanella, O.H. and Munro. P.A. 1992. Fractal dimension of casein precipitate particles. Proceedings of 20th Australasian Chemical Engineering Conference, Vol. (1), pp 263-270, Australia.
37. Bhaskar, G.V., Campanella O.H. and Munro, P.A. 1992. Effect of agitation rate during batch precipitation on the particle size distribution of acid casein mineral curd. Proceedings of 20th Australasian Chemical Engineering Conference, Vol. (2), pp 583-90, Australia.
38. Rebouillat, S., Campanella, O.H., Schwartzberg, H. and Leclerc, D. An Approach to the Pressing Mechanism Involved During Screw Expression of Food Products (Dewatering). V World Filtration Congress, Nice, France, June 5-8, 1990.
39. Peleg, M., Popplewell, M.L., Campanella, O.H. and Normand, M.D. 1989. Uni and bimodal size distributions of food powders. In "Engineering and Food, Vol. (1). Physical Properties and Process Control". Spiess and Schubert Eds. Elsevier.

Inventions and Patents

1. Campanella. O.H, Hamaker, B.R., Keshavarzian, A., Reuhs, B.L., Rose, D.J., and Rumpagaporn, P. (2015). Increasing short chain fatty acid concentration in colon of mammal, comprises orally administering to mammal composition comprising treated bran product, and after administering, fermenting treated bran product in colon of mammal. US Patent US2015010672-A1.
2. Boeh, A., Hall B., Mullen, G.J., Conway, R. and Campanella, O.H. (2010). Biodegradable target disc and methods of making the same. US Patent # 2010/0207331 A1.
3. Hamaker, B.R. Mejia, C.D., Mauer, L.J. and Campanella, O.H. (2009). Leavened products made from non-wheat cereal proteins. US Patent US2009/0304861 A1.

Mentions in the media

1. Device intended to feed mars-bound astronauts to debut in Africa. Picture "(From left) Carlos Corvalan, Osvaldo Campanella, Martin Okos and Amudhan Ponrajan, have developed a lightweight food extruder for NASA that could have immediate benefits in "April 20, 2017 | Food & Drink International (United Kingdom).
2. SBE Update: The Other Bio: Chemicals and Materials. Just in case you haven't noticed, a new wave of biotechnology is underway. Over the last three decades, we have seen biological technologies". Rheological Characterization of Bio-Based Materials. “Experimental and analytical tools combined with computational studies can be used to design new bio-based materials tailored for specific applications. April 30, 2012 Chemical Engineering Progress (United States)
3. Cooking Up New Gelled Rocket Fuels. 1/26/2009. “Engineers and food scientists are teaming up to develop a new type of gelled fuel the consistency of orange marmalade designed to improve the safety, performance and range of rockets for space and military applications”. Science Daily https://www.sciencedaily.com/releases/2009/01/090121122938.htm
4. Pesticide additives cause drifting droplets but can be controlled. "Chemical additives that help agricultural pesticides adhere to their targets during spraying can lead to formation of smaller "satellite" droplets that cause those pesticides to….”. March 20, 2012 | Farm Industry News (United States).