

Curriculum Vitae

****Name:**** Mohsen Zandi, Ph.D.

****Position:**** Associate Professor, Department of Food Science & Technology, University of Zanjan, Iran

****Email:**** zandi@znu.ac.ir | ****Phone:**** +98-917-6095155

****Website:**** <http://www.znu.ac.ir/members/zandim/en>

****Profiles:**** [Google Scholar](#) | [Scopus](#) | [Web of Science](#) | [ResearchGate](#) | [ORCID](#) | [SciProfiles](#) | [LinkedIn](#)

Professional Summary

Accomplished Associate Professor in Food Engineering with over 150 peer-reviewed publications and an H-index of 23 (Google Scholar). Renowned for research in bioactive packaging, encapsulation technologies, and modelling & simulation. Holder of multiple patents and national research grants, with significant contributions to sustainable food processing innovations.

Key Achievements

- Authored over 150 peer-reviewed journal articles with significant international impact.
- H-index of 23 with extensive citations in food engineering and packaging research.
- Secured multiple national research grants exceeding \$90,000 in total funding.
- Holder of 9 patents in food processing and packaging technology.
- Supervised more than 25 MSc and PhD theses in advanced food engineering topics.
- Recognized as a Distinguished Researcher at the University of Zanjan (2025) and Zanjan Province (2022).
- Published six academic books on food process engineering, packaging, and edible films.

Education

Degree	Institution	Year
Ph.D. in Food Engineering	Ferdowsi University of Mashhad, Iran	2011–2014
M.Sc. in Food Engineering	Shiraz University, Iran	2008–2011
B.Sc. in Food Science & Technology	Urmia University, Iran	2004–2008

Academic Positions

Position	Institution	Year
Associate Professor	University of Zanjan	2022–Present
Assistant Professor	University of Zanjan	2017–2022
Assistant Professor	Urmia University	2014–2017
Adjunct Professor	Gorgan University of Agricultural Sciences	2011–2012

Publications

1. Navaei, F., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Fe₃O₄ and TiO₂ nanoparticle-enhanced balangu seed mucilage-gelatin films as advanced functional materials. *Scientific Reports*, 28 November 2025.
2. **Zandi, M.**, & Golshan Tafti, A. (2025). Enhancing the quality and shelf life of Mazafati dates using alginate-coconut oil composite coatings with natural antimicrobials. *LWT*, 233, 118538.
3. **Zandi, M.**, Ganjloo, A., Shahbazi, M., & Shahavi, M.H. (2025). Development of Balangu Seed Mucilage-Gelatin Films Reinforced with TiO₂ Nanoparticles and Echinops Setifer Extract. *Industrial Crops and Products*, 235, 121692.
4. Khalafi, N., & **Zandi, M.** (2025). Utilizing natural pigments in electrospun nanofibers: Sustainable and smart food packaging solutions driven by nanotechnology. *Applied Food Research*, 5 (2), 101220.
5. Ayazi, D., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Electrospun zein nanofiber-reinforced multilayer biodegradable films with cumin essential oil. *Journal of Food Measurement and Characterization*, 1-15.
6. Valizadeh, R., **Zandi, M.**, Dardmeh, N., & Ganjloo, A. (2025). Sage seed gum-gelatin composite films and electrospun zein fibers: A sustainable bilayer system enriched with pomegranate flower extract. *International Journal of Biological Macromolecules*, 310 (1), 143512.
7. Pilehforooshha, M., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Advanced biopolymer films for sustainable applications: Integrating Fe₃O₄ and ZnO nanoparticles into pea protein isolate-alginate matrices. *International Journal of Biological Macromolecules*, 310 (1), 143306.
8. Pilehforooshha, M., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Pea protein isolate-alginates bio-composite Film: Enhancing performance with pomegranate flower extract. *Polymer Testing*, 147, 108816.
9. Navaei, F., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Fabrication of magnetic nanoparticle-enhanced Bi-layer films: Fe₃O₄-loaded electrospun PVA/Gelatin nanofibers on a balangu seed mucilage-gelatin base. *Industrial Crops and Products*, 229, 121037.
10. Pilehforooshha, M., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Multifunctional bilayer films based on pea protein isolate and alginate with Fe₃O₄ nanoparticles. *International Journal of Biological Macromolecules*, 309 (2), 142997.

11. Safari, S., **Zandi, M.**, & Ganjloo, A. (2025). Investigating the effect of freezing method, voltage gradient, and probe type on quality characteristics of Turkey meat during the ohmic thawing process. *Heliyon*, 11(2), 1–13.
12. Ayazi, D., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2025). Bilayer bioactive film based on sage seed gum-pea protein isolate/electrospun zein loaded with cumin essential oil: characterization, biodegradability and release study. *Journal of Food Measurement and Characterization*, 19, 1482–1496.
13. Ayazi, D., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2024). Bioactive electrospun zein fibers integrated with ZnO nanoparticles: In vitro investigations Bioactive electrospun zein fibers integrated with ZnO nanoparticles: In vitro investigation. *Food Bioscience*, 62, 105343.
14. Shahedi, Y., **Zandi, M.**, & Bimakr, M. (2024). A computer vision system and machine learning algorithms for prediction of physicochemical changes and classification of coated sweet cherry. *Heliyon*, 10 (24), 1–15.
15. Valizadeh, R., **Zandi, M.**, Dardmeh, N., & Ganjloo, A. (2024). Bioactive multilayer film based on the sage seed gum-gelatin, TiO₂ and electrospun zein fibers encapsulating pomegranate peel extract. *International Journal of Biological Macromolecules*, 283 (2), 1–14.
16. Valizadeh, R., **Zandi, M.**, Dardmeh, N., & Ganjloo, A. (2024). Eco-friendly nanocomposite biofilm based on sage seed gum/gelatin/TiO₂: Fabrication and characterization. *International Journal of Biological Macromolecules*, 283 (1), 1–14.
17. Shahedi, Y., **Zandi, M.**, & Bimakr, M. (2024). A computer vision system and machine learning algorithms for prediction of physicochemical changes and classification of coated sweet cherry. *Heliyon*, 10 (20), 1–25.
18. Hassanloofard, Z., **Zandi, M.**, Gharekhani, M., Ganjloo, A., & Roufegarinejad, L. (2024). Novel green method for enhancing the extraction efficiency of bioactive compounds: Falcaria Vulgaris extract. *Journal of Food Biochemistry*, 1, 1–13.
19. Valizadeh, R., **Zandi, M.**, Dardmeh, N., & Ganjloo, A. (2024). Electrospun zein fibers loaded with pomegranate flower extract: Characterization and release behavior. *Food Bioscience*, 62, 1–10.
20. Davoudi, S., **Zandi, M.**, & Ganjloo, A. (2024). Fabrication and characterization of novel biodegradable films based on tomato seed mucilage and gelatin plasticized with polyol mixtures. *Food and Bioproducts Processing*, 148, 187–197.
21. Ayazi, D., **Zandi, M.**, Ganjloo, A., & Dardmeh, N. (2024). Biodegradable active composite film based on pea protein isolate, sage seed gum, and cumin essential oil: Fabrication and characterization. *Reactive and Functional Polymers*, 204, 1–13.
22. Davoudi, S., **Zandi, M.**, & Ganjloo, A. (2024). Evaluation of nanocomposite films based on tomato seed mucilage, gelatin and TiO₂ nanoparticles. *Progress in Organic Coatings*, 192, 1–11.
23. Safari, S., **Zandi, M.**, & Ganjloo, A. (2024). Novel infrared-Ohmic thawing method: Effect on thawing rate and frozen turkey meat quality. *International Journal of Food Science & Technology*, 59, 3791–3803.
24. Izadi, H., **Zandi, M.**, Rafiee, G., & Bimakr, M. (2024). Tomato seed mucilage/whey protein isolate as a novel edible coating enriched with shallot essential oil: effect on

- quality changes of the trout fish fillet during cold storage. *Biocatalysis and Agricultural Biotechnology*, 58, 1–14.
25. Nikoomanesh, N., **Zandi, M.**, & Ganjloo, A. (2024). Development of ohmic-assisted green extraction technique with ultrasonic and microwave pretreatments: Burdock (*Arctium lappa* L.) root extract. *Chemical Engineering and Processing - Process Intensification*, 199, 1–12.
 26. Izadi, H., **Zandi, M.**, Rafiee, G., & Bimakr, M. (2024). Effect of tomato seed mucilage coating enriched with shallot essential oil on frozen rainbow trout (*Oncorhynchus mykiss*) fillet quality. *Biocatalysis and Agricultural Biotechnology*, 57, 1–11.
 27. Nikoomanesh, N., **Zandi, M.**, & Ganjloo, A. (2024). Development of eco-friendly cellulose acetate films incorporated with Burdock (*Arctium lappa* L.) root extract. *Progress in Organic Coatings*, 186, 1–13.
 28. Jafari, R., **Zandi, M.**, & Ganjloo, A. (2023). Modeling of microwave- and ultrasound-Ohmic-assisted hydro-distillation extraction of the Pimpinella anisum essential oil. *Journal of Food Process Engineering*, 46(11), 1–10.
 29. Hassanloofard, Z., Gharekhani, M., **Zandi, M.**, Roufegarinejad, L., & Ganjloo, A. (2023). Fabrication and characterization of cellulose acetate film containing falcaria vulgaris extract. *Cellulose*, 30(11), 6833–6853.
 30. Jafari, R., **Zandi, M.**, & Ganjloo, A. (2023). Characterization of Alginate-Gelatin Edible Film Containing Anise (Pimpinella anisum L.) Essential Oil. *Journal of Polymers and the Environment*, 31(4), 1568-1583.
 31. **Zandi, M.**, Ganjloo, A., Bimakr, M., & Nasiri, M. (2023). Ohmic heating extraction of radish (*Raphanus sativus* L.) leaf extract: Numerical optimization and kinetic modelling. *Journal of food science and technology (Iran)*, 20 (135) , 141-157.
 32. Mohamadifard, S. Z., Zariinghalami, S., **Zandi, M.**, & Pakpour, M. (2023). Influence of the mucilage and chia seed (*Salvia hispanica* L.) oil addition on the physicochemical and sensory properties of yoghurt during storage time. *Journal of food science and technology (Iran)*, 19(132), 237-249.
 33. Mohamadifard, S. Z., Zariinghalami, S., **Zandi, M.**, & Pakpour, M. (2023). Fortification of yogurt with encapsulated chia seed oil and mucilage: optimization and evaluation of physicochemical and rheological properties. *Journal of food science and technology (Iran)*, 20(134), 171-191.
 34. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2022). Encapsulation of musk willow (*Salix aegyptiaca* L.) essential oil with sodium alginate and whey protein: Characterization, controlled release and mathematical modeling. *Journal of food science and technology (Iran)*, 19(125), 121-133.
 35. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2022). Kinetic modeling and optimization of musk willow (*Salix aegyptiaca* L.) essential oil extraction process of using ultrasound assisted hydrodistillation. *Journal of food science and technology (Iran)*, 18(121), 93-106.
 36. Karami, P., **Zandi, M.**, & Ganjloo, A. (2022). Evaluation of key parameters during ohmic-assisted hydro-distillation of essential oil from aerial part of yarrow (*Achillea millefolium* L.). *Journal of Applied Research on Medicinal and Aromatic Plants*, 31, 100425.

37. Karami, P., **Zandi, M.**, & Ganjloo, A. (2022). Investigation and modeling of the release kinetics of yarrow (*Achillea millefolium* L.) essential oil from gelatin-sodium alginate active film into food simulants. *Journal of food science and technology (Iran)*, 19(122), 181-196.
38. Karami, P., **Zandi, M.**, & Ganjloo, A. (2022). Evaluation of physicochemical, mechanical, and antimicrobial properties of gelatin-sodium alginate-yarrow (*Achillea millefolium* L.) essential oil film. *Journal of Food Processing and Preservation*, 46(7), e16632.
39. Karami, P., **Zandi, M.**, & Ganjloo, A. (2022). Mathematical, fuzzy logic and artificial neural network modeling of extraction kinetics of essential oil from aerial parts of yarrow (*Achillea millefolium* L.) using ohmic-assisted hydrodistillation. *Journal of food science and technology (Iran)*, 19(123), 341-354.
40. Jafari, R., **Zandi, M.**, & Ganjloo, A. (2022). Effect of ultrasound and microwave pretreatments on extraction of anise (*Pimpinella anisum* L.) seed essential oil by ohmic-assisted hydrodistillation. *Journal of Applied Research on Medicinal and Aromatic Plants*, 31, 100418.
41. Jafari, R., **Zandi, M.**, & Ganjloo, A. (2022). Effect of gelatin–alginate coating containing anise (*Pimpinella anisum* L.) essential oil on physicochemical and visual properties of zucchini (*Cucurbita pepo* L.) fruit during storage. *Journal of Food Processing and Preservation*, 46(8), e16756.
42. Hassanloofard, Z., Gharekhani, M., **Zandi, M.**, Roufegarinejad, L., & Ganjloo, A. (2022). Kinetic modeling and artificial neural network approach for the modelling of Ohmic-assisted extraction of *Falcaria vulgaris* extract. *Journal of food science and technology (Iran)*, 19(131), 173-186.
43. Ganjloo, A., **Zandi, M.**, & Bimakr, M. (2022). Evaluation of Color and Texture Features of Low-calorie Doughnut Containing Maltodextrin using Machine Vision System. *Journal of food science and technology (Iran)*, 19(125), 11-21.
44. **Zandi, M.**, Ganjlo, A., & Bimakr, M. (2021). Quality grading of coated grape with Farsi gum and hemp seed oil emulsion based on surface defects via RGB and binary images. *Iranian Food Science and Technology Research Journal*, 18(1), 51-64.
45. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2021). Ohmic assisted hydrodistillation extraction of musk willow (*Salix aegyptiaca* L.) essential oil and artificial neural network modeling of extraction kinetic. *Journal of food science and technology (Iran)*, 18(120), 173-186.
46. **Zandi, M.**, Ganjloo, A., Bimakr, M., Nikoomanesh, N., & Moradi, N. (2021). Application of neural-fuzzy inference system (ANFIS) and fuzzy logic for prediction of physicochemical changes and classification of coated sweet lemon during storage. *Iranian Food Science and Technology Research Journal*, 17(2).
47. **Zandi, M.**, Ganjloo, A., Bimakr, M., Moradi, N., & Nikoomanesh, N. (2021). Effect of active coating containing radish leaf extract with or without vacuum packaging on the postharvest changes of sweet lemon during cold storage. *Journal of Food Processing and Preservation*, 45(3), e15252.
48. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2021). Applying Adaptive Neuro-Fuzzy Inference System and Artificial Neural Network to the Prediction of Quality changes of Hawthorn Fruit (*Crataegus pinnatifida*) during Various Storage Conditions. *Journal of Agricultural Machinery*, 11(2), 343-357.

49. Ganjloo, A., **Zandi, M.**, Bimakr, M., & Monajem, S. (2021). Visual grading of cherry tomatoes coated with aloe vera gel containing hemp seed oil using principal component analysis, artificial neural network and adaptive neuro-fuzzy inference system methods. *Journal of food science and technology (Iran)*, 18(116), 143-159.
50. Ganjloo, A., **Zandi, M.**, Bimakr, M., & Ghareh Baghi, A. (2021). Evaluation the effect of Farsi gum containing hemp seed oil coating on mass and volume changes of grape using machine vision and machine learning systems. *Journal of food science and technology (Iran)*, 18(113), 157-172.
51. **Zandi, M.** (2020). Vitamin protection by Alginate-Whey Protein Micro Gel (AL-WPC MG) as a novel microcapsule against gastrointestinal condition; case study: B-complex vitamins. *Iranian Food Science and Technology Research Journal*, 16(3), 37-50.
52. **Zandi, M.**, Almasi, H., & Dardmeh, N. (2020). Evaluation of nanocomposite packaging containing Tio2 and ZnO on shelf life and quality changes of apple and grape. *Innovative Food Technologies*, 8(1), 63-82.
53. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2020). Development of quality grading system based on image processing for hawthorn classification during various storage condition (cold, refrigerator and room). *Journal of Food Research*, 30(1), 195-209.
54. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2020). Assessment of Quality Changes of Medlar (Mespilus Germanica) During Ripening at Cold Storage. *Food Engineering Research*, 19(1), 1-16.
55. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2020). Computer Vision System Applied to Classification of Medlar (Mespilus germanica) during ripening stage at cold storage. *Innovative Food Technologies*, 7(3), 403-415.
56. **Zandi, M.**, Ganjloo, A., & Bimakr, M. (2020). Modelling medlar (Mespilus germanica) quality changes during cold storage using kinetics models and artificial neural network. *Journal of food science and technology (Iran)*, 16(96), 103-119.
57. Ganjloo, A., **Zandi, M.**, Bimakr, M., & Monajem, S. (2020). Indirect estimation of mass and shape ratio changes of Aloe vera gel coated cherry tomatoes using image processing technique. *Innovative Food Technologies*, 7(4), 551-565.
58. Ganjloo, A., **Zandi, M.**, Bimakr, M., & Monajem, S. (2020). Ripening stages control of cherry tomato coated with aloe Vera gel using artificial vision system. *Journal of food science and technology (Iran)*, 17(105), 135-149.
59. Ganjloo, A., **Zandi, M.**, & Bimakr, M. (2020). Evaluation of physicochemical characterization of hawthorn (Crataegus pinnatifida) during various storage conditions and modeling of changes using kinetic models. *Iranian Food Science and Technology Research Journal*, 16(5), 507-523.
60. **Zandi, M.** (2019). The Mechanical, Rheological and Release Properties of Riboflavin and Biotin Encapsulated Alginate-whey Protein Micro-Gels. *Research and Innovation in Food Science and Technology*, 8(3), 285-296.
61. **Zandi, M.** (2017). Simulation of Ascorbic Acid Release from Alginate-Whey Protein Concentrates Microspheres at the Simulated Gastrointestinal Condition Using Netlogo Platform. *Journal of Food Process Engineering*, 40(1), e12327.
62. **Zandi, M.** (2017). Evaluation of the Kinetics of Ascorbic Acid (AA) Release from Alginate-Whey Protein Concentrates (AL-WPC) Microspheres at the Simulated Gastro-Intestinal Condition. *Journal of Food Process Engineering*, 40(1), e12334.

63. **Zandi, M.**, Dardmeh, N., Pirs, S., & Almasi, H. (2017). Identification of cardamom encapsulated alginate–whey protein concentrates microcapsule release kinetics and mechanism during storage, stew process and oral consumption. *Journal of Food Process Engineering*, 40(1), e12314.
64. Sukhtezari, S., Almasi, H., Pirs, S., **Zandi, M.**, & Pirouzifard, M. (2017). Investigation of the physical and antioxidant properties of bacterial cellulose active film containing *Scrophularia striata* extract. *Journal of Food Research (Agricultural Science)*, 27(2), 51-62.
65. Sukhtezari, S., Almasi, H., Pirs, S., **Zandi, M.**, & Pirouzifard, M. (2017). Development of bacterial cellulose based slow-release active films by incorporation of *Scrophularia striata* Boiss. extract. *Carbohydrate Polymers*, 156, 340-350.
66. Dardmeh, N., Khosrowshahi, A., Almasi, H., & **Zandi, M.** (2017). Study on effect of the polyethylene terephthalate/nanoclay nanocomposite film on the migration of terephthalic acid into the yoghurt drinks simulant. *Journal of Food Process Engineering*, 40(1), e12324.
67. Dardmeh, N., Khosrowshahi, A., Almasi, H., & **Zandi, M.** (2017). Study on the effect of the concentration of organically modified nanoclay on the microstructure and physical (mechanically, WVP and color) properties of Poly Ethylene Terephthalate (PET)-based nanocomposites. *Iranian Food Science and Technology Research Journal*, 13(1), 117-128.
68. Pirs, S., **Zandi, M.**, & Almasi, H. (2016). Determination of Quality and Spoilage of Milk by Synthesized Polypyrrole–A g Nanocomposite Fiber at Room Temperature. *Journal of Food Process Engineering*, 39(3), 266-272.
69. Pirs, S., Alizadeh, N., **Zandi, M.**, & Almasi, H. (2016). Determination of Dimethylsulfoxide in Water by Capillary Gas Chromatography-Gas Sensor Based on Nanostructure Conducting Polypyrrole. *Nanoscience & Nanotechnology-Asia*, 6(2), 105-112.
70. Hashemi, S., Niakousari, M., **Zandi, M.**, & Saharkhiz, M. (2016). Application of ultrasonic Ohmic hydrodistillator system in production of essential oil from Zenyan. *International Food Research Journal*, 23(1), 135-140.
71. Almasi, H., **Zandi, M.**, Beigzadeh, S., Haghju, S., & Mehrnow, N. (2016). Chitosan films incorporated with nettle (*Urtica Dioica* L.) extract-loaded nanoliposomes: II. Antioxidant activity and release properties. *Journal of microencapsulation*, 33(5), 449-459.
72. **Zandi, M.**, Dardmeh, N., Pirs, S., & Almasi, H. (2015). Migration of ohmic heating electrode components into a food. *Iranian Food Science and Technology Research Journal*, 11(3), 274-280.
73. **Zandi, M.**, Mohebbi, M., Varidi, M., & Ramezani, N. (2015). Estimation and evaluation of diffusion coefficient of diacetyl encapsulated alginate-whey protein microspheres at simulated mouth conditions. *Iranian Food Science and Technology Research Journal*, 11(4), 435-444.
74. **Zandi, M.**, & Mohebbi, M. (2015). An agent-based simulation of a release process for encapsulated flavour using the NetLogo platform. *Flavour and Fragrance Journal*, 30(3), 224-229.

75. **Zandi, M.**, Niakousari, M., & Dardmeh, N. (2015). A study of drying characteristics and quality parameters of dried Iranian peas, in different temperatures in Spouted bed dryer and its comparison with the product dried by thin layer dryer and sun dryer. *Research and Innovation in Food Science and Technology*, 4(1), 87-96.
76. Pirsa, S., **Zandi, M.**, Almasi, H., & Hasanlu, S. (2015). Selective hydrogen peroxide gas sensor based on nanosized polypyrrole modified by CuO nanoparticles. *Sensor Letters*, 13(7), 578-583.
77. Almasi, H., Ghanbarzadeh, B., Dehghannia, J., Pirsa, S., & **Zandi, M.** (2015). Heterogeneous modification of softwoods cellulose nanofibers with oleic acid: Effect of reaction time and oleic acid concentration. *Fibers and Polymers*, 16, 1715-1722.
78. **Zandi, M.**, Mohebbi, M., Varidi, M., & Ramezani, N. (2014). Evaluation of diacetyl encapsulated alginate–whey protein microspheres release kinetics and mechanism at simulated mouth conditions. *Food research international*, 56, 211-217.
79. **Zandi, M.**, & Mohebbi, M. (2014). Investigation of encapsulated diacetyl colloidosome release profile as a function of sintering process and release media properties. *Flavour and Fragrance Journal*, 29(6), 364-370.
80. Pirsa, S., Alizadeh, N., **Zandi, M.**, Almasi, H., & Heidari, H. (2014). Chemically synthesize nanostructure polypyrrole derivatives and fabrication of gas sensor based on synthesized polymers. *Sensor Letters*, 12(12), 1709-1716.
81. **Zandi, M.**, Niakousari, M., Eskandari, M. H., & Sarshar, M. (2013). Design, construction and evaluation performance of spouted bed dryer. *Research and Innovation in Food Science and Technology*, 2(3), 243-252.

Conference papers

1. Safari, Sh., **Zandi, M.**, Ganjloo. A. (2023) “Novel methods of food defrosting: Ohmic assisted defrosting”. **29st National Iranian Food Science and Technology Congress, Iranian Research Organization for Science and Technology, Tehran, Iran. (As a Poster).**
2. Jafari, R., **Zandi, M.**, Ganjloo. A. (2022) “Methods of extracting *Pimpinella anisum* essential oil and evaluation of compounds, antioxidant activity and antimicrobial and medicinal effects”. **28st National Iranian Food Science and Technology Congress, Zar group, Tehran, Iran. (As a Poster).**
3. Karami, P., **Zandi, M.**, Ganjloo. A. (2021) “Yarrow (*Achillea millefolium* L.) Essential oil extraction methods and Evaluation of composition, medicine effect, antioxidant and antimicrobial activity from aerial part of”. **3st International Congress and the 4nd National Conference on Biotechnology of Medicinal Plants and Mushrooms, University of Zanjan, Iran. (As a Poster).**
4. Baiat, F., Ganjloo. A., Bimakr, M., **Zandi, M.** (2021) “Application of medicinal plants for production of cold beverages”. **3st International Congress and the 4nd National Conference on Biotechnology of Medicinal Plants and Mushrooms, University of Zanjan, Iran. (As a Poster).**

5. Mirmohamad rezaee, H., **Zandi, M.**, Bimakr, M. (2019) "Investigating of the effect of the transgenic products and establishing biosafety on food security and production stability". **National Conference on Food Security and Production Boom, Ferdowsi University of Mashhad, Iran. (As a Poster).**
6. **Zandi, M. (2018)** "Production of Riboflavin Encapsulated Alginate-whey microcapsules powder and evaluation of the Impact of drying on the powder properties and active ingredient". **1st National Conference on Agricultural and Environmental Sciences of Iran, Agricultural Sciences and Natural Resources University of Khuzestan, Iran. (As an oral presentation).**
7. **Zandi, M. (2018)** "Evaluation of physical and visual properties of pomegranate foam in the presence of different concentrations of Arabic gum and albumin, product and performance evaluation of ohmic heating system". **1st National Conference on Agricultural and Environmental Sciences of Iran, Agricultural Sciences and Natural Resources University of Khuzestan, Iran. (As an oral presentation).**
8. **Zandi, M.**, Pirsa, S., Dardmeh, N. (2015) "Design, product and performance evaluation of ohmic heating system". **1st National e-Conference on Healthy Food, Zabol University, Iran. (As a Poster).**
9. Pirsa, S., **Zandi, M. (2015)** "Determination of toxic 1, 1-dimethylhydrazine by gas sensor based on polypyrrole-Ag nanocomposite". **13th Iranian international congress of toxicology Iran 2015. (As an oral presentation).**
10. Dardmeh, N., **Zandi, M.**, Zinali, F., (2015) "Health-promoting compounds of functional meat products". **1st National e-Conference on Healthy Food, Zabol University, Iran. (As an oral presentation).**
11. Pirsa, S., **Zandi, M.**, Almasi, H., (2015) "Fabrication of portable PH sensor based on nanosized conducting polymer for determination of milk quality". **1st National e-Conference on Healthy Food, Zabol University, Iran. (As a Poster).**
12. **Zandi, M.** and Mirarab, S. (2013) "Introduction to the Complex Systems". **1st International e-Conference on novel Food Processing, Iran, IECFP2013 (As an oral presentation).**
13. **Zandi, M.** and Mobbei, M. (2013)." Ice cream microstructure". **1st International e-Conference on novel Food Processing, Iran, IECFP2013. (As a Poster)**
14. **Zandi, M.**, Niakousari, M., Hashemi, M.B., Had, A. (2011) "Design and performance evaluation of an ohmic ultrasonic extractor unit for herbal essential oils extraction". **International Food Congress-Novel Approaches in Food Industry, Turkey, nafi 2011. (As a Poster)**
15. Khajeie, F., **Zandi, M.**, Niakousari, M., Saidi, M. (2011) "Thin layer drying of broccoli florets pretreated in hot water, steam and osmotic solution (Experimental and theoretical

- studies)". **International Food Congress-Novel Approaches in Food Industry**, Turkey, nafi 2011. (As a Poster)
16. Saidi, M., **Zandi, M.**, Khajeie, F., Niakousari, M., Mohammadi, M.A. (2011) "Antiradical activity and nutritional value of the *Ziziphus nummularia* L. berries used for the preparation of Ramlik concentrate in Iran". **International Food Congress-Novel Approaches in Food Industry**, Turkey, nafi 2011. (As a Poster)
 17. **Zandi, M.**, Niakousari, M. (2011) "Study of antioxidant and antimicrobial activity of the natural essential oil". **20st National Iranian Food Science and Technology Congress**, Sharif University, Iran. (As an oral presentation).
 18. **Zandi, M.**, Mosavi nasab, M., Asghari, F., Mojtahed zadeh, R. (2011) "Investigation of Single Cell Oil (SCO) from date extract via *Mortierella vinacea*". **20st National Iranian Food Science and Technology Congress**, Sharif University, Iran. (As a Poster).
 19. **Zandi, M.**, Niakousari, M. (2010) "Study of the ultrasound systems in food processing". **19st National Iranian Food Science and Technology Congress**, Tehran University, Iran. (As an oral presentation).
 20. **Zandi, M.**, Niakousari, M. (2010) "Application of the electrical nose and electrical tongue systems in food evaluation". **19st National Iranian Food Science and Technology Congress**, Tehran University, Iran. (As an oral presentation).
 21. **Zandi, M.**, Niakousari, M. (2010) "Melamine: Description, Synthesis, Toxicity, Health effects and Analysis". **5th International Conference on Innovations in Food and Bioprocess Technology**, Thailand 2010. (as a Keynote Speaking)
 22. **Zandi, M.**, Niakousari, M. (2010) "Migration of ohmic heating electrode components into a food". **5th International Conference on Innovations in Food and Bioprocess Technology**, Thailand 2010. (As an oral presentation)
 23. **Zandi, M.**, Ebrahimian, S. (2007) "A New Approach in Assessment of Human Based Quality: Application of Electronic Nose in Food Quality". **17th National Iranian Food Science and Technology Congress**, Tehran University, Iran. (As an oral presentation).

Books

1. **Glossary of Cold Storage and Food Warehousing**, University of Zanjan Press (2025)
2. **Fundamentals of Food Process Engineering**, University of Zanjan Press (2024)
3. **Unit Operation and Processing in Food Engineering**, University of Zanjan Press (2024)
4. **Introduction to Edible Films and Coating**, University of Zanjan Press (2023)
5. **Introduction to Food Engineering**, University of Zanjan Press (2019)

6. **Application of Electronic Nose and Tongue in Food Industry**, Tehran: Aeeij Press (2012)
7. **Principles of Waste Management in Food Industry**, Tehran: Aeeij Press (2012).

Awards & Honors

- **Distinguished Researcher**, University of Zanjan (2025)
- **Distinguished Researcher**, Zanjan Province (2022)
- **Iran National Elite Foundation Award** – Dr. Kazemi Ashtiani Research Grant (2016)
- **Member**, Iran National Elite Foundation (2007–Present)
- **Top Student Awards** during Ph.D., M.Sc., and B.Sc. programs.

Patents

- Spouted bed dryer for heat-sensitive food and drug drying (Patent #71046, 2011)
- Process of pomegranate powder production by spray & freeze drying (Patent #71047, 2011)
- Ohmic system for processing, extraction & distillation (Patent #64725, 2010)
- Continuous ohmic pasteurization system (Patent #65554, 2010)
- Ohmic ultrasonic extractor (Patent #66044, 2010)
- Process of Fig powder production by spray & freeze drying (Patent #67631, 2010)
- Single Cell Oil Production (Patent #67111, 2010)
- Process of aloe Vera powder production by spray, fluidized bed & freeze drying (Patents #65548, #66493, and #66045, 2010)

Research Grants & Projects

- Production of functional food with encapsulated probiotics – Iran Ministry of Industries & Mines – \$15,000 (2016)
- Production of a novel functional food by addition of encapsulated probiotic bacteria to the formulation of a local candy (Noghle-e-Urmia)– Iran Ministry of Industries & Mines – \$15,000 (2016)
- Microwave irradiation for essential oil shelf-life improvement – Iran Ministry of Industries & Mines – \$15,000 (2016)
- Design & commercialization of antimicrobial nanocomposite packaging – Iran Ministry of Industries & Mines – \$15,000 (2015)
- Design & evaluation of ohmic extractor for essential oil extraction – Iran Ministry of Industries & Mines – \$15,000 (2015)
- Production of Colloidosomes as Ascorbic Acid Carrier and Modelling of its Controlled Release Using Complex Systems– Urmia University– (2014)
- Design, manufacture, and performance evaluation of an ohmic ultrasonic extractor– Shiraz University– (2010)

- Design, manufacture, and performance evaluation of a Spouted bed dryer– Iran Ministry of Industries & Mines –(2010)

Professional Activities

- **Reviewer** for multiple international journals (e.g., International Journal of Biological Macromolecules, Materials, LWT, ...)
- **Committee Member** for national and international conferences since 2007.
- **Advisor and scientific association supervisor** at the University of Zanjan (2019–2025)

Teaching Experience

Course	Level	University	Years
Food Biophysics	M.Sc.	University of Zanjan	2023–Present
Advanced Food Packaging	M.Sc.	University of Zanjan	2023–Present
Advanced Unit Operations in Food Science	M.Sc.	University of Zanjan	2023–Present
Food Packaging	B.Sc.	University of Zanjan	2023–Present
Transport Phenomena	M.Sc.	University of Zanjan	2019–Present
Sensors in food engineering	M.Sc.	University of Zanjan	2019–Present
Unit Operations in Food Science	B.Sc.	University of Zanjan	2017–Present
Food Engineering	B.Sc.	University of Zanjan, Urmia University	2014–Present
Software application in Food engineering	M.Sc.	University of Zanjan	2017–Present
Advanced statistical techniques in food science	M.Sc.	University of Zanjan	2017–2020
Experimental Design	M.Sc.	University of Zanjan	2017–2021
Dairy Technology	B.Sc.	University of Zanjan	2017–2018
Statistics & Probability	B.Sc.	University of Zanjan, Urmia University	2014–2025
Sugar Technology	B.Sc.	Urmia University	2013–2015
Principles of Marketing and Exports of Food Products	B.Sc.	Urmia University	2014–2015
Food Safety and Law	B.Sc.	Urmia University	2014–2015
Cereals Processing Engineering	B.Sc.	Gorgan University of Agricultural Sciences Resources	2011–2012
Edible Oil Processing Engineering	B.Sc.	Gorgan University of Agricultural Sciences Resources	2011–2012
Dairy Processing Engineering	B.Sc.	Gorgan University of Agricultural Sciences Resources	2011–2012

Supervised Theses

Student	Year	Title	Level
Zeynab Hassanloofard	2023	Optimization of <i>Falcaria vulgaris</i> extraction & controlled release modeling of controlled release from cellulose acetate film in food simulant	Ph.D.
Sara Asheri	2026	Development of Active and Biodegradable Nanocomposite Films Based on Polyvinyl Alcohol/Myrrh Gum Reinforced with Nanoclay and Titanium Dioxide Containing Red Sandalwood Extract	M.Sc.
Minoo Shahbazi	2026	Development and Characterization of Smart and Self-Healing Bionanocomposite Packaging Based on Anzaroot Gum Containing silica nanoparticles, nanohydroxyapatite, and grape seed proanthocyanidins	M.Sc.
Reza Ramshab	2025	Development of the bio-nanocomposite films based on the Tranjabin (<i>Persian manna</i>) containing watercress (<i>Nasturtium officinale</i>) extract and nano-clay (Cloisite 15A)	M.Sc.
Ghazaleh Shafiei Qahefarrokhi	2025	Investigating the effect of drying methods on the purification of medicinal cannabis leaves using supercritical fluid	M.Sc.
Fatemeh Gholizadeh	2025	Fabrication and Characterization of Salep-Beeswax Composite Film Laminated with Persian Gum-Polyvinyl Alcohol Electrospuns Containing TiO ₂ and Fumaria officinalis Polyphenols.	M.Sc.
Mobina Bagheri	2025	Evaluation of the performance of casted and electrospun films based on zein-polyvinyl alcohol containing mahaleb anthocyanins as a pH-sensitive indicator for monitoring the freshness of rainbow trout.	M.Sc.
Faezeh Navaee	2025	Construction of multilayer, conductive, magnetic and active composite films base on the Balangu seed musilage-gelatin, Fe ₃ O ₄ , TiO ₂ and cumin essential oil.	M.Sc.
Mohammad Pilehforosha	2025	Characterization of multifunctional Alginat-pea protein isolate/ pomegranate flower extract/ Fe ₃ O ₄ /Zno composite films with conductive and magnetic properties.	M.Sc.
Seyedeh Sara Borghei	2025	Assessment of probiotic protein bars' qualitative properties containing encapsulated Lactobacillus plantarum and Bifidobacterium bifidum during storage time.	M.Sc.
Seyyed Mojtaba Jalali Chimeh	2024	Fabrication and Characterization of Composite Film Based on Psyllium Mucilage and TiO ₂ Laminated with Zein Electrospun Containing Walnut Green Husk Extract.	M.Sc.
Romina Valizadeh	2024	Characterization of pomegranate flower extract-loaded electrospun zein laminated on sage seed gum-gelatin film as bilayer bioactive edible film.	M.Sc.

Donya Ayazi	2024	Fabrication and characterization of bilayer bioactive edible films with cumin essential oil-loaded electrospun zein.	M.Sc.
Mina Nasiri	2023	Fabrication and characterization of composite film based on psyllium mucilage and electrospun zein fibers incorporating dragonhead essential oil.	M.Sc.
Shaghaiegh Javadi	2023	Foam mat drying of <i>Prunus persica</i> L. var. Shams: Optimization of foam composition and physicochemical properties of its powder.	M.Sc.
Yashar Shahedi	2023	Evaluation and modeling of quality changes of sweet cherry (<i>Prunus avium</i> L.) coated with Balangu seed musilage -gelatin incorporated with ZnO and dill (<i>Anethum graveolens</i> L.) essential oil under cold storage.	M.Sc.
Samira Davoodi memar	2023	Production and evaluation of edible film based on tomato seed mucilage – gelatin.	M.Sc.
Hanieh Izadi	2023	Evaluation and modeling of quality changes of <i>Oncorhynchus mykiss</i> L. fillet coated with an active coating of tomato seed mucilage-whey protein isolate containing <i>Allium ascalonicum</i> L. essential oil during storage.	M.Sc.
Shabnam Safari	2023	Investigating and modeling the effect of ohmic thawing on physicochemical and quality properties of frozen turkey meat.	M.Sc.
Hajar Sabagh	2022	Optimization of Functional Toffee Formulation Prepared from Sesame Paste and Concentrated Grape Juice.	M.Sc.
Narges Nikomanesh	2022	Optimization and modeling of the ohmic heating assisted extraction of burdock (<i>Arctium lappa</i> L.) extract and evaluation of antimicrobial, physical and mechanical properties of cellulose acetate films containing burdock extract.	M.Sc.
Roya Jafari	2022	Optimization and modeling of the extraction process of Anise (<i>Pimpinella anisum</i> L) essential oil by green technology and modeling of physicochemical changes of zucchini coated with active gelatin-sodium alginate coating during storage.	M.Sc.
Parvaneh Karami	2021	Optimization and modeling of ohmic-hydrodistillation assisted essential oil extraction from aerial parts of yarrow (<i>Achillea millefolium</i>) and kinetics modeling of controlled release from active film in food simulant.	M.Sc.
seyed Zahra seyed Mohammadifard	2021	The feasibility of yoghurt enrichment with microencapsulated chia seed oil (<i>Salvia hispanica</i> L.)..	M.Sc.
Hamed Zamani	2020	Design, construction, and performance evaluation of a hybrid dryer for agricultural products.	M.Sc.
Mahdi Jafari	2020	Comparison of the efficiency of culture media produced from date fruit wastes using ultrasound and microwave	M.Sc.

		with standard samples based on the protocol for the validation of alternative methods.	
Rahim Salimi	2017	Chocolate production of probiotic bacteria <i>Bifidobacterium bifidum</i> encapsulated Alginate_chitosan investigation by physicochemical properties, sensory, and lasting.	M.Sc.
Shokofeh Soukhtezari	2016	Utilization of bacterial cellulose nanofiber membrane as a carrier of <i>Scrophularia striata</i> extract and its effect on the oxidative stability of soybean oil.	M.Sc.
Selda Sabouri	2016	Investigation of the effect of antimicrobial nonocomposite packaging on quality preservation and prolonging the shelf life of apples.	M.Sc.
Zohreh Karimi	2016	Investigate the effect of antimicrobial nonocomposite packaging on quality preservation and prolonging the shelf life of grapes in environmental and refrigerator temperatures.	M.Sc.

Technology Readiness Levels (TRL)

Project	Year	TRL	Organization
Active Film Based on Pea Protein Isolate–Sage Seed Gum	2025	5	National Research and Technology
Sage Seed Gum–Gelatin Composite Film	2025	5	National Research and Technology
Electrospan Zein containing pomegranate flower extract	2025	5	National Research and Technology
Active nanofibers of green cumin essential oil and zinc oxide	2025	5	National Research and Technology
Active coating of tomato seed mucilage - whey protein	2024	5	National Research and Technology
Active composite coating in cherry preservation	2024	5	National Research and Technology
Fluidized bed dryer	2024	5	National Research and Technology
Edible film of tomato seed mucilage-gelatin	2024	5	National Research and Technology
Functional bioactive compound from radish leaf	2023	4	National Research and Technology
Encapsulation Emulsion System for essential oil	2023	4	National Research and Technology
Micro-Gel containing Riboflavin and Biotin	2023	4	National Research and Technology
Ultrasound-ohmic thawing hybrid system	2023	4	National Research and Technology
Ohmic thawing system	2023	4	National Research and Technology
Ultrasonic-Ohmic hydro distillation system	2021	4	National Research and Technology
Active Farsi gum-hemp seed oil coating	2021	3	National Research and Technology
Ohmic heating-assisted extraction system	2021	4	National Research and Technology

Diet doughnut production by machine vision	2021	3	National Research and Technology
Cellulose acetate active film	2021	2	National Research and Technology
Gelatin-sodium alginate active edible film	2021	2	National Research and Technology
Antimicrobial active edible coating	2021	4	National Research and Technology
Machine vision system for grading fruit quality	2020	4	National Research and Technology
Hot air-IR-Centrifuge dryer	2020	4	National Research and Technology
Vacuum microwave infrared Fryer	2019	4	National Research and Technology
Ohmic extractor system	2019	6	National Research and Technology
Antimicrobial nanocomposite packaging	2019	4	National Research and Technology

Skills

****Software:**** MATLAB, ImageJ, Photoshop, SAS, Design Expert, SPSS, Minitab, NetLogo, SolidWorks, NeuroSolution

****Languages:**** Persian (Native), English

****Soft Skills:**** Research leadership, academic writing, project management, team collaboration, problem-solving

Research Interests

Bio-active Packaging, Biopolymer, Modelling & Simulation, Controlled Release, Encapsulation, Extraction technology, Coating & Packaging, Drying, Food Machine Design, Image Processing, Sensors.