Full Name: Majid Nooshkam

Nationality: Iranian
Academic Level: Assistant Professor
Gorgan University of Agricultural Sciences & Natural Resources
Cell: +98 (916) 9448412
Email: m.nooshkam@gau.ac.ir; nooshkamma@gmail.com

PERSONAL INFORMATION

Date of birth: 1st June 1990
Nationality: Iranian
Languages known: Persian and English

ACADEMIC PROFILE

Google Scholar: https://scholar.google.com/citations?user=S2uo1vAAAAAJ&hl=en&oi=ao
- **Total citations:** > 2200
- ***h*-index:** 18

Scopus: https://www.scopus.com/authid/detail.uri?authorId=56734454100
- **Total citations:** > 1800
- ***h*-index:** 17

ORCID ID: 0000-0003-2939-9599

RESEARCH INTERESTS

- Colloidal systems stabilized by protein-polysaccharide Maillard-based conjugates
- Chemistry, extraction, and modification of food proteins
- Food Emulsions, Emulsion gels, Aerated gels, Hydrogels, Foams, Oleofoams, Oleogels, Emulsion-filled hydrogels
- Production of high-added value compounds from food wastes
- Functional foods and drug delivery systems

EDUCATION

- Ph.D. in Food Chemistry 2016-2020
  Ferdowsi University of Mashhad (FUM), Mashhad, Iran.
  GPA: 19.13/20
  Thesis title: Design and fabrication of an oil in water emulsion stabilized by whey protein-gellan gum conjugate as a carrier for β-carotene (Score: 20/20).
- M.Sc. in Food Chemistry 2014-2016
  University of Tehran, Tehran, Iran.
  GPA: 17.07/20
  Thesis title: Microwave-assisted isomerization of lactose to lactulose and glycation of potentially bioactive peptides with lactulose (Score: 19.85/20)
- B.Sc. in Food Science and Technology 2009-2014
  Agricultural Sciences and Natural Resources University of Khuzestan, Khuzestan, Iran.
  GPA: 18.38/20
  Thesis title: Effects of Different Manufacturing Methods on Yield, Physicochemical and Sensory Properties of Mozzarella Cheese (Score: 20/20)

RESEARCH EXPERIENCE

2022-2023	Iran's National Elites Foundation Postdoctoral fellowship in Food Science and Technology at Ferdowsi University of Mashhad (Mashhad, Iran)
2021-2022	Postdoctoral fellowship in Food Science and Technology at Ferdowsi University of Mashhad (Mashhad, Iran)
2021-2022	Ph.D. Postgraduate fellowship at Ferdowsi University of Mashhad (Mashhad, Iran)
2017-	Lab Manager in Food Chemistry Lab, Ferdowsi University of Mashhad (Reference: Dr. Mehdi Varidi)
2017-2020	Research Assistant at Ferdowsi University of Mashhad (Reference: Dr. Mehdi Varidi)

FELLOWSHIPS AND AWARDS

2025	World's Top 2% Most-Cited Scientist (2025) – Listed in the Elsevier & Stanford University bibliometric database.
2023	Awarded the "Shahid Dr. Shahriari" Grant by the National Elites Foundation, a competitive award supporting the recruitment of distinguished faculty members.
2022	Iran's National Elites Foundation Postdoctoral fellowship
2021	Ranked 1st doctoral student in the research and technology festival of Khorasan Razavi province, Iran
2020	Top student (talented) at Ferdowsi University of Mashhad
2019	Top student (talented) at Ferdowsi University of Mashhad
2016	Ranked 2nd in Ph.D. entrance exam among 944 applicants
2013	Ranked 11th in M.Sc. entrance exam among 6967 applicants

PUBLICATIONS

JCR Papers

[1] Varidi, M., Alkobeisi, F., & **Nooshkam**, M. (2025). Licorice extract/gellan gum aerated gels: Insights into structure and properties. *Food Chemistry: X*, *30*, 102921. https://doi.org/10.1016/j.fochx.2025.102921. **Q1**

[2] Moayedi, A., Zareie, Z., Rahmani, F., **Nooshkam**, M., Ziaiifar, A. M., & Akbari, N. (2025). Lactulose production from kashk whey utilizing eggshell as an eco-friendly catalyst. *Food Chemistry: X*, 29, 102790. https://doi.org/10.1016/j.fochx.2025.102790. **Q1**

[3] Ferdowsian, S., Kazemi-Taskooh, Z., Varidi, M. J., **Nooshkam**, M., & Varidi, M. (2024). Optimization of cold-induced aerated gels formed by Maillard-driven conjugates of SPI-gellan gum as an oil substitute in mayonnaise sauce. *Current Research in Food Science*, *9*, 100923. https://doi.org/10.1016/j.crfs.2024.100923. **Q1**

[4] Sabeghi, Y., Varidi, M., & **Nooshkam**, M. (2024). Bioactive foamulsion gels: a unique structure prepared with gellan gum and *Acanthophyllum glandulosum* extract. *Journal of the Science of Food and Agriculture*, *104*(7), 3853-3864. https://doi.org/10.1002/jsfa.13267. **Q1**

[5] Fatah-Jahromi, S., Varidi, M.J., Y., Varidi, M., & **Nooshkam**, M. (2024). Reduced fat and sugar cakes developed by protein/polysaccharide/licorice extract ternary gel-like foams. *LWT, 194,* 115790. https://doi.org/10.1016/j.lwt.2024.115790. **Q1**

[6] Hadidi, M., Hossienpour, Y., **Nooshkam**, M., Mahfouzi, M., Gharagozlou, M., Aliakbari, F., & McClement, D. J. (2024). Green leaf proteins: A sustainable source of edible plant-based proteins. *Critical Reviews in Food Science and Nutrition*, *64*(29), 10855-10872. https://doi.org/10.1080/10408398.2023.2229436. **Q1**

[7] Jafarzadeh, S., **Nooshkam**, M., Zargar, M., Garavand, F., Forough, M., Ghosh, S., & Hadidi, M. (2024). Green synthesis of nanomaterials for smart biopolymer packaging: challenges and outlooks. *Journal of Nanostructure in Chemistry*, *14*(2), 113-136. https://doi.org/10.1007/s40097-023-00527-3. **Q1**

[8] Jafarzadeh, S., **Nooshkam**, M., Qazanfarzadeh, Z., Oladzadabbasabadi, N., Strachowski, P., Rabiee, N., Shirvanimoghaddam, K., Abdollahi, M., & Naebe, M. (2024). Unlocking the potential of 2D nanomaterials for sustainable intelligent packaging. *Chemical Engineering Journal*, *490*, 151711. https://doi.org/10.1016/j.cej.2024.151711. **Q1**

[9] **Nooshkam**, M., Varidi, M., Zareie, Z., & Alkobeisi, F. (2023). Behavior of protein-polysaccharide conjugate-stabilized food emulsions under various destabilization conditions. *Food Chemistry: X*, *18*, 100725. https://doi.org/10.1016/j.fochx.2023.100725. **Q1**

[10] **Nooshkam**, M., Varidi, M., & Alkobeisi, F. (2023). Licorice extract/whey protein isolate/sodium alginate ternary complex-based bioactive food foams as a novel strategy to substitute fat and sugar in ice cream. *Food Hydrocolloids*, *135,* 108206. https://doi.org/10.1016/j.foodhyd.2022.108206. **Q1**

[11] Garavand, F., **Nooshkam**, M., Khodaei, D., Yousefi, S., Cacciotti, I., & Ghasemlou, M. (2023). Recent advances in qualitative and quantitative characterization of nanocellulose-reinforced nanocomposites: A review. *Advances in Colloid and Interface Science*, *318*, 102961. https://doi.org/10.1016/j.cis.2023.102961. **Q1**

[12] Ahmadzadeh-Hashemi, S., Varidi, M., & **Nooshkam**, M. (2023). Hydro- and aerogels from quince seed gum and gelatin solutions. *Food Chemistry: X, 19,* 100813. https://doi.org/10.1016/j.fochx.2023.100813. **Q1**

[13] Ahmadzadeh-Hashemi, S., Varidi, M., & **Nooshkam**, M. (2023). Changes in fat uptake, color, texture, and sensory properties of Aloe vera gel-coated eggplant rings during deep-fat frying. *Food Science & Nutrition*, *11*(4), 2027-2035. https://doi.org/10.1002/fsn3.3238. **Q2**

[14] **Nooshkam**, M., Varidi, M., & Alkobeisi, F. (2022). Bioactive food foams stabilized by licorice extract/whey protein isolate/sodium alginate ternary complexes. *Food Hydrocolloids*, *126*, 107488. https://doi.org/10.1016/j.foodhyd.2022.107488. **Q1**

[15] Lavaei, Y., Varidi, M., & **Nooshkam**, M. (2022). Gellan gum conjugation with soy protein via Maillard-driven molecular interactions and subsequent clustering lead to conjugates with tuned technological functionality. *Food Chemistry: X*, *15*, 100408. https://doi.org/10.1016/j.fochx.2022.100408. **Q1**

[16] Alkobeisi, F., Varidi, M., Varidi, M. J., & **Nooshkam**, M. (2022). Quinoa flour as a skim milk powder replacer in concentrated yogurts: Effect on their physicochemical, technological, and sensory properties. *Food Science & Nutrition*, *10*(4), 1113-1125. https://doi.org/10.1002/fsn3.2771. **Q2**

[17] **Nooshkam**, M., & Varidi, M. (2021). Physicochemical stability and gastrointestinal fate of β-carotene-loaded oil-in-water emulsions stabilized by whey protein isolate-low acyl gellan gum conjugates. *Food Chemistry*, *347*, 129079. https://doi.org/10.1016/j.foodchem.2021.129079. **Q1**

[18] **Nooshkam**, M., & Varidi, M. (2020). Maillard conjugate-based delivery systems for the encapsulation, protection, and controlled release of nutraceuticals and food bioactive ingredients: A review. *Food Hydrocolloids*, *100*, 105389. https://doi.org/10.1016/j.foodhyd.2019.105389. **Q1**

[19] **Nooshkam**, M., Varidi, M., & Verma, D. K. (2020). Functional and biological properties of Maillard conjugates and their potential application in medical and food: A review. *Food Research International*, *131*, 109003. https://doi.org/10.1016/j.foodres.2020.109003. **Q1**

[20] **Nooshkam**, M., & Varidi, M. (2020). Whey protein isolate-low acyl gellan gum Maillard-based conjugates with tailored technological functionality and antioxidant activity. *International Dairy Journal*, *131*, 104783. https://doi.org/10.1016/j.idairyj.2020.104783. **Q2**

[21] **Nooshkam**, M., Varidi, M., & Bashash, M. (2019). The Maillard reaction products as food-born antioxidant and antibrowning agents in model and real food systems. *Food Chemistry*, *275*, 644-660. https://doi.org/10.1016/j.foodchem.2018.09.083. **Q1**

[22] **Nooshkam**, M., Falah, F., Zareie, Z., Yazdi, F. T., Shahidi, F., & Mortazavi, S. A. (2019). Antioxidant potential and antimicrobial activity of chitosan–inulin conjugates obtained through the Maillard reaction. *Food Science and Biotechnology*, *28*(6), 1861-1869. https://doi.org/10.1007/s10068-019-00635-3. **Q2**

[23] **Nooshkam**, M., Babazadeh, A., & Jooyandeh, H. (2018). Lactulose: Properties, techno-functional food applications, and food grade delivery system. *Trends in Food Science & Technology*, *80*, 23-34. https://doi.org/10.1016/j.tifs.2018.07.028. **Q1**

[24] **Nooshkam**, M., & Madadlou, A. (2016). Maillard conjugation of lactulose with potentially bioactive peptides. *Food Chemistry*, *192*, 831-836. https://doi.org/10.1016/j.foodchem.2015.07.094. **Q1**

[25] **Nooshkam**, M., & Madadlou, A. (2016). Microwave-assisted isomerisation of lactose to lactulose and Maillard conjugation of lactulose and lactose with whey proteins and peptides. *Food Chemistry*, *200*, 1-9. https://doi.org/10.1016/j.foodchem.2015.12.094. **Q1**

ISC Papers

[1] Nooshkam, M., Rahmaniyan, A., Khoshbakht, A., Hosseinpour, S., & Velayati, A. (2023). Feasibility of using sodium alginate gel to increase the shelf life of top strudel. *Food Processing and Preservation Journal, 15*(1), 23–42.

[2] Lavaei, Y., Varidi, M., & Nooshkam, M. (2022). The effect of browning intensity on the interfacial properties of gellan gum-soy protein conjugate obtained from the Maillard reaction. *Journal of Food Science and Technology of Iran, 19*(124), 1–17.

[3] Nooshkam, M., & Varidi, M. (2021). Interfacial and surface activity of whey protein isolate-gellan gum conjugate as a function of polymerization degree. *Journal of Food Science and Technology of Iran, 18*(118), 15–25.

[4] Shahidi, F., Tabatabaei Yazdi, F., Noshkam, M., Zarei, Z., & Fallah, F. (2020). Chemical modification of chitosan through non-enzymatic glycosylation reaction to improve its antimicrobial and antioxidant properties. *Iranian Food Science and Technology Research Journal*, 16 (1), 117–129.

[5] Tabatabaei Yazdi, F., Noshkam, M., Shahidi, F., & Asadi, A. (2018). Evaluation of the antimicrobial and antioxidant activity of chitosan conjugates based on the Maillard reaction under in vitro conditions. *Journal of Applied Microbiology in Food Industries*, 4(3), 1–15.

[6] Jooyandeh, H., Nooshkam, M., & Davari, A. B. (2016). Effects of Different Manufacturing Methods on Yield, Physicochemical and Sensory properties of Mozzarella Cheese. Iranian Food Science and Technology Research Journal, 12(3), 371-381.

[7] Nasehi, B., Nooshkam, M., Ghodsi, M., & Tatar, A. (2023). Synbiotics as potentially growth promoter substitution for improving microbial and oxidative stability of Japanese quail meat. Iranian Food Science and Technology Research Journal, 18(6), 127-139. 10.22067/ifstrj.2023.77120.1191.

[8] Ghadimi, S., Heshmati, A., Azizi Shafa, M., & **Nooshkam**, M. (2017). Microbial Quality and Antimicrobial Resistance of Staphylococcus aureus and Escherichia coli Isolated from Traditional Ice Cream in Hamadan City, West of Iran. *Avicenna Journal of Clinical Microbiology and Infection*, *4*(1), e39781.

Books (Chapters)

[1] Zareie, Z., Moayedi, A., & **Nooshkam**, M. (2025). Chapter 13- Food waste upcycling and applications: circular economy in modern food industries. In Reducing Food Loss and Waste – Challenges, Trends, and Solutions, Springer, pp. 295–320. https://doi.org/10.1007/978-3-031-91693-9_12

[2] **Nooshkam**, M., & Varidi, M. (2024). Chapter Twelve - Antioxidant and Antibrowning Properties of Maillard Reaction Products in Food and Biological Systems. In Vitamins and Hormones (Glycation), 125, 367-399. https://doi.org/10.1016/bs.vh.2024.01.001

[3] Zareie, Z., **Nooshkam**, M., & Moayedi, A. (2024). Chapter 1- Tomato Agro-industrial Wastes as Rich Source of Bioactive Compounds. In Food by-products management and their utilization, Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis), pp. 3-20.

[4] Garavand, F., **Nooshkam**, Aghamirzaei, M., Feyzi, S., Nateghi, L., Yousefi, S., Rouhi, M., & Jafari, S.M. (2022). Chapter 3- Industrial-scale encapsulation processes and products. In Encapsulation in food processing and fermentation, CRC Press, pp. 81-117.

[5] Rouhi, M., Nateghi, L., Aghamirzaei, M., Yousefi, S., Garavand, F., Feyzi, S., **Nooshkam**, M., & Jafari, S. M. (2022). Chapter 13- Safety, standards, and regulations of nanotechnology in food. In Encapsulation in food processing and fermentation, CRC Press, pp. 335-358.

[6] **Nooshkam**, M., & Zareie, Z. (2022). Chapter 2- New technological trends in probiotics encapsulation for their stability improvement in functional foods and gastrointestinal tract. In Microbial Biotechnology in Food Processing and Health; Advances, Challenges, and Potential, Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis), pp. 21-50.

[7] Babazadeh, A., **Nooshkam**, M., & Tabibiazar, M. (2022). Chapter 3- Bioactive peptides as functional foods: Production process, techno-functional applications, health promoting effects and safety issues. In Microbial Biotechnology in Food Processing and Health; Advances, Challenges, and Potential, Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis), pp. 51-78.

[8] **Nooshkam**, M., & Zareie, Z. (2022). Chapter 6- Lactulose: A high food value-added compound and its industrial application in food. In Microbial Biotechnology in Food Processing and Health; Advances, Challenges, and Potential, Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis), pp. 167-197.

[9] **Nooshkam**, M., & Babazadeh, A. (2022). Chapter 3- Bioactive carbohydrates: Safety regulations and applications for dairy-based functional foods. In Biotechnical Processing in the Food Industry: New Methods, Techniques, and Applications, Apple Academic Press, Inc. Co-published with CRC Press (Taylor & Francis), pp. 81-117.

[10] Garavand, F., Eghbal, N., **Nooshkam**, M., Miraballes, I., Jafari, S.M. (2021). Chapter 10- Salt, spices and seasonings formulated with nano/micro-encapsulated ingredients. In Application of Nano/Microencapsulated Ingredients in Food Products, Volume 6 in Nanoencapsulation in the Food Industry, Academic Press, 435-467. https://doi.org/10.1016/B978-0-12-815726-8.00010-6

RESEARCH PROJECTS

[1] Moayedi, A., Ziaeifar, A., **Nooshkam**, M., Zareie, R., Rahmani, F., & Akbari, N. (2023). Feasibility of the enzymatic synthesis of lactulose from kashk whey. Gorgan University of Agricultural Sciences and Natural Resources, Iran.

[2] Varidi, M., Alkobeisi, F., & **Nooshkam**, M. (2021). Aerated gel based on gellan gum and licorice root extract: Production and study of physicochemical, textural, rheological, and structural properties. Ferdowsi University of Mashhad, Iran.

[3] Lavaei, Y., Varidi, M., & **Nooshkam**, M. (2022). Design and production of emulsion gel stabilized by soy protein isolate-gellan gum conjugate. Ferdowsi University of Mashhad, Iran.

[4] Alkobeisi, F., Varidi, M., & **Nooshkam**, M. (2022). Gellan gum/licorice extract-based aerated gel: Production and study of physicochemical, textural, rheological, and structural properties. Ferdowsi University of Mashhad, Iran.

[5] Shahidi, F. Tabatabaei Yazdi, F., **Nooshkam**, M., Zareie, Z., & Falah, F. (2020). Chemical modification of chitosan through non-enzymatic glycosylation reaction to improve its antimicrobial and anti-oxidative properties. Ferdowsi University of Mashhad, Iran.

[6] Tabatabaei Yazdi, F., **Nooshkam**, M., Shahidi, F., Asadi, A., & Alizadeh Behbahani, B. (2018). Evaluating the antibacterial and antioxidant activities of the Maillard reaction products in ground sheep meat. Ferdowsi University of Mashhad, Iran.

THESIS SUPERVISED

[1] Sattari, A., Varidi, M.J., Varidi, M., & **Nooshkam**, M. (2022). Oil-in-water emulsion filled polysaccharidic hydrogel as a fat substitute in sausage. [PhD thesis, Ferdowsi University of Mashhad]. (Role: Primary Advisor). *In progress*.

[2] Fatah Jahromi, S.F., Varidi, M.J., Varidi, M., & **Nooshkam**, M. (2021). Whey protein/licorice extract/sodium alginate based stable ternary foam as a fat and sugar substitute in yellow cake. [Master's thesis, Ferdowsi University of Mashhad]. (Role: Primary Advisor). *Completed*.

[3] Sabeghi, Y., Varidi, M., & **Nooshkam**, M. (2021). Emulsion foam gel based on Chubak root saponin extract and gellan gum. [Master's thesis, Ferdowsi University of Mashhad]. (Role: Primary Advisor). *Completed*.

[4] Lavaei, Y., Varidi, M., & **Nooshkam**, M. (2019). Evaluation of functional properties of soy protein isolate-gellan gum conjugate prepared through the Maillard reaction. [Master's thesis, Ferdowsi University of Mashhad]. (Role: Primary Advisor). *Completed*.

[5] Ferdowsian, S., Varidi, M.J, Varidi, M., & **Nooshkam**, M. (2022). Aerated gel based on soy protein isolate-gellan gum conjugate obtained from the Maillard reaction [Master's thesis, Ferdowsi University of Mashhad]. (Role: Primary Advisor). Completed.

[6] Iranshahi, A., Jooyandeh, H., Noshad, M., Alizadeh Behbahani, B., & **Nooshkam**, M. (2022). The effect of eucalyptus essential oil on some qualitative properties of doogh (Iranian yogurt drink) [Master's thesis, Khuzestan University of Agricultural Sciences and Natural Resources]. (Role: External Advisor). Completed.

PATENT

Sabeghi, Y., Varidi, M., & Nooshkam, M. (2024). Emulsion foam gel based on saponin extract of Chubak root and gellan gum (Patent Registration No. 112326). Ferdowsi University of Mashhad, Iran.

EDITORIAL AND PEER REVIEW

[1] **Editorial Board Membership**:
Journal of Food Technology Research (Published by Conscientia Beam).
http://www.conscientiabeam.com/journal/58/editorial-board.html

[2] **Peer Reviewer for National Journals**:
- Iranian Food Science and Technology Research Journal
- Food Processing and Preservation Journal
- Nutrition and Food Sciences Research

[3] **Peer Reviewer for International Journals**:
- Food Chemistry
- Food Hydrocolloids
- Food Research International
- Trends in Food Science & Technology
- Food Chemistry: X
- Journal of the Science of Food and Agriculture, *etc*.

TEACHING EXPERIENCES

Undergraduate Courses:
Food Chemistry and Biochemistry; Food Analysis; Beverage Technology; Computer Applications in Food Science; Food Machinery; Canning Technology.

COMPUTER SKILLS

- Microsoft Office (Word, Excel, PowerPoint): Proficient
- Minitab, Design Expert, Image J, SPSS: Familiar