Curriculum vitae

PERSONAL INFORMATION

Name: Seyed Fakhreddin Hosseini
Date of Birth: March 21, 1981 (Noor, Iran)
Status: Single
Nationality: Iranian
Address: Department of Seafood Processing,
Faculty of Marine Sciences, Tarbiat Modares University,
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Career/Employment

2019-present	Associate Professor, Department of Seafood Processing, Faculty of Marine Sciences, Tarbiat Modares University (TMU). Research Interest: Nano-delivery of bioactive compounds; Marine-derived functional foods; Bio-based and active food packaging
2013-2019	Assistant Professor, Department of Seafood Processing, Faculty of Marine Sciences, Tarbiat Modares University (TMU). Research Interest: Nano-delivery of bioactive compounds; Bio-based and active food packaging

Education

2008-2013	Ph.D in Fisheries (Seafood Processing)	Tarbiat Modares University
2004-2006	M.Sc. in Fisheries	Islamic Azad University-Lahijan Branch
1999-2003	B.Sc. in Fisheries	University of Mazandaran

Background

- Seafood wastes biorefinery processes
- Marine-derived functional foods
- Nano-delivery of bioactive compounds
- Formation and characterization of food nanocarriers
- Bio-based and active food packaging

Awards:

- Top 1% Highly Cited Scientists according to Clarivate Analytics (WOS-ESI) (2020-2023).
- Top 2% Scientists Worldwide by Stanford University (2020-2024).
- Top Researcher in Tarbiat Modares University (2016, 2020, 2021, 2022, 2023).

Publications:

H-index and citations: 30 (total citations: 4153, source Scopus).

Total number of peer-reviewed papers: 42

Links to Scopus and Scholar Google:

https://www.scopus.com/authid/detail.uri?authorId=24474760300

https://scholar.google.com/citations?hl=en&user=qbBfjq4AAAAJ&view_op=list_works&sortby=pubdate

Refereed Journal Articles

1. Ramezanzade, L., **Hosseini, S. F.,** Sajedi, R. H., Nielsen, A. M., & Yaghmur, A. (2024). Food-grade hexosomes as efficient vehicles for delivery of fish-purified antioxidant peptide. *Food Chemistry*, *434*, 137446.

2. Eskandari, Z., **Hosseini, S. F.,** Yaghmur, A. (2024). Production of omega-3 fatty acid concentrates from common kilka oil: optimization of the urea complexation process. *Molecules*, *29*(11), 2430.

3. **Hosseini, S. F.,** Mousavi, Z., & McClements, D. J. (2023). Beeswax: a review on the recent progress in the development of superhydrophobic films/coatings and their applications in fruits preservation. *Food Chemistry*, 136404.

4. Hasanzadeh Baboli, N., **Hosseini, S. F.,** & Gharsallaoui, A. (2023). Antibacterial and anti-biofilm properties of cinnamaldehyde-loaded nanoliposomes against Listeria monocytogenes and Salmonella enteritidis adhered to stainless steel. *International Journal of Food Science & Technology*, *58*(10), 5275-5282.

5. **Hosseini, S. F.,** Rezaei, M., & McClements, D. J. (2022). Bioactive functional ingredients from aquatic origin: a review of recent progress in marine-derived nutraceuticals. *Critical Reviews in Food Science and Nutrition*, *62*(5), 1242-1269.

6. Tan, C., **Hosseini, S. F.,** & Jafari, S. M. (2022). Cubosomes and hexosomes as novel nanocarriers for bioactive compounds. *Journal of Agricultural and Food Chemistry*, *70*(5), 1423-1437. 5.

7. **Hosseini, S. F.,** Kaveh, F., & Schmid, M. (2022). Facile fabrication of transparent high-barrier poly (lactic acid)-based bilayer films with antioxidant/antimicrobial performances. *Food Chemistry*, *384*, 132540.

8. **Hosseini, S. F.,** Ansari, B., & Gharsallaoui, A. (2022). Polyelectrolytes-stabilized liposomes for efficient encapsulation of Lactobacillus rhamnosus and improvement of its survivability under adverse conditions. *Food Chemistry*, *372*, 131358.

9. **Hosseini, S. F.,** Ghaderi, J., & Gómez-Guillén, M. C. (2022). Tailoring physico-mechanical and antimicrobial/antioxidant properties of biopolymeric films by cinnamaldehyde-loaded chitosan nanoparticles and their application in packaging of fresh rainbow trout fillets. *Food Hydrocolloids*, *124*, 107249.

10. Ramezanzade, L., **Hosseini, S. F.,** Akbari-Adergani, B., & Yaghmur, A. (2021). Cross-linked chitosan-coated liposomes for encapsulation of fish-derived peptide. *LWT*, *150*, 112057.

11. **Hosseini, S. F.,** Ghaderi, J., & Gómez-Guillén, M. C. (2021). trans-Cinnamaldehyde-doped quadripartite biopolymeric films: Rheological behavior of film-forming solutions and biofunctional performance of films. *Food Hydrocolloids*, *112*, 106339.

12. **Hosseini, S. F.,** Ramezanzade, L., & McClements, D. J. (2021). Recent advances in nanoencapsulation of hydrophobic marine bioactives: Bioavailability, safety, and sensory attributes of nano-fortified functional foods. *Trends in Food Science & Technology*, *109*, 322-339.

13. **Hosseini, S. F.,** Soofi, M., & Rezaei, M. (2021). Enhanced physicochemical stability of ω-3 PUFAs concentrates-loaded nanoliposomes decorated by chitosan/gelatin blend coatings. *Food Chemistry*, *345*, 128865.

14. Ramezani, Z., Rajabzadeh Ghatarmi, E., **Hosseini, S. F.,** & Regenstein, J. M. (2020). Functional properties and antioxidant activities of protein hydrolysates from orangefin ponyfish (*Photopectoralis bindus*). *Iranian Journal of Fisheries Sciences*, *19*(6), 3001-3017.

15. Mojaveri, S. J., **Hosseini, S. F.,** & Gharsallaoui, A. (2020). Viability improvement of Bifidobacterium animalis Bb12 by encapsulation in chitosan/poly (vinyl alcohol) hybrid electrospun fiber mats. *Carbohydrate Polymers*, 116278.

16. Ardekani-Zadeh, A. H., & **Hosseini, S. F.** (2019). Electrospun essential oil-doped chitosan/poly (ε-caprolactone) hybrid nanofibrous mats for antimicrobial food biopackaging exploits. *Carbohydrate Polymers*, *223*, 115108.

17. Ghaderi, J., **Hosseini, S. F.,** Keyvani, N., & Gómez-Guillén, M. C. (2019). Polymer blending effects on the physicochemical and structural features of the chitosan/poly (vinyl alcohol)/fish gelatin ternary biodegradable films. *Food Hydrocolloids*, *95*, 122-132.

18. **Hosseini, S. F.,** Nahvi, Z., & Zandi, M. (2019). Antioxidant peptide-loaded electrospun chitosan/poly(vinyl alcohol) nanofibrous mat intended for food biopackaging purposes. *Food Hydrocolloids, 89,* 637-648.

19. Joghataei, M., **Hosseini, S. F.,** & Arab-Tehrany, E. (2019). Cinnamaldehyde loaded chitosan/tripolyphosphate nanoassemblies: Fabrication, characterization, and in vitro evaluation of antioxidant activity. *Journal of Food Processing and Preservation*, e13972.

20. **Hosseini, S. F.,** Amraie, M., Salehi, M., Mohseni, M., & Aloui, H. (2019). Effect of chitosan-based coatings enriched with savory and/or tarragon essential oils on postharvest maintenance of kumquat (Fortunella sp.) fruit. *Food Science & Nutrition, 7*(1), 155-162.

21. **Hosseini, S. F.,** & Gómez-Guillén, M. C. (2018). A state-of-the-art review on the elaboration of fish gelatin as bioactive packaging: Special emphasis on nanotechnology-based approaches. *Trends in Food Science & Technology, 79,* 125-135.

22. **Hosseini, S.F.,** Soleimani, M.R. and Nikkhah, M. (2018). Chitosan/sodium tripolyphosphate nanoparticles as efficient vehicles for antioxidant peptidic fraction from common kilka. *International Journal of Biological Macromolecules, 111,* 730-737.

23. Ramezanzade, L., **Hosseini, S. F.,** & Nikkhah, M. (2017). Biopolymer-coated nanoliposomes as carriers of rainbow trout skin-derived antioxidant peptides. *Food Chemistry, 234,* 220-229.

24. **Hosseini, S. F.,** Ramezanzade, L., & Nikkhah, M. (2017). Nano-liposomal entrapment of bioactive peptidic fraction from fish gelatin hydrolysate. *International Journal of Biological Macromolecules, 105,* 1455-1463.

25. Jafarzadeh, S., Ariffin, F., Mahmud, S., Alias, A. K., **Hosseini, S. F.,** & Ahmad, M. (2017). Improving the physical and protective functions of semolina films by embedding a blend nanofillers (ZnO-nr and nano-kaolin). *Food Packaging and Shelf Life, 12,* 66-75.

26. Mohajer, S., Rezaei, M., & **Hosseini, S. F.** (2017). Physico-chemical and microstructural properties of fish gelatin/agar bio-based blend films. *Carbohydrate Polymers, 157,* 784-793.

27. **Hosseini, S. F.,** Javidi, Z., & Rezaei, M. (2016). Efficient gas barrier properties of multi-layer films based on poly (lactic acid) and fish gelatin. *International Journal of Biological Macromolecules, 92,* 1205-1214.

28. Javidi, Z., **Hosseini, S. F.,** & Rezaei, M. (2016). Development of flexible bactericidal films based on poly (lactic acid) and essential oil and its effectiveness to reduce microbial growth of refrigerated rainbow trout. *LWT-Food Science and Technology, 72,* 251-260.

29. **Hosseini, S. F.,** Rezaei, M., Zandi, M., & Farahmandghavi, F. (2015). Preparation and characterization of chitosan nanoparticles-loaded fish gelatin-based edible films. *Journal of Food Process Engineering,* 39, 521-529.

30. **Hosseini, S. F.,** Rezaei, M., Zandi, M., & Farahmand Ghavi, F. (2015). Effect of Fish Gelatin Coating Enriched with Oregano Essential Oil on the Quality of Refrigerated Rainbow Trout Fillet. *Journal of Aquatic Food Product Technology*, 25, 835-842.

31. **Hosseini, S. F.,** Rezaei, M., Zandi, M., & Farahmandghavi, F. (2016). Development of bioactive fish gelatin/chitosan nanoparticles composite films with antimicrobial properties. *Food Chemistry*, *194*, 1266-1274.

32. **Hosseini, S. F.,** Rezaei, M., Zandi, M., & Farahmandghavi, F. (2015). Fabrication of bio-nanocomposite films based on fish gelatin reinforced with chitosan nanoparticles. *Food Hydrocolloids*, *44*, 172-182.

33. **Hosseini, S. F.,** Rezaei, M., Zandi, M., & Farahmandghavi, F. (2015). Bio-based composite edible films containing *Origanum vulgare* L. essential oil. *Industrial Crops and Products*, *67*, 403-413.

34. Bahmani, Z., Rezaei, M., Hosseini, S. V., **Hosseini, S. F.,** Alishahi, A., Ahmad, M., & Regenstein, J. M. (2014). Effect of delayed icing on the microbiological, chemical, and sensory properties of Caspian sea golden grey mullet (*Liza aurata*). *Journal of Aquatic Food Product Technology*, *23*, 542-551.

35. **Hosseini, S. F.**, Rezaei, M., Zandi, M., & Ghavi, F. F. (2013). Preparation and functional properties of fish gelatin–chitosan blend edible films. *Food Chemistry*, *136*(3), 1490-1495.

36. **Hosseini, S. F.,** Zandi, M., Rezaei, M., & Farahmandghavi, F. (2013). Two-step method for encapsulation of oregano essential oil in chitosan nanoparticles: preparation, characterization and in vitro release study. *Carbohydrate Polymers*, *95*(1), 50-56.

37. Etemadi, H., Rezaei, M., Abedian Kenari, A., & **Hosseini, S. F.** (2013). Combined effect of vacuum packaging and sodium acetate dip treatment on shelf life extension of rainbow trout (*Oncorhynchus mykiss*) during refrigerated storage. *Journal of Agricultural Science and Technology*, *15*(5), 929-939.

38. Rezaei, M., **Hosseini, S. F.,** Langrudi, H. E., Safari, R., & Hosseini, S. V. (2008). Effect of delayed icing on quality changes of iced rainbow trout (*Onchorynchus mykiss*). *Food Chemistry*, *106*(3), 1161-1165.

39. Rezaei, M., & **Hosseini, S. F.** (2008). Quality assessment of farmed rainbow trout (*Oncorhynchus mykiss*) during chilled storage. *Journal of Food science*, *73*(6), 93-96.

40. Hosseini, S. V., Behrooz, R. D., Esmaili-Sari, A., Bahramifar, N., Hosseini, S. M., Tahergorabi, R., **Hosseini, S. F.,** & Feás, X. (2008). Contamination by organochlorine compounds in the edible tissue of four sturgeon species from the Caspian Sea (Iran). *Chemosphere*, *73*(6), 972-979.

Book Chapter:

1. Keivani, N., & **Hosseini, S. F.** (2023). Omega-3 Polyunsaturated Fatty Acids: Sources, Structural Features and Health Effects. In *Handbook of Food Bioactive Ingredients: Properties and Applications* (pp. 967-995). Cham: Springer International Publishing.

Conference papers and Workshops:

1- **Seyed Fakhreddin Hosseini** and Masoud Rezaei. Preparation and characterization of bio-nanocomposite films based on fish gelatin reinforced with chitosan nanoparticles. *The 2nd national conference on optimizing the chain production, distribution and consumption of food industry, Sari agriculture and natural resource University, Sari, Iran, 18-19 Feb 2015.*

2- Zahra javidi, **Seyed Fakhreddin Hosseini** and Masoud Rezaei. Evaluation of physical characteristics of biodegradable films based on polylactic acid (PLA). *The first national novel aquaculture conference-challenges and opportunities, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran, 22-23 Oct 2014.*

3- Setareh mohajer, **Seyed Fakhreddin Hosseini** and Masoud Rezaei. Preparation of fish gelatin-agar composite edible films. *The first national novel aquaculture conference-challenges and opportunities, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, Iran, 22-23 Oct 2014.*

4- **Seyed Fakhreddin Hosseini**, Masoud Rezaei, Mojgan Zandi & Farhid Farahmand Ghavi. Preparation and characterization of chitosan nanoparticles loaded oregano essential oil by oil in water emulsion and ionic gelation. *12nd student Congress on Nanoscience & Nanotechnology, Tehran University of Medical Sciences, Tehran, Iran, 23-24 May 2012.*

5- Workshop on fish processing and production line design, *Tarbiat Modares University, Tehran, Iran, 23-24 May 2009.*

6- Workshop on Value Added Fish and fish paste products, *Tarbiat Modares University, Tehran, Iran, 23-24 May 2008.*

Patent:

Active packaging based on solvent-cast Polylactic Acid (PLA) film containing oregano essential oil. Iranian Research Organization for Science and Technology, 9503736, 2016.

Research projects:

1. Enhancement of Oxidative Stability and Bioaccessibility of Triacylglycerols (TAG) Rich in Omega-3 Polyunsaturated Fatty Acids by Surface-Modified Lipid Nano-Self-Assemblies via Layer-by-Layer (LBL) Technique (*On-going, financially supported by Iran National Science Foundation INSF*).

2. Pilot Production of Concentrated Omega-3 Fatty Acids from Kilka Fish oil (*financially supported by Iran's Fisheries Organization (IFO), 2021-2023*). (Finished)

3. Fabrication and Characterization of Liquid-Crystalline Lipid Nanocarriers (LCNPs) for Encapsulation of Fish-Derived Bioactive Peptides and Evaluation of their Potential for Fortification of Drinking Yoghurt (*Financially supported by Iran National Science Foundation INSF, 2021-2022*). (Finished)

4. Design and manufacture of biodegradable food packages by electrospinning. (*Financial support by International Scientific Studies and Collaboration of the Ministry of Science (CISSC) and Campus France, 2020-2021*). (Finished)

5. Fabrication and evaluation of chitosan/liposome-based hybrid nanosystem containing fish-derived bioactive peptides. (*Financial support by International Scientific Studies and Collaboration of the Ministry of Science (CISSC) and Campus France, 2016-2017*). (Finished)

6. Fabrication, characterization and evaluation of hybrid nanosystems containing bioactive peptide extracted from sea urchin (*Echinometra matheai*) as a bio-preservative with an emphasis on microbial biofilm formation. (*Financial support by Iran National Science Foundation (INSF), Iran, 2017*). (Finished)

7. Preparation, characterization and evaluation of chitosan nanoparticles loaded with citrus essential oils to enhance the shelf life of cold-stored 'Thomson navel' oranges *(Citrus sinensis Osbeck)*. (*Financial support by Genetics & Agricultural Biotechnology Institute of Tabarestan, Iran, 2018*). (Finished)

8. Development and evaluation of active multilayer food packaging films based on polylactic acid (PLA). (*Financial support by Iran National Science Foundation (INSF), Iran, 2014*). (*Finished*)

9. Preparation, optimization and application of Gelatin-Chitosan Nanoparticles Bio-Nanocomposite Film incorporated with oregano essential oil on Shelf life Extension of Fresh Rainbow trout (*Oncorhynchus mykiss*) Fillet. (*Financial support by Iran National Science Foundation (INSF), Iran, 2011*). (*Finished*)

Supervisor functions:

Main supervisor: Graduated: 25 MSc, 3 PhD

On-going: 2 MSc, 2 PhD

Co-supervisor: Graduated: 2 MSc, 1 PhD

Teaching experience:

- Nanotechnology application in seafood processing
- Bionanotechnology in fisheries sciences
- Value added seafood products
- Seafood quality control
- Innovative food packaging technologies

Referee and review activities:

- Trends in Food Science & Technology
- Critical Reviews in Food Science and Nutrition
- ACS Sustainable Chemistry & Engineering
- Journal of Agricultural and Food Chemistry
- Food Chemistry
- Food Hydrocolloids
- Food Control
- Carbohydrate Polymers
- Industrial Crops and Products
- Journal of Food engineering
- LWT - Food Science and Technology
- Food Biophysics

Editorial board membership:

- Molecules (Editor) (IF: 4.6)

- Frontiers in Nutrition (Associate Editor) (IF: 5)