

## Curriculum vitae



### PERSONAL INFORMATION

**Name:** Seyed Fakhreddin

**Surname:** Hosseini

**Place of Birth:** Noor, Iran

**Status:** single

**Nationality:** Iranian

**Languages:** Persian, English

**Address:** Department of Seafood Processing,  
Faculty of Marine Sciences, Tarbiat Modares University,  
Noor, Mazandaran, Iran.

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### Education

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|-----------|---|--|
| 2008-2013 | Ph.D in Fisheries (Seafood processing).<br><u>Dissertation:</u> Evaluation of Bio-Nanocomposite Films based on Fish gelatin and Chitosan Nanoparticles on Shelf life Extension of Fresh Rainbow trout ( <i>Oncorhynchus mykiss</i> ) Fillet | Tarbiat Modares University                 |
| 2004-2006 | M.Sc. in Fisheries.<br><u>Thesis:</u> Effect of delayed icing on quality deterioration of iced rainbow trout ( <i>Oncorhynchus mykiss</i> )   | Islamic Azad University-<br>Lahijan Branch |
| 1999-2003 | B.Sc. in Fisheries.   | University of Mazandaran                   |

## Research interests:

- Effective nano-delivery of marine bioactive compounds
- Value added seafood products
- Bio-based food packaging

## H-index: 29

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

[https://scholar.google.com/citations?hl=en&user=qBfjq4AAAAJ&view\\_op=list\\_works&sortby=pubdate](https://scholar.google.com/citations?hl=en&user=qBfjq4AAAAJ&view_op=list_works&sortby=pubdate)

## Awards:

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

## Publications:

### Peer-reviewed Journals

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. 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.
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. Ghazaghi, A., **Hosseini, S. F.**, & Rezaei, M. (2022). Electrospinning of cinnamaldehyde in chitosan/poly ( $\epsilon$ -caprolactone) hybrid nanofibers: the investigation of physicochemical, structural, and antimicrobial properties for food biopackaging exploits. *Innovative Food Technologies*, 9(3), 269-287.
11. Ramezanzade, L., **Hosseini, S. F.**, Akbari-Adergani, B., Hasan Sajedi, R., & Yaghmur, A. (2022). Evaluation of bioactive properties of peptide fractions from enzymatic hydrolysis of orange-fin ponyfish (*Leiognathus bindus*). *Fisheries Science and Technology*, 11(2), 106-122.
12. 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.
13. Ghaderi, J., **Hosseini, S. F.**, Shabazadeh, I., & Gómez-Guillén, M. C. (2021). Fabrication and characterization of biocomposite films based on carboxymethyl cellulose/polyvinyl alcohol/fish gelatin for food packaging exploits. *Innovative Food Technologies*, 8(3), 383-398.
14. **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.
15. **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.
16. **Hosseini, S. F.**, Soofi, M., & Rezaei, M. (2021). Enhanced physicochemical stability of  $\omega$ -3 PUFAs concentrates-loaded nanoliposomes decorated by chitosan/gelatin blend coatings. *Food Chemistry*, 345, 128865.
17. **Hosseini, S. F.**, Rezaei, M., & McClements, D. J. (2020). Bioactive functional ingredients from aquatic origin: a review of recent progress in marine-derived nutraceuticals. *Critical Reviews in Food Science and Nutrition*, 1-28.

18. Ghaderi, J., **Hosseini, S. F.**, & Gómez-Guillén, M. C. (2020). Effect of biodegradable films based on chitosan/polyvinyl alcohol/fish gelatin incorporated with cinnamaldehyde on shelf-life extension of rainbow trout (*Oncorhynchus mykiss*) fillets. *Innovative Food Technologies*, 7(2), 223-242.
19. 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.
20. **Hosseini, S. F.**, Ghaderi, J., & Gómez-Guillén, M. C. (2020). trans-Cinnamaldehyde-doped quadripartite biopolymeric films: Rheological behavior of film-forming solutions and biofunctional performance of films. *Food Hydrocolloids*, 106339.
21. 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.
22. Ardekani-Zadeh, A. H., & **Hosseini, S. F.** (2019). Electrospun essential oil-doped chitosan/poly ( $\epsilon$ -caprolactone) hybrid nanofibrous mats for antimicrobial food biopackaging exploits. *Carbohydrate Polymers*, 223, 115108.
23. 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.
24. **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.
25. 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.
26. **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.
27. **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.
28. **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.

29. Ramezanzade, L., **Hosseini, S. F.**, & Nikkhah, M. (2018). Recovery of bioactive peptide fractions from rainbow trout (*Onchorhynchus mykiss*) processing waste hydrolysate, *ECOPERSIA*, 6(1), 31-40.
30. 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.
31. **Hosseini, S. F.**, Ramezanzade, L., & Nikkhah, M. (2017). Nano-liposomal entrapment of bioactive peptidic fraction from fish gelatin hydrolysate. *International Journal of Biological Macromolecules*.
32. 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.
33. 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.
34. **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.
35. 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.
36. **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.
37. **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.
38. **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.
39. **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.
40. **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.

41. 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.
42. **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.
43. **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.
44. 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.
45. 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 (*Oncorhynchus mykiss*). *Food Chemistry*, 106(3), 1161-1165.
46. 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.
47. 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.
48. Ramezanzadeh, L., **Hosseini, S. F.**, Nikkhah, M. (2017). Enzymatic hydrolysis of rainbow trout (*Oncorhynchus mykiss*) skin gelatin and evaluation of its antioxidant properties. *Fisheries Science & Technology*, 5, 29-44. (In Persian)
49. Soleimani, M. R., **Hosseini, S. F.**, Nikkhah, M. (2017). Evaluation of antioxidant activity of protein hydrolysate from common kilka (*Clupeonella cultriventris caspia*). *Fisheries Science & Technology*, 5, 95-108. (In Persian)
50. Ramezani, Z., Ebrahim Ghatarmi, R., **Hosseini, S. F.** (2018). Effect of Hydrolysis Intensity on Functional Properties of Protein Hydrolysate from ponyfish (*Leiognathus bindus*). *Electronic Journal of Food processing and Protection*, *Accepted manuscript*. (In Persian)

### **Conference papers and Workshops:**

- 1- **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. *12<sup>nd</sup> student Congress on Nanoscience & Nanotechnology, Tehran University of Medical Sciences, Tehran, Iran, 23-24 May 2012.*

- 2- **Seyed Fakhreddin Hosseini** and Masoud Rezaei. Preparation and characterization of bio-nanocomposite films based on fish gelatin reinforced with chitosan nanoparticles. *The 2<sup>nd</sup> 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.*
- 3- 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.*
- 4- 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.*
- 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 (*Financial support by Iran National Science Foundation (INSF), Iran, 2022*). (On-going)
2. Pilot Production of Concentrated Omega-3 Fatty Acids from Kilka Fish oil. (*Financial support by Ministry of Agriculture Jihad Iran's Fisheries Organization (IFO), 2021-2023*). (Finished).
3. Identification and Quantification of Bioactive Peptides with Antioxidant, Angiotensin-I Converting Enzyme (ACE-I) and DPP-IV Inhibitory Properties from Hydrolyzed Fish

proteins, and Study of its Bioavailability in Liquid-Crystalline Lipid Nanocarriers (LCNPs). (*Financial support by Iran National Science Foundation (INSF), Iran, 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)
10. Coding standard of fisheries and food science courses. (*Financial support by Mazandaran Technical & Vocational Training Organization, Iran, 2010*). (Finished)

### **Advising Activities:**

Student Name	Student Position	Advising Role	University	Year(s)
Zahra Javidi	M.S. Student	Supervisor	Tabiat Modares University	2014-2015
Setareh Mohajer	M.S. Student	Advisor	Tabiat Modares University	2014-2015
Mohammad reza soleimani	M.S. Student	Supervisor	Tabiat Modares University	2014-2016
Leila ramezanzadeh	M.S. Student	Supervisor	Tabiat Modares University	2014-2016
Zeinab ramzani	M.S. Student	Co-supervisor	Khorramshahr	2014-2016



Hajar Mohammadi	M.S. Student	Co-supervisor	Marine Science and Technology University Khorramshahr	2014-2016
Nilofar Keivani	M.S. Student	Supervisor	Marine Science and Technology University Khazar University	2016-2017
Mandana Joghtaei	M.S. Student	Supervisor	Marine Science and Technology University Khazar University	2016-2017
Zahra nahvi	M.S. Student	Supervisor	Marine Science and Technology University Tabiat Modares University	2016-2017
Sajad kaviani	M.S. Student	Supervisor	Marine Science and Technology University Tabiat Modares University	2016-2017
Narges Hasanzadeh	M.S. Student	Supervisor	Marine Science and Technology University Khazar University	2016-2017
Sahereh Khoramian	M.S. Student	Supervisor	Marine Science and Technology University Khazar University	2017-2018
Maryam soofi	M.S. Student	Supervisor	Marine Science and Technology University Tabiat Modares University	2017-2018
Seyed Javad Mojaveri	M.S. Student	Supervisor	Marine Science and Technology University Khazar University	2017-2018
Hoda Ansari	M.S. Student	Supervisor	Marine Science and Technology University Khazar University	2017-2018
Jaber Ghaderi	M.S. Student	Supervisor	Marine Science and Technology University Tabiat Modares University	2018-2019
Ali Hasanpour Ardekani-Zadeh	M.S. Student	Supervisor	Marine Science and Technology University Tabiat Modares University	2018-2019

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### Teaching experience:

- Nanotechnology application in seafood processing
- Bionanotechnology in fisheries sciences
- Value added seafood products
- Seafood quality control

### Referee and review activities:

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

- Food Biophysics
- International Journal of Food Science & Technology

**Editorial board membership:**

- Molecules (Editor) (IF: 4.927)
- Frontiers in Nutrition (Associate Editor) (IF: 6.59)