

Curriculum Vitae (CV)

Fojan Badii, PhD

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Education:

- **PhD:** December 2005, Food Science Department, School of Biosciences, The University of Nottingham, UK.
- **MSc:** August 1996, Food Science Department, Faculty of Agriculture, University of Tehran, Iran.
- **BSc:** August 1992, Food Science Department, Faculty of Agriculture, University of Tehran, Iran.

Awards:

- Outstanding Researcher in Alborz province, 2020.
- Organizing the 4th National Conference on Nanotechnology in Agriculture, Agricultural Research, Education and Extension Organization, 2017.
- Technical Knowledge of Date Powder, Agricultural Research, Education and Extension Organization, 2014.
- Leader of the Outstanding Research Project, Agricultural Research Organization, Iran, 2013.
- Outstanding Researcher, Agricultural Engineering Research Institute (AERI), Iran, 2010.
- Outstanding Colleague, Agricultural Engineering Research Institute (AERI), Iran, 2011.

Patents:

- Functional yogurt using protein fibers and method of making, Iran Patent No. 103929, 2021
- Production of a shelf-stable date powder. Iran Patent No. 91673, 2016
- Cellulose based edible coating for extending storage life of agricultural products. Iran Patent No. 68604, 2011

Book:

- Applications of the Glass Transition Phenomenon in Food Stability. 2022. Agricultural Engineering Research Institute. 184 Pages. (In Farsi)

Technical Review

- Legume Protein and the Prospect of its Applications in Food Technology.
- Fundamentals of Fresh Horticultural Products Packaging

Work Experiences:

- Member of Scientific Board of Agricultural Engineering Research Institute (1996-present)
- Research Visitor at The University of Melbourne, Australia (2014)
- Certified Translator, National Accreditation Authority for Translators and Interpreters (NAATI), Australia (2015-2018)
- Editorial Board Member, Journal of Food Engineering Research, Agricultural Engineering Research Institute (2014-present)
- Scientific Secretary of the Publishing Committee, Agricultural Engineering Research Institute (2019-present)
- Member of Working Group for Organizing Research Laboratories at Agricultural Research, Education and Extension Organization (2015-2018)
- Member of Research Committee of the Department of Food Engineering and Postharvest Technology, Agricultural Engineering Research Institute (2007-2020)
- Member of Scientific Assessment and Promotion Committee, Agricultural Engineering Research Institute (1997-2002 and 2006-2016)
- Member of Research Council of Agricultural Engineering Research Institute (2007- 2014 and 2019-present)

Teaching Experiences:

- Biophysical Properties of Agricultural Products (MSc course), Spring 2017, Azad University.
- Food Packaging (MSc course), Fall 2016, Tehran University.
- Food Packaging (MSc course), Spring 2016, Tehran University.
- Advanced Food Packaging (PhD course), Spring 2013, Shahid Beheshti University.
- Fruit and Vegetable Processing (BSc course), Fall 2012, Shahid Beheshti University.
- Fruit and Vegetable Processing (BSc course), Spring 2012, Shahid Beheshti University.
- Food Packaging (BSc course), Fall 2011, Shahid Beheshti University.
- Fruit and Vegetable Processing (BSc course), Fall 2011, Shahid Beheshti University.
- Food Packaging (BSc course), Spring 2011, Shahid Beheshti University.
- Fruit and Vegetable Processing (BSc course), Spring 2011, Shahid Beheshti University.
- Advanced Food Packaging (PhD course), Spring 2010, Shahid Beheshti University.
- Food Packaging (BSc course), Fall 2009, Shahid Beheshti University.
- Fruit and Vegetable Processing (BSc course), Fall 2009, Shahid Beheshti University.
- Fundamentals of Food Preservation (Teaching assistant), Fall 2005, The University of Nottingham

- Fundamentals of Food Preservation (Teaching assistant), Fall 2004, The University of Nottingham
- Fundamentals of Food Preservation (Teaching assistant), Fall 2003, The University of Nottingham.
- Workshop on Application of Differential Scanning Calorimetry in Food Research, Agricultural Engineering Research Institute, 2011.
- Workshop on Application of Nanotechnology in Food Packaging, Agricultural Biotechnology Research Institute of Iran, 2011.

Academic Services:

- Reviewing articles for peer reviewed Journals:
 - LWT-Food Science and Technology
 - Food Research International
 - Journal of Food Processing and Preservation
 - Food and Bioprocess Technology
 - Food and Bioproducts Processing
 - Journal of Agricultural Science and Technology
 - Journal of Crop Protection
 - International Journal of Food Science and Technology
 - The Philippine Agricultural Scientist
 - Iranian peer reviewed journals
- Reviewing for Patents
- Reviewing for Paper Conferences
- PhD thesis and MSc dissertation Examiner

Student Projects:

- Optimizing the production of nanofibrils from whey protein isolate and investigating their structural and functional properties and the effect of ultrasonic technique on their stability (supervisor)
- Application of methylcellulose-based edible coatings for improving quality and storage life of tomato (supervisor)
- Preparation of methylcellulose edible coating and investigating some of their physical and mechanical properties and its effect on storage life of nectarine (supervisor)
- Evaluating the physical and mechanical properties of edible films based on soy protein isolate (supervisor)
- Preparation of protein isolate from chickpea and studying its functional, thermal and film-forming properties (supervisor)
- The effect of nano-micro sized chitosan-based paper packaging on storage life and staling of bread (supervisor)
- The effect of chitosan-based nanoemulsion coating on extending the shelf life of apple var. *Golab* (Supervisor)

- Effects of blanching and edible coating on French fries oil uptake and qualitative properties (supervisor)
- Optimizing the production of date powder and studying its physico-chemical properties by response surface methodology (Supervisor).
- Investigation on the physicochemical properties, bruise resistance and respiration rate of some native and commercial apple cultivars in Iran (supervisor)
- Preparation and characterization of active bio-nanocomposite film based on pectin-nanocellulose and its effect on the shelf life of chicken meat during refrigeration storage (advisor)
- Model determination for some physical properties of cumin with artificial neural networks (advisor)
- Genetic variability of cold storage capacity, pomology and ascorbic acid biosynthesis in some of apple (*Malus domestica* Borkh.) cultivars in Karaj (advisor)
- Investigation on genetic variability of morphologic, phonologic and pectin content of apple cultivars in Karaj (advisor)
- Investigation on morphological, pomological and phonological traits of some native apple cultivars and promising genotypes (advisor)
- Modeling the effects of grain moisture content and popping temperature on physical properties of popcorn (advisor)
- The effect of chitosan-based nanoemulsion on some of the quality characteristics of fresh strawberry fruit (*Fragaria x ananassa Duchesne*) during storage (advisor)
- Preparation of tragacanth gum-based edible film and investigating its application for extending storage life of kiwi fruit (advisor)
- The effect of two type chitosan-based nanoemulsion coating on changes of the bioactive compounds, antioxidant activity and some of the quality characteristics of orange var. Thomson and blood orange during storage (advisor)

Research Projects:

- Formation of nanofibrils from whey protein using hydrodynamic cavitation and investigating its functional properties in a food formulation (Leader)
- Preparation, optimization and characterization the antimicrobial pectin films reinforced with nanocellulose and its effect on the shelf life of meat (Leader)
- Evaluation of qualitative and quantitative properties of local apricot germplasm for introducing promising cultivars suitable for processing and fresh storage (Leader)
- Preparation and properties of biodegradable starch-clay nanocomposite films for food packaging applications (Leader)
- Preparation of powder granule from low quality date and investigating some of its physicochemical properties (Leader)
- Investigation on some physicochemical properties of Estahban dried fig in order to increase its quality and stability (Leader)
- Studying the effect of packaging with polyethylene-clay nanocomposite film on extending the shelf life of toast bread (Leader)

- Studying the effect of chitosan-based nanoemulsion coating on extending the shelf life of apple var. *Golab* (Leader)
- Preparation of cellulose-based edible films and investigating some of their physical and mechanical properties and their application to extend the shelf life of horticultural crops (Leader)
- Applying new technologies for increasing shelf-life and decreasing postharvest losses of apple var *Golab* (Leader)
- Preparation of pea protein-based products (Leader)
- Study the effects of two chitosan-based nanoemulsion coatings on extending the shelf life of Orange var. *Tamson* and blood-orange (Leader)
- Study the effects of two chitosan-based micro/nanoemulsion coatings on extending the shelf life of a *Tonekabon* local Mandarin (Leader)
- The effect of chitosan-based nanoemulsion on some of the quality characteristics of fresh strawberry fruit (*Fragaria x ananassa Duchesne*) during storage (Leader)
- Evaluation of selected Sour cherry (*Prunus cerasus* L.) genotypes in order to register and introduce superior cultivars suitable for various processing applications (Member)
- Synthesis of slow release NPK fertilizers via coating of fertilizer using starch-based polymer nanocomposites and evaluation of coated fertilizer efficiency in water, soil and tomato (Member)
- Preparation and optimization of nanoemulsion containing plant essential oils and Lactic Acid Bacteria free cell extract to induction of resistance and control of postharvest rots of apple and orange (Member)
- Production of Nutritional Snack from Date fruit (Member)
- Study the thermal properties, stability, textural properties and microscopic structure of intermediate moisture fig (Member)
- Effect of temperature and relative humidity on garlic powder stability (Member)
- Use of osmotic solutions and air drying in production of intermediate moisture fig (cv. *Sabz*) fruit (Member)
- Study the effect of chitosan-based nanoemulsion coating on extending the shelf life of fig cv. *Siah-e-Estahban* (Member)
- Study the effect of chitosan-based nanoemulsion coating on extending the shelf life of 2 moist varieties of Rutab (*Shanani* and *Kabkab*) in Fars province (Member)
- Study the effects of sodium chloride, citric acid and freezing on artificial ripening of date palm fruits (*Phoenix dactylifera* L. cv. *Shahani*) (Member)
- Detection of the adulteration in olive oil using rapid methods (Member)
- A study on malting characteristics of three seeds: barley, wheat and triticale (Advisor)
- Optimization of the production of powder from date fruit variety *Estameran* in order to use in food processing industry (Advisor)
- The evaluation of the physicochemical and thermal properties of garlic powder dried under freeze and cabinet drying (Advisor)
- Effect of modified atmosphere packaging on the shelf-life and quality of date variety *Barhee* on kharak stage (Advisor)
- Use of an edible coating based on corn zein and calcium chloride in order to improve the quality and storage life of apricot (Advisor)

- Effect of a nanoemulsion coating based on chitosan on increasing the storage life of apricot (Advisor)
- Reducing the waste and increasing the storage life of three date varieties in Khoozestan province by use of natural edible coatings based on methyl cellulose (Advisor)
- Production of a biodegradable natural composite based on wheat straw and polyethylene as a coating for food packaging and investigating its different properties (Advisor)

Papers in English:

1. Chaichi, M., Badii, F., Mohammadi, A., and Hashemi, M. 2023. Novel Bioactive Composite Films Based on Pectin-Nanocellulose-Synergistic Triple Essential Oils: Development and Characterization. *Food and Bioprocess Technology*, 16(8), 1794-1805.
2. Chaichi, M., Mohammadi, A., Badii, F., and Hashemi, M. 2021. Triple synergistic essential oils prevent pathogenic and spoilage bacteria growth in the refrigerated chicken breast meat. *Biocatalysis and Agricultural Biotechnology*, 32, 101926
3. Farrokhi, F., Badii, F., Ehsani, M.R., and Hashemi, M. 2020. Effect of pH-dependent fibrillar structure on enzymatic hydrolysis and bioactivity of nanofibrillated whey protein. *LWT-Food Science and Technology*, 131, 109709.
4. Maftoonazad, N., Badii, F., Mohamed, A., and Ramaswamy, H. 2020. Evaluation of physicochemical, thermomechanical, and structural properties of chickpea flour composite films reinforced with crystalline nanocellulose. *Journal of Applied Polymer Science*, 137(8), 48389.
5. Rafiee Darsangi, Z., Badii, F., and Salehifar, M. 2020. Optimization of the production of a self-stable powder from date fruit variety 'shahani'. *Agriculturae Conspectus Scientificus*, 85(3), 247-255
6. Mansoori, N., Majzoobi, M., Gavahian, M., Badii, F., and Farahnaky, A. 2020. Acacia gum as a natural anti-plasticizer for the production of date syrup powder: Sorption isotherms, physicochemical properties, and data modeling. *Foods*, 9(1), 50.
7. Farrokhi, F., Badii, F., Ehsani, M.R., and Hashemi, M. 2019. Functional and thermal properties of nanofibrillated whey protein isolate as functions of denaturation temperature and solution pH. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 583, 124002.
8. Chaichi, M., Badii, F., Mohammadi, A., and Hashemi, M. 2019. Water resistance and mechanical properties of low methoxy-pectin nanocomposite film responses to interactions of Ca²⁺ ions and glycerol concentrations as crosslinking agents. *Food Chemistry*, 293, 429-437.
9. Farrokhi, F., Ehsani, M.R. Badii, F., and Hashemi, M. 2018. Structural and thermal properties of nanofibrillated whey protein isolate in the glassy state. *LWT-Food Science and Technology*, 96, 274-281.
10. Farrokhi, F., Ehsani, M.R. Badii, F., and Hashemi, M. 2020. Effect of pH on Structural Properties of Heat-Induced Whey Protein Gels. *Journal of Food Biosciences and Technology*, 10 (1), 57-68.
11. Chaichi, M., Hashemi, M., Badii, F., and Mohammadi, A. 2017. Preparation and characterization of a novel bionanocomposite edible film based on pectin and crystalline

- nanocellulose. *Carbohydrate Polymers*, 157, 167-175.
12. Aghababaei, A.H., Maftoonazad, N., Elhamirad, A.H., and Badii, F. 2017. Accelerated aging of wheat grains: Part I- Influence on rheological properties of wheat flour. *Journal of Cereal Science*, 77, 147-156.
 13. Aghababaei, A.H., Maftoonazad, N., Elhamirad, A.H and Badii, F. 2017. Accelerated aging of wheat grains: Part II-Influence on thermal characteristics of wheat starch and FTIR spectroscopy of gluten. *Journal of Cereal Science*, 77, 157-165.
 14. Badii, F., Atri, H., and Dunstan, D. 2016. The effect of shear on the rheology and structure of heat induced whey protein gels. *International Journal of Food Science and Technology*, 51(7), 1570-1577.
 15. Sahraei KhoshGardesh, A., Badii, F., Hashemi, M., Yasini Ardakani, A., Maftoonazad, N., and Mousapour Gorji, A. 2016. Effect of nanochitosan-based coating on climacteric behavior and postharvest shelf-life extension of Apple cv. *Golab Kohanz*. *LWT-Food Science and Technology*, 70, 33-40.
 16. Farahnaky, A., Mansoori, N., Majzoobi, M., and Badii, F. 2016. Physicochemical and sorption isotherm properties of date syrup powder: antiplasticizing effect of maltodextrin. *Food and Bioproducts Processing*, 98, 133-141.
 17. Badii, F., MacNaughtan, W., Mitchell, J.R., and Farhat, I.A. 2014. Effect of Drying Temperature on Physical Properties of Thin Gelatin Films. *Drying Technology*, 32(1, 2), 30-38.
 18. Ansari, S., Maftoon-Azad, N., Farahnaky, A., Hosseini, E., and Badii, F. 2014. Effect of moisture content on textural attributes of dried figs. *International Agrophysics*, 28, 403-412.
 19. Majzoobi, M., Beparva, P., Farahnaky, A., and Badii, F. 2014. Physicochemical properties of cross-linked wheat starch affected by L-ascorbic acid. *Journal of Agricultural Science and Technology*, 16, 355-364.
 20. Eshghi, S., Hashemi, M., Mohammadi, A., Badii, F., Mohammadhoseini, Z., and Ahmadi, K. 2014. Effect of Nanochitosan-Based Coating With and Without Copper Loaded on Physicochemical and Bioactive Components of Fresh Strawberry Fruit (*Fragaria x ananassa* Duchesne) During Storage. *Food and Bioprocess Technology*, 7, 2397-2409.
 21. Badii, F., Farahnaky, A., and Behmadi, H. 2014. Effect of storage relative humidity on physical stability of dried fig. *Journal of Food Processing and Preservation*, 38(1), 477-483.
 22. Majzoobi, M., Beparva, P., Farahnaky, A., and Badii, F. 2013. Effects of malic acid and citric acid on the functional properties of native and cross-linked wheat starches. *Starch/Starke*, 65, 1-6.
 23. Maftoonazad, N., Badii, F., and Shahamirian, M. 2013. Recent innovations in the area of edible films and coatings. *Recent Patents on Food, Nutrition & Agriculture*, 5, 201-213.
 24. Ansari, S., Farahnaky, A., Majzoobi, M., and Badii, F. 2011. Modelling the effect of glucose syrup on the moisture sorption isotherm of figs. *Food Biophysics*, 6(3), 377-389.
 25. Tarrahi, S., Hajnajari, H., and Badii, F. 2010. Comparison of pectin biosynthesis in local apple cultivar 'Azayesh' and some commercial cultivars as affected by pH and carbohydrate contents. *Acta Horticulture*, 877, 1137-1144.

26. Maftoonazad, N., and Badii, F. 2009. Use of edible films and coatings to extend the shelflife of food products. *Recent Patents on Food, Nutrition & Agriculture*, 1(2), 162-70
27. Saiedirad, M.H., Tabatabaeefar, A., Borghei, A., Mirsalehi, M., Badii, F., and Ghasemi, M. 2008. Effect of moisture content, seed size, loading rate and seed orientation on force and energy required for fracturing cumin seed (*Cuminum cyminum* Linn.) under quasi-static loading. *Journal of Food Engineering*, 86, 565-572.
28. Amini, F.L., Badii, Kh., Rastkari, N., Nabi Bidhendi, G.R., Farshchi, P., Gerayeshnejad M., and Badii, F. 2007. Bioassay on the bioaccumulation of tributyltin chloride exposure in the fish, *Scatophagus argus*, in the Persian Gulf. *International Journal of Ecology and Environmental Sciences*, 33(1), 23-28.
29. Badii, F., Martinet, C., Mitchell, J.R., and Farhat, I.A. 2006. Enthalpy and mechanical relaxation of glassy gelatin films. *Food Hydrocolloids*, 20, 879-884.
30. Badii, F., MacNaughtan, W., and Farhat, I.A. 2005. Enthalpy relaxation of gelatin in the glassy state. *International Journal of Biological Macromolecules*, 36, 263-9.
31. Farahnaky, A., Badii, F., Farhat, I.A., Mitchell, J.R., and Hill, S.E. 2004. Enthalpy relaxation of bovine serum albumin. *Biopolymers*, 78, 69-77.

Papers in Farsi:

1. Badii, F., Shavakhi, F., Bouzari, N., and Rafiee Darsangi, Z. 2023. Classification of some superior local apricot genotypes of Iran based on physical and geometrical attributes. *Journal of Food Science and Technology (Iran)*, 20 (137), 74-89.
2. Shavakhi, F., Bouzari, N., Badii, F., and Rafiee Darsangi, Z. 2022. Selection of superior local sour cherry (*Prunus cerasus* L.) genotypes of Iran for different applications of fresh consumption and processing. *Journal of Food Science and Technology (Iran)*, 19 (123), 119-132.
3. Badii, F. 2021. Role of glass transition temperature in color and textural changes of dried fig. *Journal of Food Science and Technology*, 18 (116): 221-229.
4. Farrokhi, F., Badii, F., Ehsani, M.R., and Hashemi, M. 2020. Stability of whey protein nanofibrils at different pH. *Food Engineering Research*, 19 (67), 45-62.
5. Badii, F., Maftoonazad, N., Maadani, S., and Shahamirian, M. 2019. Effect of different plasticizers on microscopic structure and browning in Estahban intermediate moisture fig cv. *Sabz. Iranian Food Science and Technology Research Journal*, 29 (2), 97-108.
6. Aghababaei, A., Maftoonazad, N., Elhamirad, A.H., and Badii, F. 2018. Optimization of the influence of accelerated aging condition on physicochemical characteristics of wheat flour. *Journal of Food Science and Technology*, 83 (15), 367-377.
7. Bayati, M.R., Rajabipour, A., Mobli, H., Eyvani, A., and Badii, F. 2016. Storability evaluation of Golab apple with acoustic and penetration methods. *Journal of Agricultural Machinery*, 6 (1), 188-200.
8. Faraji, N., Maftoonazad, N., Farahnaki, A., Badii, F., and Hoseini, E. 2014. Study the effect of different treatments in control of browning in estahban intermediate moisture fig (cv. Sabz). *Journal of Food Science and Technology*, 47 (12), 171-180.
9. Keshavarzian, F., Badii, F., Seyedain Ardebili, S.M., Hashemi, M., Ahmadi, Z., and Hosseini, S.A. 2014. Effect of packaging in polyethylene-clay nanocomposite film on

- quality and storage life of sliced bread. *Iranian Journal of Nutrition Sciences & Food Technology*, 9 (1), 93-100.
10. Majzoobi, M., Seifzadeh, N., Farahnaki, A, and Badii, F. 2014. Effect of Ultrasound on Physicochemical Properties of Wheat Starch. *Iranian Journal of Polymer Science and Technology*, 27 (1), 15-23.
 11. Mohammadhosseini, Z., Hashemi, M. Mohammadi, A., Badii, F., Eshghi, S., and Ahmadi, K. 2014. Changes of the bioactive compounds, antioxidant activity and respiration rate of blood orange during storage. *Journal of Food Science and Technology*, 43 (11), 41-52.
 12. Sarmadizadeh, D., Badii, F., Maftoonazad, N., Ehsani, M.R., and Ameri, A. 2013. Evaluating the effects of glycerol and sorbitol on the properties of edible soy protein based films using response surface methodology. *Journal of Food Science and Technology*, 40 (10), 103-116.
 13. Sarmadizadeh, D., Badii, F., Maftoonazad, N., Ehsani, M.R., and Ameri, A. 2013. Evaluating the effects of glycerol and sorbitol on the properties of edible soy protein-based films using response surface methodology. *Journal of Food Science and Technology*, 10 (40), 103-116.
 14. Mohammad hosseini, Z., Hashemi, M., Mohammadi, A., Badii, F., Eshghi, S., Ahmadi, K., and Ghanati, K. 2013. Bioactive compounds and antioxidant activity of Thomson navel orange during storage. *Iranian Journal of Nutrition Sciences & Food Technology*, 8(1), 209-217.
 15. Sadeghipour, M., Badii, F., Behmadi, H., and Bazyar, B. 2012. The effect of methyl cellulose based active edible coatings on the storage life of tomato. *Journal of Food Science and Technology*, 9 (35), 89-99.
 16. Rezaei Taghiabadi, M., Maftoonazad, N., Badii, F., Hosseini, S.E. 2012. Evaluation of factors affecting barrier, mechanical and optical properties of tragacanth gum-based edible films using Response surface methodology. *Journal of Food Science and Technology*, 9 (37), 123-134.
 17. Ameri Shahrabi, A., Badii, F. , Maftoonazad, N., and Ehsani, M. R. 2012. Evaluating the properties of edible pea protein-based films using response surface methodology. *Journal of Food Science and Technology*, 10 (38), 89-101.
 18. Ameri Shahrabi A, Badii F, Ehsani MR, Maftoonazad N, Sarmadizadeh D. 2011. Functional and thermal properties of chickpea and soy-protein concentrates and isolates. *Iranian Journal of Nutrition Sciences & Food Technology*, 6 (3), 49-58.
 19. Sarmadizadeh D, Badii F , Ehsani MR, Maftoonazad N, and Goodarzi F. 2011. Effects of soy-protein isolate coating on the properties of French fries using response surface methodology. *Iranian Journal of Nutrition Sciences & Food Technology*, 6 (2), 75-86.
 20. Saiedirad, M. H., A.Tabatabaeefar, A. and F. Badii, F. 2010. Effective factors on force and energy requirements for picking cumin seed. *Journal of Agricultural Engineering Research*, 11(2), 49-58.
 21. Saiedirad, M. H., Tabatabaeefar, A., and Badii, F. 2008. Contributing factors to the mechanical strength of cumin seed under quasi-static loading. *Journal of Agricultural Engineering Research*, 9 (3), 23-34.
 22. Daraei, F., Badii, F. Mizani, M., and Gerami, A. 2009. The effect of plasticizer on some mechanical and physico-chemical properties of methylcellulose based edible films. *Iranian Journal of Nutrition Sciences & Food Technology*, 4 (3), 47-54.

23. Mizani, M., Daraei, F., Badii, F. and Gerami, A. 2009. The influence of methylcellulose edible coating on the storage life of nectarin. *Journal of Food Technology & Nutrition*. 6 (3): 2-11.
24. Dehghan Shoar, Z., Badii, F., and Behmadi, H. 2009. Effect of glycerol addition on the mechanical and physical properties of soy protein isolate film. *Journal of Food Science and Technology*, 6 (1), 1-10.
25. Badii, F., Farahnaky, A., and Behmadi, H. 2008. Dynamic vapor sorption properties of gaz-angubin. *Journal of Agricultural Engineering Research*, 9 (1), 81-94.
26. Badii, F., Shahbake, M.A., and Madani, S. 2000. Interaction between heat, calciumchloride and 2,4-D hormone on storage life of red delicious apples. *Journal of Agricultural Engineering Research*, 5 (19), 1-8.
27. Badii, F., and Shahbake, M.A. 1999. Evaluating the effect of calcium chloride and heat treatment on quality and storage life of red delicious apple. *Journal of Iranian Agricultural Engineering Research institute*, 4 (13), 16-26.
28. Badii, F. 1998. Modified starches and their applications (an overview). *Journal of Iranian Agricultural Engineering Research institute*, 3 (10), 33-51.
29. Badii, F. 1997. Evaluating the functional properties of rice bran and soy protein concentrates. *Journal of Iranian Agricultural Engineering Research institute*, 2(7), 28-46.
30. Hamedie, M., and Badii, F. 1996. Investigation of the possibility to produce rice bran protein concentrate. *Journal of Science*, 9 (3-4), 15-30.

Papers in Conferences (In English):

1. Badii, F. Protein nanofiber as an ingredient for functional food products. Iran-Philippines International Virtual Symposium on Agricultural Nanotechnology, 18-19 November, 2021. (Resource Speaker)
2. Bayati, M.R., Rajabipou, A., Mobli, H., Eyvani, F., and Badii, F. Evaluation and comparison firmness of “Golab Apple” with two methods of acoustic and penetration during cold storage. 2016 International Conference on Food Properties (ICFP2016), Bangkok, Thailand, May 31-June 2, 2016.
3. Eshghi, S., Hashemi, M., Mohammadi, A., Badii, F., Mohammadhoseini, Z., Ahmadi, K. Chitosan nano-emulsion coating as a potential natural compound to storability and control postharvest quality of strawberry. 5th International Symposium on Food Packaging, Berlin, Germany, 14-16 November 2012.
4. Tarrahi Tabrizi, Sh., Hajnajari, H., Badii, F. Comparison of the pectin biosynthesis in Azayesh (a local apple cultivar) with some important commercial apple cultivars in Iran. 6th International Postharvest Symposium, Antalya, Turkey, 8-12 April 2009.
5. Farzaneh Kouchaki, M., Hajnajari, H., Badii, F. Genetic variability of ascorbic acid biosynthesis in native and introduced apple cultivars. 6th International Postharvest Symposium, Antalya, Turkey, 8-12 April 2009.
6. Badii, F. Mechanical relaxation of glassy gelatin films. 18th National Congress on Food Technology, Mashhad, Iran, 15-16 Oct. 2008.

7. Badii, KH., Amini, F.L., Gerayeshnejad, M., Tonekaboni, S.Z.S., Nooshin Rastkari, Badii, F., Marandi, A. Statistical investigation of effective parameters on bioaccumulation of tributyltin chloride (TBTCI) in Scat Fish in simulated environment of Persian Gulf. 2nd International Congress of Biological Sciences, Olympic Hotel, Tehran, Iran, 5-6 Feb. 2008.
8. Badii, KH., Hashemi, S.M., Ahmadi Moghadam, H., Arabi, A.M., Jebeli Moein, S., Abdoulreza, S., Badii, F. Surface Coating of Glass Reactors with Nano Titanium Dioxide for Propose of Advanced Oxidation Process of Organic Colorants in Aqueous Environments: Comparison between Surface Coatings by Polymeric Glues and Surface Preparation Methods. International Catalyst Conference, Tehran, Iran, P111., 28-30 April, 2008.
9. Badii, F., MacNaughtan, W. and Farhat, I.A. Enthalpy relaxation of gelatin in the glassy state. The First International Symposium on Delivery of Functionality in Complex Food Systems Lausanne, Switzerland: Nestle Research Center, 2005.
10. Badii, F., MacNaughtan, W. and Farhat, I.A. DSC studies of physical ageing in gelatin. Thermal Analysis & Calorimetry (TAC), John Moores University, Liverpool: Royal Society of Chemistry. 2004.
11. Shavakhi, F. and Badii, F. 2001. Investigation on the effect of harvest time on the physico-chemical properties of pear cultivars (Dutchess and Tabrizy) in Iran. International Conference on Agricultural Science and Technology (ICAST), Beijing, China, 2001.

Papers in Conferences (In Farsi):

1. Badii, F., and Hashemi, M. Production of protein nanofibers and their application in food technology. 4th Conference of Nanotechnology in Agriculture, Agricultural Biotechnology Research Institute of Iran, Karaj, Iran, 4-5 July, 2017.
2. Badii, F. Stability of dried foods during storage: Glass transition temperature (T_g) and its importance. 21th National Congress of Food Science and Technology, Shiraz University, Shiraz, Iran, 29-31 October, 2013. (Keynote Speaker)
3. Badii, F., Maftoonazad, N., Rafiee, Z., and Sharifnasab, H. Investigating the properties of nanocomposite starch films for packaging of agricultural products. 21th National Congress of Food Science and Technology, Shiraz University, Shiraz, Iran, 29-31 October, 2013.
4. Maftoonazad, N., Foroozandeh, F., Badii, F., Farahnaky, A. Hosseini, S.E. and Shahamirian, M. Study the effect of sucrose and pectin on the color changes, organoleptic and thermal properties of fig syrup. 20th National Food Congress, Sharif University of Technology, Tehran, Iran, 22-24 November, 2011.
5. Alipour, M., Farahnaky, A., Majzoobi, M. and Badii, F. Modeling the effects of grain moisture content and popping temperature on physical properties of popcorn. 20th National Food Congress, Sharif University of Technology, Tehran, Iran, 22-24 November, 2011.
6. Radi, M., Majzoobi, M., Farahnaky, A., Gamalian, J., Badii, F. Production of Cross-Linked wheat starch and evaluation of its physicochemical properties. 18th National Congress on Food Technology. Mashhad, Iran. 15-16 October 2008.
7. Badii, F. Study of effect of molecular structure on water sorption properties of thin gelatin films. 11th National Chemical Engineering. Tarbiat Modares University, Tehran, Iran. 27-29 November 2006.

8. Badii, F. Mechanical relaxation of glassy gelatin films. 18th National Congress on Food Technology. Mashhad, Iran. 15-16 October 2008.
9. Badii, F. An overview on the methods for production of minimally processed food. 11th Iranian Nutrition Congress. Shiraz University of Medical Science, Iran. 31 October-3 November 2010. (Keynote Speaker)
10. Keshavarzian, F., Badii, F., Seyedein Ardebili, M., Hashemi, M. and Hosseini, S.E. The effect of packaging with polyethylene-clay nanocomposite on the shelf life of barley bread. National Congress of Food Hygiene and safety. Shiraz, Iran. 15th November 2013.
11. Farzaneh, M., Hajnajari, H. and Badii, F. Chemical and sensory properties of three new apple cultivars in Karaj. 6th Iranian Congress on Horticultural Science. Gilan University, Iran. 12-15 July 2009.
12. Tarrahi, Sh., Hajnajari, H. and Badii, F. Investigating the correlation between pH and pectin biosynthesis of some commercial and local apple cultivars. 6th Iranian Congress on Horticultural Science. Gilan University, Iran. 12-15 July 2009.
13. Rezaei Taghiabadi, M., Maftoonazad, N., Badii, F., Hosseini, S.E. Application of tragacanth gum-based edible films for extending shelf life of kiwi fruit. 19th National Food Congress. Tehran University, Iran. 12-13 November 2010.
14. Badii, F. Improving the quality and storage life of nectarine using intermittent warming method. 12th National Congress of Food Industries. Tehran, Iran. 9-11 October 2001.

Short training courses

- How to build a knowledge enterprise in agricultural sector, 2020
- Challenges for reviewing scientific papers, 2020
- Editing scientific texts, 2019
- An introduction to business incubator, 2019
- Different types of Infographic, their applications and design, 2018
- Economic evaluation for research projects, 2017
- Reducing the agricultural waste: The main strategy for enhancing food security, 2017
- How can industry, government, and research institutes effectively collaborate on food research & development? 2016
- Technology valuation, 2015
- Nanotechnology: challenges and opportunities, 2015
- Lab safety rules and guidelines, 2015
- Production of mobile Apps for agriculture, 2015
- Methods for measuring residual toxins in raw foods, 2013
- Research project management and training on Ms-project software, 2013
- Workshop on Recent Developments in Postharvest Cares & Practices of Fresh Fruits and Vegetables, Prof. G. DiRenzo, University of Basilicata/Agricultural Engineering Research Institute, Iran, 2013
- Workshop on Recent Developments in Olive oil Extraction Plants with Reference to High Quality Olive Oil Production, Prof. G. DiRenzo, University of Basilicata/Agricultural Engineering Research Institute, Iran, 2013
- The application of PCR in food science, 2013
- Fundamentals and applications of image processing in agriculture, 2012

- Laboratory techniques used in nanotechnology and their applications in food science, 2011
- Application of response surface methodology in food science and postharvest technology researches, 2010
- Fundamental of modeling and analysis with MATLAB software, 2010
- Training on TA instruments, Mettler Toledo/Parsel CO., Tehran, 2009.
- Modeling of biological processing, 2008
- Nanotechnology in food technology, 2007
- Innovative technologies in food science, 2007
- Strategic research planning, 2006
- Practical methods for determining the quality of cereal products, 2006
- Experimental designs in agriculture and their applications in agricultural engineering research, 2006
- Fundamentals of food hydrocolloids, University of Nottingham, UK, 2005
- Introductions to design of experiments, University of Nottingham, UK, 2005
- GC Chromatography, Research Institute of Petroleum Industry, 2000
- Data Analysis, data presentation and scientific writing, ICARDA, Karaj, 1997