



Aman Mohammad ZIAIFAR

Professor, Food Process Engineering

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Google Scholar: <https://scholar.google.ca/citations?user=Gh77CyoAAAAJ&hl=en> (h index: 22)

Academic Degrees

Year	Activity	University	Supervisor	Research title (short)
2009 - 2010	Post Doc	Cargill, US company (France)	Prof. Gilles Trystram Prof. Olivier Vitrac	Modeling of oil oxidation during frying
2008 - 2009	Post Doc	AgroParisTech (France)	Prof. Bertrand Heyd	Quality of French fries during frying
2005 - 2008	PhD	AgroParisTech (France)	Prof. Francis Courtois & Prof. Gilles Trystram	Investigation of oil absorption in potato during frying
2000 - 2002	MSc	Tehran University (Iran)	Prof. Zahra Emam Djomeh	Heat and mass transfer during frying
1996 - 2000	BSc	Sabzevar University (Iran)	-	Design of tomato processing plant

Academic Levels

Year	Academic rank	University
October 2022	Professor	Gorgan University of Agricultural Sciences and Natural Resources (Iran)
January 2016	Associate professor	Gorgan University of Agricultural Sciences and Natural Resources (Iran)
Mars 2010	Assistant professor	Gorgan University of Agricultural Sciences and Natural Resources (Iran)

Teaching Experiences

Year	University	Courses
2010-2024	Gorgan University of Agricultural Sciences and Natural Resources (Iran)	PhD: Advanced transfer phenomena in foods Design of food processing devices Mathematical application in food Modeling in food engineering MSc: Food processing Transfer phenomena in foods BSc: Principles of food engineering Heat transfer Mass transfer Food plant design Computer in food engineering Canning technology Meat and fishery technology Edible oil technology Cold storage of foods
2005-2009	AgroParisTech (France)	BSc: Sterilization of food (TP Ingénieur, in French) Solid food processing (European course, in English)
2002-2004	Azad University (Iran)	BSc: English in food science Food packaging
2002-2004	Gorgan University of Agricultural Sciences and Natural Resources (Iran)	BSc: Food chemistry Food microbiology Dairy technology

Professional activities

Year	Responsibility	Organization
2022-	Expert	PreScouter (US)
2012-2018	Head of Dept. Food Process Engineering	Gorgan Univ. (Iran)
2008-	Journal reviewing	Journal of Food Process Engineering Food Review International Food Structure

Honors

Year	Honor	Award
2002	2nd place in Food Engineering PhD examination, Ministry of Science, Research, and Technology of Iran	Scholarship for 4 years of PhD study in France

Publications (Selected)

Mokhtari Z, Jafari SM, **Ziaifar** AM, Cacciotti I (2024). Extraction, purification and characterization of amylose from sago and corn: Morphological, structural and molecular comparison. *International Journal of Biological Macromolecules* (255), 128237.

Heidari F, Jafari SM, **Ziaifar** AM, Malekjani N (2023), Surface modification of silica nanoparticles by chitosan for stabilization of water-in-oil Pickering emulsions, *Carbohydrate Polymer Technologies and Applications* (6), 100381.

Arabmofrad S, Jafari SM, Lazzara G, **Ziaifar** AM, Shahiri H, Bahlakeh G, Cavallaro G, Calvino M, Nasiri Sarvi M (2023). Preparation and characterization of surface-modified montmorillonite by cationic surfactants for adsorption purposes. *Journal of Thermal Analysis and Calorimetry* (148) 13803–13814.

Ziaifar AM, Dezyani A, Mokhtari Z, Aghajanzade S, Arjeh E (2023). Response surface optimization of pulsed electric field processed kiwi–carrot juice: enzyme inactivation and evaluation of physicochemical and nutritional properties, *Journal of Food Measurement & Characterization*, <https://doi.org/10.1007/s11694-023-02164-4>.

Aghajanzadeh S, Fayaz G, Soleimani Y, **Ziaifar** AM, Turgeon S L, Khalloufi S (2023), Hornification: Lessons learned from the wood industry for attenuating this phenomenon in plant-based dietary fibers from food wastes, *Comprehensive Reviews in Food Science and Food Safety* 22 (1), 4-45.

Mohammadian N, **Ziaifar** AM, Mirzaei E, Kashaninejad M, Karami H (2023), Nondestructive technique for identifying adulteration and additives in lemon juice based on analyzing volatile organic compounds, *Processes* 11 (5), 1531.

Dezyani A, **Ziaifar** AM, Jafari SM, Aghajanzadeh S (2023), Design and manufacturing of key lime juice processing system by pulsed electric field and evaluation of its quality characteristics, *Journal of food science and technology* 19 (132), 33-49.

Heidari F, Jafari SM, **Ziaifar** AM, Malekjani N (2022), Stability and release mechanisms of double emulsions loaded with bioactive compounds: a critical review, *Advances in Colloid and Interface Science* 299, 102567.

Heidari F, Jafari SM, **Ziaifar** AM, Anton N (2022), Preparation of pickering emulsions stabilized by modified silica nanoparticles via the taguchi approach, *Pharmaceutics* 14 (8), 1561.

Naderi M, **Ziaifar** AM, Jafari SM (2022), Study of the Physicochemical and Rheological Behaviors of Hybrid Oleogels Based on Monoacylglycerol and Carboxymethyl Cellulose, *Iranian Journal of Nutrition Sciences & Food Technology* 17 (1), 65-76.

Aghajanzadeh S, **Ziaifar** AM, Verkerk R (2021), Effect of thermal and non-thermal treatments on the color of citrus juice: A review, *Food Reviews International* 39 (6), 3555-3577.

Aghajanzadeh S, Ganjeh M, Jafari SM, Kashaninejad M, **Ziaifar** AM (2020), Prediction of the changes in physicochemical properties of key lime juice during IR thermal processing by artificial neural networks, *Journal of Food and Bioprocess Engineering* 3 (2), 95-100.

Bagheri H, Kashaninejad M, **Ziaifar** AM, Aalami M (2019), Textural, color and sensory attributes of peanut kernels as affected by infrared roasting method, *Information Processing in Agriculture* 6 (2), 255-264.

Mohammadi Z, Kashaninejad M, **Ziaifar** AM, M Ghorbani (2019), Peeling of kiwifruit using infrared heating technology: A feasibility and optimization study, *LWT* 99, 128-137.

Ranjbar Nedanami A, **Ziaifar** AM, Parvini M, Kashaninejad M, Maghsoudlou Y (2018), Numerical calculation of sterilization heat penetration parameters based on initial temperature and headspace in canned nonNewtonian fluid, *Journal of Food Processing and Preservation* 42 (10), 1-8.

Rahimi D, Kashaninejad M, **Ziaifar** AM, Sadeghi AR (2018), Effect of infrared final cooking on some physico-chemical and engineering properties of partially fried chicken nugget, *Innovative Food Science & Emerging Technologies* 47, 1-8.

Touffet M, Patsioura A, **Ziaifar** AM, Eveleigh L, Vitrac O (2018), Online reconstruction of oil oxidation kinetics and reaction schemes during deep-frying by deconvolution of ATR-FTIR spectra, *Journal of Food Engineering* 224, 1-16.

Bakhshabadi H, Mirzaei H, Ghodsvali A, Jafari SM, **Ziaifar** AM (2018), The influence of pulsed electric fields and microwave pretreatments on some selected physicochemical properties of oil extracted from black cumin seed, *Food science & nutrition* 6 (1), 111-118.

- Aghajanzadeh S, **Ziaifar** AM (2018), A review of pectin methylesterase inactivation in citrus juice during pasteurization, Trends in Food Science & Technology 71, 1-12.
- Aghajanzadeh S, Kashaninejad M, **Ziaifar** AM (2017), Cloud stability of sour orange juice as affected by pectin methylesterase during come up time: Approached through fractal dimension, International Journal of Food Properties 20 (sup3), S2508-S2519.
- Aghajanzadeh S, **Ziaifar** AM, Kashaninejad M (2017), Influence of thermal treatment, homogenization and xanthan gum on physicochemical properties of watermelon juice: A response surface approach, LWT-Food Science and Technology 85, 66-74.
- Salimi A, Maghsoudou Y, Jafari SM, Sadeghi AR, Kashaninejad M, **Ziaifar** AM (2017), Stabilizing O/W Emulsions by Soy Protein Concentrate+ Maltodextrin and Optimizing the Process by Using Response Surface Methodology, Food Sci and Tech 5 (5), 97-105.
- Bakhshabadi H, Mirzaei H, Ghodsvali A, Jafari SM, **Ziaifar** AM, Farzaneh V (2017), The effect of microwave pretreatment on some physico-chemical properties and bioactivity of Black cumin seeds' oil, Industrial crops and products 97, 1-9.
- Patsioura A, **Ziaifar** AM, Smith P, Menzel A, Vitrac O (2017), Effects of oxygenation and process conditions on thermo-oxidation of oil during deep-frying, Food and Bioproducts Processing 101, 84-99.
- Aghajanzadeh S, Kashaninejad M, **Ziaifar** AM (2016), Effect of infrared heating on degradation kinetics of key lime juice physicochemical properties, Innovative Food Science & Emerging Technologies 38, 139-148.
- Bagheri H, Kashaninejad M, **Ziaifar** AM, Aalami M (2016), Novel hybridized infrared-hot air method for roasting of peanut kernels, Innovative Food Science & Emerging Technologies 37, 106-114.
- Aghajanzadeh S, **Ziaifar** AM, Kashaninejad M, Maghsoudlou Y, Esmaeilzadeh E (2016), Thermal inactivation kinetic of pectin methylesterase and cloud stability in sour orange juice, Journal of Food Engineering 185, 72-77.
- Sabaghi M, Maghsoudlou Y, Khomeiri M, **Ziaifar** AM (2015), Active edible coating from chitosan incorporating green tea extract as an antioxidant and antifungal on fresh walnut kernel, Postharvest biology and technology 110, 224-228.
- Salimi A, Maghsoudlou Y, Jafari SM, Mahoonak AS, Kashaninejad M, **Ziaifar** AM (2015), Preparation of lycopene emulsions by whey protein concentrate and maltodextrin and optimization by response surface methodology, Journal of Dispersion Science and Technology 36 (2), 274-283.
- Bakhshabadi H, Mirzaei H, Ghodsvali A, **Ziaifar** AM, Aidani E, Daraei A, Maghsoudlou M (2015), Optimization of physicochemical and aerodynamical characteristics of barley malt using Response Surface methodology, Minerva Biotecnologica 27 (1), 21-8.
- Hashemi Shahraki M, **Ziaifar** AM, Kashaninejad M, Ghorbani M (2014), Optimization of pre-fry microwave drying of French fries using response surface methodology and genetic algorithms, Journal of food processing and preservation 38 (1), 535-550.
- Courtois F, **Ziaifar** AM, Trezzani I, Trystram G (2012), Friture profonde: les interactions huile-produit, Oléagineux, Corps gras, Lipides 19 (2), 89-95 (In French).
- Ziaifar** AM, Courtois F, Trystram G (2010), Porosity development and its effect on oil uptake during frying process, Journal of Food Process Engineering 33 (2), 191-212.
- Ziaifar** AM, Heyd B, Courtois F (2009), Investigation of effective thermal conductivity kinetics of crust and core regions of potato during deep-fat frying using a modified Lees method, Journal of Food Engineering 95 (3), 373-378.
- Ziaifar** AM, Achir N, Courtois F, Trezzani I, Trystram G (2008), Review of mechanisms, conditions, and factors involved in the oil uptake phenomenon during the deep-fat frying process, international journal of food science & technology 43 (8), 1410-1423.

Congress and Meetings (Selected)

Ziaifar AM (2023), Erasmus+ Staff Training Mobility, 29 May- 2 June. Usak University, Turkey.

Sabbaghi H, **Ziaifar** AM (2013), Color quality variations of French fries during frying using image processing, 1st International e-Conference on Novel Food Processing (IECFP 2013), Ferdowsi University, Iran.

Ziaifar AM, Alfredo H, Heyd B (2009), Process parameters affecting the quality of fried potato in crust and core regions, Conference of Food Engineering CoFE09, Columbus, OH, USA.

Ziaifar AM, Heyd B, Courtois F (2009), Investigation of thermal conductivity kinetics of crust/core regions of Fried potato using a modified Lees method. 8th World Congress of Chemical Engineering, Montréal, Quebec, Canada.

Ziaifar AM, Courtois F, Trystram G (2008), Variation of porosity during frying and cooling of French fries and its relation with oil absorption. International Congress of Engineering and Food, ICEF10, Chile.

Ziaifar A M, Courtois F, Trystram G (2008), Investigation of oil physical properties affecting oil absorption during frying process, 6th Euro Fed Lipid Congress, Greece.

Book and Chapters

Ziaifar AM, Ranjbar A (2023), Thermal food process calculations (Chapter 2), in Thermal Processing of Food Products by Steam and Hot Water, Woodhead Publishing (Elsevier), 27-66.

Ziaifar AM, Ranjbar A, Aghajanzadeh S (2021), Conductive heat transfer in food processing (Chapter 9), In: Engineering Principles of Unit Operations in Food Processing, Woodhead Publishing (Elsevier), 281-313.

Aghajanzadeh S, **Ziaifar** AM (2021), Pasteurization of juices with non-thermal technologies (Chapter 2), In: Sustainable food processing and engineering challenges, Academic Press (Elsevier), 25-73.

Ziaifar AM, Heidary F (2023), Heat and Mass Transfer: A Biological Context (Ashim K. Datta, 2017), Published in Gorgan University of Agricultural Sciences and Natural Resource (Translated in Persian).

Ziaifar AM, Sabbaghi H (2018), Engineering Principles of Frying Process, Gorgan University of Agricultural Sciences and Natural Resources (In Persian).

PhD student supervised (Selected, Gorgan Univ.)

Year	Student	Thesis subject
2000-2024	Bahareh Maroufpour	Investigation of the changes in physicochemical properties of shrimps in hot air frying
2019-2023	Nasim Mohammadian	Development the E-nose to investigate the quality of lemon juice
2018-2022	Fahteme Heidari	Encapsulation and release kinetics of folic acid in Pickering double emulsion
2015-2019	Mahdi Naderi	Evaluation of rheological and physical behaviors of hybrid oleogel-based shortening
2015-2019	Adel Dezyani	Lemon juice processing by combined heat and pulse electric field
2014-2018	Sara Aghajanzadeh	Design of tomato juice processing system using infrared radiation and PEF
2013-2017	Bijan Asgari	Design of hybrid infrared-refractance window pumpkin dryer
2013-2017	Hassan Sabbaghi	Design of fuzzy controller in dehydration of apple with intermittent heating method
2012-2016	Safie Khalilan	Investigation of physical and thermal properties of eggplant during frying
2011-2015	Azade Ranjbar	Investigation of the coefficients of heat penetration in canned food using CFD

Up to 25 MSc students were supervised.

Language, software skills and sports

English (excellent), French (excellent), Persian (native), Turkmen (native)

Matlab, Comsol, Imagej, LabView

Running, Soccer, Table Tennis, Chess