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Dr. Morteza Taki was born in 17 June 1986 in Shahreza City, Isfahan province, Iran. He received his PhD degree in Agricultural Mechanization Engineering from University of Tabriz, Iran, in Febrebery 2016. He is "Associate Professors" in Agricultural Sciences and Natural Resources University of Khuzestan, Iran. His main research interests are Solar energy and Artificial Intelligence in agriculture, life cycle assessment, sustainability, modeling and optimization of energy in agricultural systems. He is associate editor of PLOS ONE journal, associate editor of Advanced in modern agriculture, editor of Frontiers in energy research and also well known as a reviewer of many scientific journals in Elsevier, Springer, Taylor and Francis, MDPI and ...

Personal web page

<https://faculty.asnrukh.ac.ir/taki/en>
<https://www.scopus.com/authid/detail.uri?authorId=54413207500>
<https://scholar.google.com/citations?user=9FWme4ohTI8C&hl=en>
<https://www.researchgate.net/profile/Morteza-Taki>
<https://publons.com/researcher/1332055/morteza-taki/>

Academic Appointment

Appointments	Duration	Academic Center
Reviewer: Journal of Cleaner Production	From 2013 until now	Elsevier Publication
Reviewer: Energy	From 2014 until now	Elsevier Publication
Reviewer: Renewable Energy	From 2013 until now	Elsevier Publication
Reviewer: Journal of Biosystems Engineering	From 2015 until now	University of Tehran
Reviewer: Science of Total Environment	From 2013 until now	Elsevier Publication
Reviewer: Journal of Agricultural Machinery	From 2015 until now	Ferdowsi University of Mashhad
Reviewer: Sustainable energy technologies and assessment	From 2016 until now	Elsevier Publication
Reviewer: Energy conversion and management	From 2016 until now	Elsevier Publication
Reviewer: Information processing in agriculture	From 2016 until now	Elsevier Publication
Reviewer: Renewable and sustainable energy reviews	From 2015 until now	Elsevier Publication
Reviewer: International journal of refrigeration	From 2017 until now	Elsevier Publication
Reviewer: Environmental and sustainability indicator	From 2018 until now	Elsevier Publication

Education

- Ph.D: Agricultural Mechanization Engineering (Energy), University of Tabriz, Iran (2005-2009).
- M.Sc: Agricultural Mechanization Engineering (Energy), University of Tabriz, Iran (2009-2011).
- B.Sc: Agricultural Mechanization Engineering, Agricultural Sciences and Natural Resources University of Khuzestan, Iran (2012-2016).

Current Teaching

Course Title	Degree	Levels	Credits
Greenhouse Technology and Management	Horticultural Sciences	M.Sc.	2
Greenhouse Management	Agricultural Mechanization Engineering	Ph.D.	2
Renewable Energy Resources	Agricultural Mechanization Engineering	BSc.	3
Principle of Energy Management	Agricultural Mechanization Engineering	BSc.	3
Principle of Simulation	Agricultural Mechanization Engineering	BSc.	3
Solar Thermal Systems	Agricultural Mechanization Engineering	BSc.	3
Energy from Non-Fossil Fuels	Agricultural Mechanization Engineering	Ph.D.	2
Energy systems modeling	Agricultural Mechanization Engineering	M.Sc.	2

Areas of Specialization and Research Interests

- Renewable Energies, recycling, exergy and environment in agriculture
- Artificial intelligent and its application in agriculture
- Simulation-modeling, controlling and energy management in greenhouse
- Soft Computing
- Heat Transfer
- Greenhouse Solar Dryers

Thesis (Supervisor and Advisor)

- Prediction the inside environment variables and energy exchange in an even-span glass greenhouse with artificial neural network and multiple linear regression models (MSc. Thesis).
- Evaluation of energy consumption and its environmental effects in the cultivation of strawberry crop with a greenhouse structure with a life cycle approach in the east of Khuzestan province (MSc. Thesis).
- Management parameters trade-off in terms of time-cost-quality and multi-objective optimization of energy-economic- environmental in production chain of onion crop (Ph.D. Thesis).
- Application of data envelopment analysis under uncertainty for evaluation and improvement of energy efficiency for kiwi fruit in Mazandaran province (MSc. Thesis).
- Modeling and assessment of energy flow in a special uneven-span greenhouse using mathematical equations (MSc. Thesis).
- Evaluation of different scenarios of municipal solid waste management using Life Cycle Assessment (LCA). (Ph.D. Thesis).
- Optimizing energy flow and investigating its effect on greenhouse gas emissions in rice fields (case study: Beyza region) (MSc. Thesis).
- Implementation and economic- technical evaluation of a smart irrigation system in greenhouse crops planting (Ph.D. Thesis).
- Energy modeling of mint drying process of a greenhouse solar dryer and with economic-environmental analysis (Ph.D. Thesis).
- Improvement of spraying efficiency through deposition modeling of spray droplets focusing on reduction of environmental impacts in citrus (Ph.D. Thesis).
- Sustainability assessment of bread supply chain in Ahvaz city (Ph.D. Thesis).
- Development and technical-economic-environmental evaluation of variable rate technology utilization in orchards spraying (Ph.D. Thesis).
- Technical-economic and environmental evaluation of using drone technology in wheat field spraying (Ph.D. Thesis).
- Optimization of energy flow in rice production and its impact on the mitigation of greenhouse gas emissions (case study: Fars Province) (MSc. Thesis).
- Technical, economic and environmental development and evaluation of a smart irrigation system in agriculture (Ph.D. Thesis).
- Design, fabrication and evaluation of a floor heating system in a nominated poultry house using biogas digester (MSc. Thesis).
- Evaluating the energy efficiency of greenhouse sweet pepper to determine best type of structures among the existing structures. (case study: Tiran and Karvan township - Isfahan) (MSc. Thesis).
- Prediction the inside variables in a conventional greenhouse and proposing an intelligent model for controlling them. Case study: Jiroft City (Ph.D. Thesis).
- Evaluating the energy efficiency and energy flow of aapple gardens by data envelopment analysis (case study: Aligudarz township- Lorestan Province) (MSc. Thesis).
- Evaluation of the energy pattern and efficiency of maize production by data envelopment analysis (Case study: Shahrekord city) (MSc. Thesis).
- Investigation the energy flow and its efficiency in fish farms of Charmahal and Bakhtiati Province using data envelopment analysis technique (MSc. Thesis).
- Assessment of energy and economic indicators and environmental impacts of apple production in Semirom region (MSc. Thesis).

Selected Publication

A. Journals Papers

1. Taki M, Ajabshirchi Y, Mahmoudi A. 2012. Prediction of output energy for wheat production using artificial neural networks in Esfahan province of Iran. *Journal of Agricultural Technology* 8(4), pp.1229-1242.
2. Abdi R, Taki M, Akbarpour M. 2012. An Analysis of Energy input-output and Emissions of Greenhouse Gases from Agricultural Productions. *International Journal of Natural and Engineering Sciences* 6 (3).
3. Taki M, Mahmoudi A, Ghasemi-Mobtaker H, Rahbari H. 2012. Energy consumption and modeling of output energy with multilayer feed-forward neural network for corn silage in Iran. *Agricultural Engineering International: CIGR Journal* 14(4), pp.93-101.
4. Ghasemi-Mobtaker H, Taki M, Salehi M, Zarei E. 2013. Application of non-parametric method to improve energy productivity and CO₂ emission for barley production in Iran. *Agricultural Engineering International: CIGR Journal* 15(4), pp.84-93.
5. Abdi R, Taki M, Jalali A. 2013. Study on energy use pattern, optimization of energy consumption and CO₂ emission for greenhouse tomato production. *International Journal of Natural and Engineering Sciences* 7(1), pp.044-052.
6. Taki M, Abdi R, Akbarpour M, Ghasemi-Mobtaker H. 2013. Energy inputs – yield relationship and sensitivity analysis for tomato greenhouse production in Iran. *Agricultural Engineering International: CIGR Journal* 15(1), pp.59-67.
7. Abdeslahi A, Taki M, Golabi M.R, Haddad M. 2013. Evaluation of energy efficiency of wheat crop by data analysis method (Case study: Mahyar plain of Shahreza city). *Journal of Agricultural Economics, University of Tehran* 7(4). (In Persian)
8. Taki M, Ajabshirchi Y, Ranjbar S.F, Rohani A, Matloobi M. 2016. Comparison between heat transfer, multiple linear regression and MLP neural network to estimate energy lost in semi-solar greenhouse- New structure. *Energy and buildings* 110, pp.314-329. <https://doi.org/10.1016/j.enbuild.2015.11.010>
9. Taki M, Ajabshirchi Y, Ranjbar S.F, Rohani A, Matloobi M. 2016. Modeling and experimental validation of heat transfer and energy consumption in an innovative greenhouse structure. *Information processing in agriculture* 3(3), pp.157-174. <https://doi.org/10.1016/j.inpa.2016.06.002>
10. Taki M, Ajabshirchi Y, Ranjbar S.F, Rohani A, Matloobi M. 2016. Application of Artificial Neural Network and multiple regression models to predict some inside environment variables in semi-solar greenhouse. *Agricultural Engineering International: CIGR Journal* 18(3), pp.29-43.
11. Ghasemi-Mobtaker H, Ajabshirchi Y, Ranjbar S.F, Matloobi M, Taki M. 2016. Estimation of Monthly Mean Daily Global Solar Radiation in Tabriz Using Empirical Models and Artificial Neural Networks. *Journal of Renewable Energy and Environment* 3(3), pp.21-30.
12. Rohani A, Taki M, Abdollahpour M. 2018. A novel soft computing model (Gaussian process regression with K-fold cross validation) for daily and monthly solar radiation forecasting (Part: I). *Renewable Energy* 115, pp.411-422. <https://doi.org/10.1016/j.renene.2017.08.061>
13. Taki M, Rohani A, Soheili-Fard F, Abdeslahi A. 2018. Assessment of energy consumption and modeling of output energy for wheat production by neural network (MLP and RBF) and Gaussian process regression (GPR) models. *Journal of cleaner production* 172, pp.3028-3041. <https://doi.org/10.1016/j.jclepro.2017.11.107>
14. Taki M, Rohani A, Rahmati-Junaidabad M. 2018. Solar thermal simulation and applications in greenhouse. *Information processing in agriculture* 5(1), pp.83-113. <https://doi.org/10.1016/j.inpa.2017.10.003>
15. Bolandnazar E, Rohani A, Taki M. 2020. Energy consumption forecasting in agriculture by artificial intelligence and mathematical models. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 42(13). <https://doi.org/10.1080/15567036.2019.1604872>
16. Yildizhan H, Taki M. 2018. Assessment of tomato production process by cumulative exergy consumption approach in greenhouse and open field conditions: Case study of Turkey. *Energy* 156, pp.401-408. <https://doi.org/10.1016/j.energy.2018.05.117>
17. Taki M, Yildizhan H. 2018. Evaluation the sustainable energy applications for fruit and vegetable productions processes; case study: Greenhouse cucumber production. *Journal of Cleaner Production* 199, pp.164-172. <https://doi.org/10.1016/j.jclepro.2018.07.136>
18. Taki M, Abdanan-Mehdizadeh S, Rohani A, Rahnama M, Rahmati-Junaidabad M. 2018. Applied machine learning in greenhouse simulation; new application and analysis. *Information processing in agriculture* 5(2), pp.253-268. <https://doi.org/10.1016/j.inpa.2018.01.003>
19. Taki M, Soheili-Fard F, Rohani A, Chen G, Yildizhan H. 2018. Life cycle assessment to compare the environmental impacts of different wheat production systems. *Journal of cleaner production* 197, pp.195-207. <https://doi.org/10.1016/j.jclepro.2018.06.173>
20. Taki M, Rohani A, Yildizhan H, Farhadi R. 2019. Energy-exergy modeling of solar radiation with most influencing input parameters. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* 41(17), pp.2128-2144. <https://doi.org/10.1080/15567036.2018.1550126>
21. Rahnama M, Kazemi N, Godarzi B, Taki M. 2019. Geothermal energy for heating and cooling in agricultural greenhouses. *Agricultural Engineering International: CIGR Journal* 20(4), pp.97-107.

22. Rohani A, Taki M, Bahrami G. 2019. Application of artificial intelligence for separation of live and dead rainbow trout fish eggs. *Artificial Intelligence in Agriculture* 1, pp.27-34. <https://doi.org/10.1016/j.aiia.2019.03.002>
23. Yildizhan H, Taki M. 2019. Sustainable management and conservation of resources for different wheat production processes; cumulative exergy consumption approach. *International Journal of Exergy* 28(4), pp.404-422. <https://doi.org/10.1504/IJEX.2019.099295>
24. Naderi S.A, Lotfalian-Dehkordi, A, Taki M. 2019. Energy and environmental evaluation of greenhouse bell pepper production with life cycle assessment approach. *Environmental and Sustainability Indicators* 3, p.100011. <https://doi.org/10.1016/j.indic.2019.100011>
25. Naderi S, Ghasemi-Nejad M, Taki M. 2020. Measuring the energy and environmental indices for apple (production and storage) by life cycle assessment (case study: Semirom county, Isfahan, Iran). *Environmental and Sustainability Indicators* p.100034. <https://doi.org/10.1016/j.indic.2020.100034>
26. Amini Sh, Taki M, Rohani A. 2020. Applied improved RBF neural network model for predicting the broiler output energies. *Applied Soft Computing* 87, p.106006. <https://doi.org/10.1016/j.asoc.2019.106006>
27. Farhadi R, Taki M. 2020. The energy gain reduction due to shadow inside a flat-plate solar collector. *Renewable Energy* 147, pp.730-740. <https://doi.org/10.1016/j.renene.2019.09.012>
28. Farhadi R, Taki M, Abdanan-Mehdizadeh, S. 2020. An algorithm and a flexible Fortran code for the computation of solar energy reception on a curved surface. *Sustainable Energy Technologies and Assessments* 42, p.100883. <https://doi.org/10.1016/j.seta.2020.100883>
29. Soheili-fard F, Taki M, van Zelm R. 2020. Impact of energy flow optimization on the mitigation of environmental consequences and costs in greenhouse cucumber production. *Environmental Science and Pollution Research* pp.1-13. <https://doi.org/10.1007/s11356-020-11219-8>
30. Mardani-Najafabadi M, Taki M. 2020. Robust data envelopment analysis with Monte Carlo simulation model for optimization the energy consumption in agriculture. *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects* pp.1-15. <https://doi.org/10.1080/15567036.2020.1777221>
31. Soheili-fard F, Marzban A, Ghasemi-Nejad M, Taki M, van Zelm R. 2020. Chemical footprint of pesticides used in citrus orchards based on canopy deposition and off-target losses. *Science of The Total Environment* p.139118. <https://doi.org/10.1016/j.scitotenv.2020.139118>
32. Taki M, Rohani A, Yildizhan H. 2021. Application of machine learning for solar radiation modeling. *Theoretical and Applied Climatology*. <https://doi.org/10.1007/s00704-020-03484-x>.
33. Yildizhan H, Taki M, Ozilgen M, Gorjian S. 2021. Renewable energy utilization in apple production process: A thermodynamic approach. *Sustainable Energy Technologies and Assessments* 43: 100956.
34. Farhadi R, Taki M. 2021. Determination of the Proper Distance between the Absorber Plate and One-layer Cover in Flat-plate Solar Collectors Using Numerical Method. *Agricultural Machinery* 10. (In Persian). [10.22059/ijbse.2020.299552.665292](https://doi.org/10.22059/ijbse.2020.299552.665292).
35. Fatemeh Mostashari-Rad, Hassan Ghasemi-Mobtaker, Morteza Taki, Mohammad Ghahderijani, Ali Kaab, Kwok-wing Chau, Ashkan Nabavi-Pelesaraei. 2021. Exergoenvironmental damages assessment of horticultural crops using ReCiPe2016 and cumulative exergy demand frameworks, *Journal of Cleaner Production*. 278: 123788. <https://doi.org/10.1016/j.jclepro.2020.123788>
36. Morteza Taki, Rouhollah Farhadi. 2021. Modeling the energy gain reduction due to shadow in flat-plate solar collectors; Application of artificial intelligence, *Artificial Intelligence in Agriculture*. 5: 185-195. <https://doi.org/10.1016/j.aiia.2021.08.002>
37. Soheilifard, F., Taki, M. & van Zelm, R. 2021. Impact of energy flow optimization on the mitigation of environmental consequences and costs in greenhouse cucumber production. *Environ Sci Pollut Res* 28, 8421–8433. <https://doi.org/10.1007/s11356-020-11219-8>
38. Amir Hematian, Yahya Ajabshirchi, Seyed Faramarz Ranjbar & Morteza Taki (2021) An experimental analysis of a solar-assisted heat pump (SAHP) system for heating a semisolar greenhouse, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 43:14, 1724-1744, DOI: [10.1080/15567036.2019.1663308](https://doi.org/10.1080/15567036.2019.1663308)
39. Behzad Elhami, Mahmoud Ghasemi Nejad Raini, Morteza Taki, Afshin Marzban, Mohsen Heidarisoltanabadi. 2021. Analysis and comparison of energy-economic-environmental cycle in two cultivation methods (seeding and transplanting) for onion production (case study: central parts of Iran), *Renewable Energy*. 178: 875-890. <https://doi.org/10.1016/j.renene.2021.06.117>
40. Elhami, B., Raeini, M.G.N., Taki, M., Marzban, A. and Heidarisoltanabadi, M., 2022. Optimization of energy ratio, benefit to cost and greenhouses gasses using metaheuristic techniques (genetic and particular swarm algorithms) and data envelopment analysis: Recommendations for mitigation of inputs consumption (a case crop: edible onion). *Environmental Progress & Sustainable Energy*, 41(6), p.e13889. <https://doi.org/10.1002/ep.13889>
41. Azizpanah, A., Fathi, R. and Taki, M., 2023. Eco-energy and environmental evaluation of cantaloupe production by life cycle assessment method. *Environmental Science and Pollution Research*, 30(1), pp.1854-1870. <https://doi.org/10.1007/s11356-022-22307-2>
42. Najafabadi, M.M., Sabouni, M., Azadi, H. and Taki, M., 2022. Rice production energy efficiency evaluation in north of Iran; application of Robust Data Envelopment Analysis. *Cleaner Engineering and Technology*, 6, p.100356. <https://doi.org/10.1016/j.clet.2021.100356>

43. Taki, M. and Rohani, A., 2022. Machine learning models for prediction the Higher Heating Value (HHV) of Municipal Solid Waste (MSW) for waste-to-energy evaluation. *Case Studies in Thermal Engineering*, 31, p.101823. <https://doi.org/10.1016/j.csite.2022.101823>
44. Elhami, B., Ghasemi Nejad Raeini, M., Taki, M., Marzban, A. and Heidarisoltanabadi, M., 2022. Application of classic and soft computing for modeling yield and environmental final impact in vegetable production (a case study: transplanting onion in Isfahan province, Iran). *Environmental Science and Pollution Research*, 29(23), pp.35314-35337. <https://doi.org/10.1007/s11356-022-18700-6>
45. Hesampour, R., Taki, M., Fathi, R., Hassani, M. and Halog, A., 2022. Energy-economic-environmental cycle evaluation comparing two polyethylene and polycarbonate plastic greenhouses in cucumber production (from production to packaging and distribution). *Science of the Total Environment*, 828, p.154232. <https://doi.org/10.1016/j.scitotenv.2022.154232>
46. Eqra, N., Kazemi, N., Taki, M. and Marzban, A., 2022. The evaluation-prediction of urban environmental emissions for Shiraz metropolis, Iran. *International Journal of Environmental Science and Technology*, 19(11), pp.10747-10758. <https://doi.org/10.1007/s13762-022-04258-w>
47. Abdi, M., Rohani, A., Soheilifard, F. and Taki, M., 2023. Energy optimization and its effects on the environmental repercussions of honey production. *Environmental and Sustainability Indicators*, 17, p.100230. <https://doi.org/10.1016/j.indic.2023.100230>
48. Azizpanah, A., Pourmusi, M. and Taki, M., 2023. Eco-environmental and sustainability evaluation of cucumber and sunflower productions in Iran. *Total Environment Research Themes*, 6, p.100037. <https://doi.org/10.1016/j.totert.2023.100037>
49. Daliran, A., Taki, M., Marzban, A., Rahnama, M. and Farhadi, R., 2023. Experimental evaluation and modeling the mass and temperature of dried mint in greenhouse solar dryer; Application of machine learning method. *Case Studies in Thermal Engineering*, 47, p.103048. <https://doi.org/10.1016/j.csite.2023.103048>
50. Zibaei-Rad, A., Rahmati-Joneidabad, M., Behbahani, B.A. and Taki, M., 2023. Assessing the protection mechanisms on *Enterobacter aerogenes* ATCC 13048 by potentially probiotic strain *Lactocaseibacillus casei* XN18: An experimental and modeling study. *Microbial Pathogenesis*, 181, p.106177. <https://doi.org/10.1016/j.micpath.2023.106177>
51. Mousavi, M., Taki, M., Raeini, M.G. and Soheilifard, F., 2023. Evaluation of energy consumption and environmental impacts of strawberry production in different greenhouse structures using life cycle assessment (LCA) approach. *Energy*, 280, p.128087. <https://doi.org/10.1016/j.energy.2023.128087>
52. Hosseini Monjezi P, Taki M, Abdanan Mehdizadeh S, Rohani A, Ahamed MS. 2023. Prediction of Greenhouse Indoor Air Temperature Using Artificial Intelligence (AI) Combined with Sensitivity Analysis. *Horticulturae*, 9(8):853. <https://doi.org/10.3390/horticulturae9080853>
53. Bolandnazar E, Sadrnia H, Rohani A, Marinello F, and Taki M. 2023. Application of Artificial Intelligence for Modeling the Internal Environment Condition of Polyethylene Greenhouses. *Agriculture* 13 (8) 1583. <https://doi.org/10.3390/agriculture13081583>
54. Daliran, A., Taki, M., Marzban, A., Rahnama, M., & Farhadi, R. 2023. Kinetic analysis, mathematical modeling and quality evaluation of mint drying in greenhouse solar dryer. *Thermal Science and Engineering Progress*, 46, 102252. <https://doi.org/10.1016/j.tsep.2023.102252>
55. Farvardin, M., Taki, M., Gorjian, S., Shabani, E., & Sosa-Savedra, J. C. (2024). Assessing the Physical and Environmental Aspects of Greenhouse Cultivation: A Comprehensive Review of Conventional and Hydroponic Methods. *Sustainability*, 16(3), 1273. <https://doi.org/10.3390/su16031273>
56. Zibaei-Rad, A., Rahmati-Joneidabad, M., Alizadeh Behbahani, B., & Taki, M. (2024). Probiotic-loaded seed mucilage-based edible coatings for fresh pistachio fruit preservation: an experimental and modeling study. *Scientific Reports*, 14(1), 509. <https://doi.org/10.1038/s41598-023-51129-6>
57. Behzadipour, F., Ghasemi Nezhad Raeini, M., Abdanan Mehdizadeh, S., Taki, M., Khalil Moghadam, B., Zare Bavani, M. R., & Lloret, J. (2023). A smart IoT-based irrigation system design using AI and prediction model. *Neural Computing and Applications*, 35(35), 24843-24857. <https://doi.org/10.1007/s00521-023-08987-y>
58. Rashidi, K., Azizpanah, A., Fathi, R. and Taki, M., 2024. Efficiency and Sustainability: Evaluating and Optimizing Energy Use and Environmental Impact in Cucumber Production. *Environmental and Sustainability Indicators*, p.100407. <https://doi.org/10.1016/j.indic.2024.100407>
59. Behbahani, B. A., Jooyandeh, H., Taki, M., & Falah, F. (2024). Evaluation of the probiotic, anti-bacterial, anti-biofilm, and safety properties of *Lactocaseibacillus paracasei* B31-2. *LWT*, 116676. <https://doi.org/10.1016/j.lwt.2024.116676>
60. Rahmati-Joneidabad, M., Behbahani, B. A., Taki, M., Hesarinejad, M. A., & Toker, O. S. (2024). Evaluation of the probiotic, anti-microbial, anti-biofilm, and safety properties of *Levilactobacillus brevis* Lb13H. *LWT*, 116636. <https://doi.org/10.1016/j.lwt.2024.116636>
61. Majdi, F., Alizadeh Behbahani, B., Barzegar, H., Mehrnia, M. A., & Taki, M. (2024). Active packaging coating based on *Lepidium sativum* seed mucilage and propolis extract: Preparation, characterization, application and modeling the preservation of buffalo meat. *Plos one*, 19(10), e0311802.

62. Behzadipour, F., Ghasemi-Nejad-Raeini, M., Mehdizadeh, S. A., Taki, M., Moghadam, B. K., & Bavani, M. R. Z. (2024). Optimizing water use efficiency in greenhouse cucumber cultivation: A comparative study of intelligent irrigation systems. *PloS one*, 19(10), e0311699.
63. Shahvarooghi Farahani, S., Zamanifard, H., & Taki, M. (2024). Assessing the energy load and environmental footprint of potash fertilizer production in Iran. *PloS one*, 19(11), e0313129.
64. Faradonbeh, M. Z., Barzegar, H., Hojjati, M., Behbahani, B. A., & Taki, M. (2024). Active packaging coating based on *Ocimum basilicum* seed mucilage and *Hypericum perforatum* extract: Preparation, characterization, application and modeling the preservation of ostrich meat. *Applied Food Research*, 4(2), 100524.
65. Rahmati-Joneidabad, M., Alizadeh Behbahani, B., Taki, M., Hesarinejad, M. A., & Toker, O. S. (2024). Active packaging coating based on *Ocimum basilicum* seed mucilage and probiotic *Levilactobacillus brevis* Lb13H: preparation, characterization, application and modeling the preservation of fresh strawberries fruit. *Journal of Food Measurement and Characterization*, 1-17.
66. Fathi, R., Ghasemi-Nejad Raeini, M., Abdanan Mehdizadeh, S., Taki, M., & Mardani Najafabadi, M. (2024). Comparison and Evaluation of Common Orchard Sprayers with Variable-rate Sprayers. *Journal of Agricultural Machinery*, 14(4), 405-427.
67. Daliran, A., Taki, M., Marzban, A., Rahnama, M., & Farhadi, R. (2025). Performance evaluation of greenhouse solar dryer: Energy-exergy analysis, CFD simulation and eco-environmental assessment. *Renewable Energy*, 238, 121946.
68. Behbahani, B. A., Rahmati-Joneidabad, M., & Taki, M. (2025). Examining the impact of probiotic *Lactiplantibacillus pentosus* 6MMI on inhibiting biofilm formation, adhesion, and virulence gene expression in *Listeria monocytogenes* ATCC 19115. *Biofilm*, 100255.
69. Mousavi, A., Ghasemi-Nejad-Raeini, M., Taki, M., & Elhami, B. (2025). Energy and Environmental Analysis of Different Methods for Using Bagasse from Sugarcane by Life Cycle Assessment Approach. *Sugar Tech*, 1-15.
70. Azizpanah, A., & Taki, M. (2025). Evaluating the Sustainability of Sugar Beet Production Using Life Cycle Assessment Approach. *Sugar Tech*, 27(1), 78-93.
71. Saadi, H., Behnia, M., Taki, M., & Kaab, A. (2025). A comparative study on energy use and environmental impacts in various greenhouse models for vegetable cultivation. *Environmental and Sustainability Indicators*, 25, 100553.
72. Noshad, M., Taki, M., Ghasemi, P., & Gandomani, M. P. (2025). Greenhouse solar drying of tarragon: Mathematical modeling and quality features. *Journal of Agriculture and Food Research*, 19, 101626.

B. Conference Papers

1. Bashiri A, Ajabshirchi Y, **Taki M**. 2016. Investigating the effect of appendages and double glazing on the thermal efficiency of solar air collector. Second National Conference on Mechanization and New Technologies in Agriculture, Iran.
2. **Taki M**, Rezaei E, Samadi Z, Bagholizadeh F, Ghazi-Asgar S. 2014. Types of conventional solar water heaters in Iran and their structure. National Conference on Energy Efficiency in Science and Engineering, Iran.
3. **Taki M**, Dabbagh G, Bagholizadeh F, Rezaei E, Cheraghpooran Y, Ghazi-Asgar S. 2014. Investigating the use of conventional solar water heaters in order to provide part of the heat needs of Islamic Azad University, Shahreza city. Fourth Annual National Conference on Clean Energy, Iran.
4. Akbarpour-Ghiasi R, Etefagh M, Sadeghi V, Ajabshirchi Y, **Taki M**. 2014, June. Prediction of a diesel engine exhaust gases physical properties with artificial neural network. In 2014 IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA) Proceedings (pp. 304-308). IEEE.
5. Farhadi R, **Taki M**. 2018. Investigation of factors affecting the formation of shadows in a flat panel solar collector. The first national conference on agricultural and environmental sciences in Iran, Iran.
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Award

- Top rank (8th) in the national master's exam. (National Organization of Educational Testing). 2009. Iran.
- Member of the Talent Office. University of Tabriz. 2009-2011. Iran.
- Top student. University of Tabriz. 2015-2017. Iran.

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