Parham Joolaei Ahranjani

RESEARCH INTERESTS

- Particle and interfacial technology (Colloidal systems)
- Green and bio-compatible nanocarriers
- Functional biopolymer materials

EDUCATION & QUALIFICATIONS

- **Unibz** **Bolzano, Italy**

Doctor of Philosophy (Ph.D.), Food Engineering & Biotechnology Oct. 2023 - Now
Supervisor: Prof. Dr. Ir. Ferrentino, Giovanna

Ph.D. Research Title
Development and Characterization of Pickering Emulsion to Tailor Food Functionalities.

- **KU Leuven, UGent (Joint program)** **Leuven, Belgium**

Master of Science (M.Sc.), Bioscience Engineering Sept. 2020 – Sept.2023
Supervisor: Prof. Dr. Ir. Van der Meeren, Paul

M.Sc. Thesis Title
Antioxidant properties of Thymol nanocarriers in omega-3 enriched emulsions.

- **University of Tehran** **Tehran, Iran**

Bachelor of Science (B.Sc.), Food Science and Engineering Sept. 2016 – Jul. 2020
Supervisors: Prof. Dr. Ir. Emam-Djomeh, Zahra; Prof. Dr. Askari, Gholamreza

B.Sc. Final Project Title
Extraction of Lysine Amino Acid from Sugar Factory Molasses

PUBLICATIONS

Journal Articles

- **Ahranjani, P. J.**, Scampicchio, M., & Ferrentino, G. (2025). Advancing the assessment of oxidative stability in co-stabilized zein nanoparticles and xanthan gum Pickering emulsions using isothermal calorimetry. Food Research International, 209, 116296. DOI: https://doi.org/10.1016/j.foodres.2025.116296

- Golmohammadi, G., **Joolaei Ahranjani, P.**, Sereshti, H., Dehghan, K., Sadatfaraji, H., Karami, S., & Rashidi Nodeh, H. (2025). Trace isolation and photometric determination of cadmium ions in water using thermally reduced graphene-modified hybrid sol-gel composite. Separation Science and Technology, 1-15. DOI: https://doi.org/10.1080/01496395.2025.2502753

- Joolaei Ahranjani, P., Dehghan, K., Esfandiari, Z., & **Joolaei Ahranjani, P.** (2025). A Systematic Review of Spectroscopic Techniques for Detecting Milk Adulteration. Critical reviews in analytical chemistry, 1-32. DOI: https://doi.org/10.1080/10408347.2025.2477535

- **Ahranjani, P. J.**, Esfandiari, Z., & Nodeh, H. R. (2025). A systematic review of traditional and eco-friendly methods for extracting bioactive compounds from the C. aurantium L. plant. Journal of Food Composition and Analysis, 107472. DOI: https://doi.org/10.1016/j.jfca.2025.107472

- Ahamdi, N., **Ahranjani, P. J.**, Rashidi, L., & Rezaei, K. (2025). Fortification of Sunflower Oil by Nanoemulsions Containing Vitamin-D3: Formation, Stability, and Release. Food Science & Nutrition, 13(3), e4677. DOI: https://doi.org/10.1002/fsn3.4677

- **Ahranjani, P. J.**, Dehghan, K., Farhoudi, S., Bidhendi, M. E., Korrani, Z. S., & Rezania, S. (2025). Effective removal of nitrate and phosphate ions from water using nickel-doped calcium alginate beads. Process Safety and Environmental Protection, 194, 486-496. DOI: https://doi.org/10.1016/j.psep.2024.12.034

- **Ahranjani, P. J.**, Saei, S. F., El-Hiti, G. A., Yadav, K. K., Cho, J., & Rezania, S. (2024). Magnetic carbon nanotubes doped cadmium oxide as heterogeneous catalyst for biodiesel from waste cooking oil. Chemical Engineering Research and Design, 201, 176-184. DOI: https://doi.org/10.1016/j.cherd.2023.11.059

- Peng, L., Bahadoran, A., Sheidaei, S., **Ahranjani, P. J.**, Kamyab, H., Oryani, B., ... & Rezania, S. (2024). Magnetic graphene oxide supported tin oxide (SnO) nanocomposite as a heterogeneous catalyst for biodiesel production from soybean oil. Renewable Energy, 120050. DOI: https://doi.org/10.1016/j.renene.2024.120050

- Sarabmirza, R. F., **Ahranjani, P. J.**, Rashidi, L., Mousavi, M., Khodaiyan, F., & Nodeh, H. R. (2023). An investigation on conjugated linoleic acid content, fatty acid composition, and physicochemical characteristics of Iranian Kurdish butter oil. Food Science & Nutrition, 11(2), 1051. DOI: https://doi.org/10.1002/fsn3.3142

- Jume, B. H., **Ahranjani, P. J.**, Saei, S. F., Mahmood, F. M. Z., Vasseghian, Y., & Rezania, S. (2022). Strontium titanium trioxide doped magnetic graphene oxide as a nanocatalyst for biodiesel production from waste cooking oil. Sustainable Energy Technologies and Assessments, 54, 102619. DOI: https://doi.org/10.1016/j.seta.2022.102619

- Mosleh, N., **Ahranjani, P. J.**, Parandi, E., Nodeh, H. R., Nawrot, N., Rezania, S., & Sathishkumar, P. (2022). Titanium lanthanum three oxides decorated magnetic graphene oxide for adsorption of lead ions from aqueous media. Environmental Research, 214, 113831. DOI: https://doi.org/10.1016/j.envres.2022.113831

- Mousavi, S. V., **Ahranjani, P. J.**, Saei, S. F., Mehrdadi, N., Bidhendi, G. N., Jume, B. H., ... & Mojiri, A. (2022). Ammonia removal from industrial effluent using zirconium oxide and graphene-oxide nanocomposites. Chemosphere, 297, 134008. DOI: https://doi.org/10.1016/j.chemosphere.2022.134008

- Rashidi, L., Faraji Sarabmirza, R., **Joolaei Ahranjani, P.**, Hadi Jume, B., Gholami, Z., & Rashid Nodeh, H. (2022). Dispersive clean-up process based on a magnetic graphene oxide nanocomposite for determination of 2- glycerol monopalmitate in olive oil prior to GC-FID and GC-MS analysis. Journal of the Science of Food and Agriculture, 102(3), 995-1001. DOI: https://doi.org/10.1002/jsfa.11433

- Ekrami, M., Emam-Djomeh, Z., **Joolaei-Ahranjani, P.**, Mahmoodi, S., & Khaleghi, S. (2021). Eco-friendly UV protective bionanocomposite based on Salep-mucilage/flower-like ZnO nanostructures to control photo-oxidation of kilka fish oil. International Journal of Biological Macromolecules, 168, 591-600. DOI: https://doi.org/10.1016/j.ijbiomac.2020.12.013

Book Chapter

- Ekrami, M., Ekrami, A., Moghadam, R. H., **Joolaei-Ahranjani, P.**, & Emam-Djomeh, Z. (2022). Food-based polymers for encapsulation and delivery of bioactive compounds. Biopolymers in Nutraceuticals and Functional Foods DOI: https://doi.org/10.1039/9781839168048-00488

CONFERENCE PRESENTATIONS

- **Ahranjani, P. J.**, & Ferrentino, G. (2025). Role of hydrocolloids on physical properties of zein-based Pickering emulsions: A comparative study of guar gum, xanthan gum, and gum Arabic. 14th International Colloids Conference, Abstracts.

- **Ahranjani, P. J.**, Sedaghat, D. A., & Van der Meeren, P. (2024). Antioxidant properties of thymol nanocarriers in omega-3 enriched emulsions. Food Colloids, 19th Conference, Abstracts.

- **Ahranjani, P. J.**, Ferrentino, G., Morozova, K., & Scampicchio, M. M. (2024). Oxidative stability of Pickering emulsion stabilized by zein and xanthan gum. Lipid Oxidation and Antioxidants, 5th Conference, Abstracts.

- **Ahranjani, P. J.**, Ferrentino, G., & Scampicchio, M. M. (2024). Development and characterization of Pickering emulsion to tailor food functionalities. The Developments in Research on Food Science, Technology and Biotechnology, 28th Conference, Abstract.

COMPLEMENTARY SKILLS

- **Shaping Techniques:** Electro-spinning, Microwave, Ultrasound, Ultra-turrax, Microfluidizer, Casting.
- **Computational Knowledge:** R, JMP, ANN, RSM, MATLAB, Minitab, Design-Expert, Adobe Photoshop, Adobe Premiere, MS Office, EndNote, IBM SPSS, Python, Visual Basic (VB.net).
- **Characterization Techniques:** Isothermal Calorimetry, Electron microscopy (SEM, CLSM, TEM) and Physicochemical analysis (DLS, SLS, LUMiSizer, Turbiscan, TAM, Rheometer, Texture Analyzer, Fluorescence Quenching, Zetasizer, Master Sizer, XRD, EDX, DSC, FTIR, HPLC, UPLC, GC, GC-MS, IR, UV/VIS, AFM)

LANGUAGE SKILLS

- **Persian (Farsi)**
  Native (bilingual proficiency)
- **Azerbaijani**
  Native (bilingual proficiency)
- **Turkish**
  Full working proficiency
- **English**
  Full working proficiency
- **French**
  Limited working proficiency
- **Italian**
  Limited working proficiency