

Curriculum Vitae

Arezou Fazli, Ph. D.

Family name, first name: Fazli, Arezou

Date of birth: 23/03/1992

Nationality:

Spoken languages: Persian (mother tongue), Turkish (fluent), English (fluent), French (advanced)

Email address:

Skype ID:

WeChat ID:

LinkedIn:

Twitter ID:

Researchgate:

Professional experience:

- **Present:** Post-doctoral Researcher in the Istituto Italiano di Tecnologia (IIT), Italy: Working on the synthesis of porous polymeric piezo-photocatalysts for the degradation of nanoplastics in water under the supervision of Dr. Despina Fragouli and Dr. Athanassia Athanassiou.
- **September 2021-January 2022:** Post-doctoral Researcher in the University of Clermont Auvergne, France: Working on the synthesis of sustainable photocatalysts for the degradation of harmful water pollutants under the supervision of Dr. Gilles Mailhot and Pr. Marcello Brigante.
- **2021:** Internship on the synthesis of layered double hydroxide (LDH) at Institute of Chemistry of Clermont-Ferrand with the group of Dr. Vanessa Prevot and Pr. Claude Forano.

Educational Background:

- **2017-2021 Ph. D.** in applied chemistry at University of Clermont Auvergne, Institut de Chimie de Clermont-Ferrand, F-63000 Clermont-Ferrand, France and University of Tabriz, Department of Applied Chemistry, Faculty of Chemistry, Tabriz, Iran. (*Duration: 4 years spending 2 year in Iran and two years in France/ Title of Ph.D. thesis: Synthesis of separable doped magnetite nano particles and magnetite-based nanocomposites and their application in the advanced oxidation processes for the removal of resistant pharmaceutical pollutants and microorganisms/ Supervisors: Prof. Alireza Khataee, Dr. Gilles Mailhot, and Prof. Marcello Brigante/ Overall grade: 19.95 out of 20, Publications: 4 published papers in international ISI indexed Journals*).
- **2014-2016 M.Sc.** in applied chemistry at University of Tabriz, Department of Applied Chemistry, Faculty of Chemistry, Tabriz, Iran. (*Title of MSc thesis: Investigation of the ozonation and heterogeneous catalytic ozonation processes in the presence of natural iron-based nano catalyst for the removal of various genera of algae from contaminated water/ Supervisor: Prof. Alireza Khataee/ Overall grade: 17.95 out of 20 and class ranking: 5th out of 17 students/ Publications: 3 published papers in international ISI indexed Journals*).

- 2010-2014 **B.Sc.** in applied chemistry at University of Tabriz, Department of Applied Chemistry, Faculty of Chemistry, Tabriz, Iran. (*Supervisor of final research: Prof. Alireza Khataee/ Overall grade: 15.43 out of 20, Publications: 1 published papers in international ISI indexed Journals*).

Scholarships/Awards

- Cotutelle scholarship for Ph. D from the **French Embassy of Iran**.
- One-year scholarship from **Collège de France**.
- A scholarship from **I-Site CAP 20-25** project in the University of Clermont Auvergne.
- One selected paper as the journal cover in Chemical Engineering Journal

Published papers in internationally refereed journals (English language)

1. **Fazli, A., Zakeri, F., Khataee, A. and Orooji, Y., 2022.** A BaTiO₃/WS₂ composite for piezo-photocatalytic persulfate activation and ofloxacin degradation. *Communications Chemistry*, 5(1), pp.1-14. (IF: 7.211).
2. **Fazli, A., Zakeri, F., Brigante, M., Khataee, A. and Mailhot, G., 2022.** Inactivation of harmful algal bloom by an environmentally friendly photocatalyst under photo-Fenton-like degradation process. *Journal of Cleaner Production*, p.133513. (IF: 11.07).
3. **Fazli, Arezou, Marcello Brigante, Alireza Khataee, and Gilles Mailhot.** "Fe_{2.5}Co_{0.3}Zn_{0.2}O₄/CuCr-LDH as a visible-light-responsive photocatalyst for the degradation of caffeine, bisphenol A, and simazine in pure water and real wastewater under photo-Fenton-like degradation process." *Chemosphere* 291 (2022): 132920. (IF: 8.943).
4. **Fazli, Arezou, Marcello Brigante, Alireza Khataee, and Gilles Mailhot.** "Synthesis of a magnetically separable LDH-based S-scheme nano-heterojunction for the activation of peroxymonosulfate towards the efficient visible-light photodegradation of diethyl phthalate." *Applied Surface Science* 559 (2021): 149906. (IF: 7.392).
5. **Fazli, Arezou, Alireza Khataee, Marcello Brigante, and Gilles Mailhot.** "Cubic cobalt and zinc co-doped magnetite nanoparticles for persulfate and hydrogen peroxide activation towards the effective photodegradation of Sulfalene." *Chemical Engineering Journal* 404 (2021): 126391. (IF: 16.744, Selected as the journal cover).
6. Khataee, Alireza, **Arezoo Fazli**, Fatemeh Zakeri, and Sang Woo Joo. "Synthesis of a high-performance Z-scheme 2D/2D WO₃@CoFe-LDH nanocomposite for the synchronic degradation of the mixture azo dyes by sonocatalytic ozonation process." *Journal of Industrial and Engineering Chemistry* 89 (2020): 301-315. (IF: 6.760).
7. Khataee, Alireza, Dimitrios Kalderis, Peyman Gholami, **Arezoo Fazli**, Marilena Moschogiannaki, Vasileios Binas, Maria Lykaki, and Michalis Konsolakis. "Cu₂O-CuO@ biochar composite: synthesis, characterization and its efficient photocatalytic performance." *Applied Surface Science* 498 (2019): 143846. (IF: 7.392).
8. Khataee, Alireza, **Arezoo Fazli**, Mehrangiz Fathinia, and Fatemeh Vafaei. "Preparation of martite nanoparticles through high-energy planetary ball milling and its application toward simultaneous catalytic ozonation of two green algae." *Journal of the Taiwan Institute of Chemical Engineers* 82 (2018): 80-91. (IF: 5.477).

9. Khataee, Alireza, **Arezoo Fazli**, Mehrangiz Fathinia, and Fatemeh Vafaei. "Removal of diatom *Nitzschia* sp. cells via ozonation process catalyzed by martite nanoparticles." *Journal of Cleaner Production* 186 (2018): 475-489. (IF: 11.07).
10. Khataee, Alireza, **Arezoo Fazli**, Mehrangiz Fathinia, and Fatemeh Vafaei. "Simultaneous elimination of two species of algae from a contaminated water through ozonation process: mechanism and destruction intermediates." *Ozone: Science & Engineering* 41, no. 1 (2019): 35-45. (IF: 2.66).
11. Khataee, Alireza, Samira Arefi-Oskoui, Mehrangiz Fathinia, **Arezoo Fazli**, Ali Shahedi Hojaghan, Younes Hanifehpour, and Sang Woo Joo. "Photocatalysis of sulfasalazine using Gd-doped PbSe nanoparticles under visible light irradiation: kinetics, intermediate identification and phyto-toxicological studies." *Journal of Industrial and Engineering Chemistry* 30 (2015): 134-146. (IF: 6.760).

Papers presented at the international conference

- Presented **poster** with the title of "*Utilizing iron-based nano catalyst for activation of persulfate: Implications for the degradation of sulfalene*" in the 19th European Meeting on Environmental Chemistry (EMEC 19), Clermont Ferrand, France. (3-6 December 2018).
- **Oral** presentation with the title of "*Activation of persulfate with the magnetically separable co-doped Fe₃O₄ for highly efficient degradation of a pharmaceutical pollutant*" in the French Swiss Photochemistry Symposium, France. (20-22 January. 2021).
- **Oral** presentation in 1st French-Slovak workshop on Inorganic Compounds for Environmental Applications: Synthesis, Characterization and Analysis. (14 September 2021).

Papers presented at national scientific assemblies

- **Oral** presentation with the title of "*Investigation of the efficiency of ozonation process for the removal of green algae presented in the contaminated water*" in the First Iranian Applied Chemistry Seminar, Tabriz, Iran. (22-23 August 2016).
- **Oral** presentation with the title of "*Production of martite nanoparticles by using the high-energy planetary ball milling method for using in the heterogenous catalytic ozonation process*" in the First Iranian Applied Chemistry Seminar, Tabriz, Iran. (22-23 August 2016).

Ongoing projects:

- Submitted review paper on the advanced oxidation process for the degradation of nanoplastics.
- Submitted research paper on the photo-Fenton degradation of water pollutants.
- Submitted review paper on the advancement of surface stabilized layered double hydroxides for cell-specific targeting of therapeutics

Job Experiences:

- English teacher at Simin institution of Iran from 2016-2017.
- Co-supervising of 2 students in masters from the research group of Applied Chemistry at the University of Tabriz. (2020-2021).

Skills and professional trainings:

- **Software:** High ability to work with different analyzing software such as CasaXPS, Gatan microscopy suite software, Digimizer, Jade, Origin, Microsoft office, Image Analyzer.
- **Data interpreting:** High ability in the precise interpretation of XRD, SEM, TEM, HRTEM, SAED, EDX, XPS, UPS, FTIR, VSM, DRS, LC-MS, and GC-MS analysis data.
- **Instruments:** Experiences in working and interpreting the results obtained the High-performance liquid chromatography (HPLC), Ultra Performance Liquid Chromatograph (UPLC), UV-spectroscopy, electrospinning, XRD, XPS, DLS, FT-IR and TOC, SEM and TEM instruments.
- **Trainings:** Attendance in the online workshop on proposal writing in 2020. Participating in the workshop on water management held in 2018 in Iran. Passing four-hours of lab security training.

References:

- Dr. Athanassia Athanassiou, Principal Investigator at the Istituto Italiano di Tecnologia responsible for the Smart Materials Group, Genoa, Italy, Email: Athanassia.Athanassiou@iit.it
- Dr. Despina Fragouli, Researcher of the Smart Materials group of Italian Institute of Technology, Genoa, Italy, Email: Despina.Fragouli@iit.it
- Dr. Gilles Mailhot, Director of CNRS, University of Clermont Auvergne, France, Email: gilles.mailhot@uca.fr
- Dr. Marcello Brigante, Full Professor of University of Clermont Auvergne, France, Email: marcello.brigante@uca.fr
- Dr. Alireza Khataee, Full Professor at university of Tabriz, Iran, Email: a_khataee@tabrizu.ac.ir
- Dr. Olivier Monfort, Comenius University in Bratislava, Faculty of Natural Sciences, Department of Inorganic Chemistry, Laboratory of Photoactive Materials. Email: monfort1@uniba.sk

Membership to Scientific Association:

- Member of Societe Chimique De France.