



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE ____5672____

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Scienze e Politiche Ambientali dell'Università degli Studi di Milano**

Scientist- in - charge: **Dr. Mirko Magni**

[**Pegah Roustazadeh Sheikhyousefi**]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Roustazadeh Sheikhyousefi
Name	Pegah
Date of Birth	12 April 1987

PRESENT OCCUPATION

Appointment	Structure
Post-doc Fellow (Assegnista di ricerca)	University of Padua, Department of Industrial Engineering

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Bachelor Degree	Chemical Engineering- Petrochemical Industries	Isfahan University of Technology	2009
Master Degree	Chemical Engineering- Biotechnology	Amirkabir University of Technology	2011
PhD	Chemical Engineering	Isfahan University of Technology	2018

FOREIGN LANGUAGES

Languages	level of knowledge
Persian	Mother tongue
English	Proficient user
French	Independent user
Italian	Basic user



AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2018	Ranked second amongst the graduates of the academic year in Isfahan University of Technology
2014-2015	Visiting student scholarship from Ministry of Science Research and Technology of Iran for 6 months stay at Chemistry department of Università degli studi di Milano
2011	Ranked third amongst the graduates of the academic year in Amirkabir University of Technology
2010	Financial support for top graduate students from Amirkabir University of Technology

RESEARCH ACTIVITY

<p>I'm a post-doctoral researcher specialized in chemical process engineering, waste water treatment systems, electrochemistry, modification and characterization of electrode materials, membrane-electrode assemblies and designing electrochemical cells for application in different systems of energy production or energy storage, especially in sodium batteries.</p> <p>I carried out my researches as principal investigator in the teams that I was involved in, all during my PhD, professional experience with the company that I was working with and now as post-doctoral fellow.</p> <p>While I was working as contractual assistant professor in different universities, it was also a part of my duties to supervise bachelor and master students to fulfill the requirements of their final projects and master thesis.</p> <p>Technical Expertise:</p> <p>Knowledge of common chemical and biological laboratory analysis techniques and instruments (Potentiostat, Cyclic Voltammetry, LSV, EIS, TGA, SEM, EDX, XPS, XRD, ICP, GC/MS, 16S rRNA gene PCR), basis of chemical synthesis, programming languages: MATLAB, C++, simulation software: Aspen HYSYS</p>	
Sep. 2022- now	<p>Post-doctoral research fellow, in Prof. Vito Di Noto's group, in Department of Industrial Engineering, University of Padua, Padua, Italy</p> <p>During last months of my research, I have consolidated my knowledge in secondary batteries materials, their characterization and synthesis. I am involved in a collaboration between CheMaMSE group founded by Prof. Di Noto and FZSoNick Company to modify and optimize the electrode material and solid polymer electrolyte of their commercially available sodium batteries.</p>
Sep. 2021- Mar. 2022	<p>Principal Process Engineer, in Tolou Shimi Sabzine Company, Isfahan, Iran</p> <p>I conducted some researches on enhancement of production efficiency of the stirred tank reactors for producing liquid agricultural fertilizers</p>
Sep. 2018- June 2019	<p>Contractual assistant professor, in Department of Engineering, Jahad Daneshgahi Esfahan Institute of Higher Education, Isfahan, Iran</p> <p>I guided 3 undergraduate students to fulfill their final project on reviewing different configurations of Microbial Desalination Cells (MDCs), comparing their various substrates, investigating unsolved challenges of MDC development and analyzing existing solutions for overcoming the problems. I supervised them in writing comprehensive reports as their bachelors' final projects.</p>



Feb. 2013- June 2018	<p>PhD Candidate, under the supervision of Prof. Mohsen Nasr Esfahany, in Chemical Engineering Department, Isfahan University of Technology, Isfahan, Iran</p> <p>I investigated the performance of Microbial Fuel Cells (MFCs) for treating Produced Water (PW) which is a major waste stream in oil and gas industries. I designed and fabricated various configuration of MFCs for performing both in batch and continuous operation mode. I studied the effect of Hydraulic Retention Time and external resistance on the efficiency of continuous MFC for treating PW and producing electrical current.</p>
Nov.2014- May 2015	<p>Visiting PhD student, under the supervision of Prof. Stefano Trasatti and Dr. Pierangela Cristiani, in the Department of Chemistry, University of Milan, Milan, Italy</p> <p>During a 6-months stay, I studied different membrane-cathode assemblies in the batch mode MFCs to understand the effect of platinum catalyst and Nafion membrane on the performance of these cells for both treating PW and generating electrical energy. I optimized the cathode assembly for the MFC of the proceeding phase of my doctoral studies.</p>
Sep. 2010- Sep. 2011	<p>Master student, under the supervision of Prof. Babak Bonakdarpour in the Department of Chemical Engineering, Amirkabir University of Technology, Tehran, Iran</p> <p>I studied the performance of a submerged membrane bioreactor (MBR) for lowering the level of pollutants in PW. I tested parameters like Hydraulic Retention Time and Sludge Retention Time in the MBR. I also investigated the efficiency of a halophilic oil degrading bacterial consortium which was isolated from an oil polluted media in treating synthetic PW with different levels of salinity to be applied in the aforementioned MBR.</p> <p>This study was part of a Project of Iranian Offshore Oil Company.</p>
Feb. 2009- Sep. 2009	<p>Bachelor student, under the supervision of Prof. Mohsen Nasr Esfahany, in the Department of Chemical Engineering, Isfahan University of Technology, Isfahan, Iran</p> <p>I did some experiments on enhancing convection heat transfer coefficient in a jacketed stirred tank by doping the heating media with aluminum oxide nano-powder. I tested the effect of fluid flow and flow turbulency in the jacket on the heat transfer coefficient. I also suggested a correlation for estimating heat transfer rate in the jacketed stirred tank.</p>

PROJECT ACTIVITY

Year	Project
Sep. 2022- now	Staff Member Improving cathode material and polymer solid electrolyte for FZSoNick (University of Padua, Italy)
Sep. 2010- Sep. 2011	Staff Member Designing biological waste water treatment plant for Iranian Offshore Oil Company (Amirkabir University of Technology, Iran)
Oct. 2018- Feb. 2021	Principal Engineer Designing biological waste water treatment plant for Tolou Shimi Sabzine Company (Isfahan, Iran)

CONGRESSES AND SEMINARS

Date	Title	Place
6-7 Feb. 2023	AQUA: our water, our world, our life (Attendee)	Padua, Italy



6-10 Sep. 2015	European Corrosion Congress (Eurocorr 2015) (Contribution in article for oral presentation)	Graz, Austria
16-18 Dec. 2015	European Fuel Cell Technology & Application Conference- Piero Lunghi Conference (EFC2015) (Contribution in article for oral presentation)	Naples, Italy
26-28 Dec. 2015	International Chemical Engineering Congress & Exhibition (IChEC 2015) (Contribution in oral presentation)	Shiraz, Iran
Dec. 2014	2 nd Euro-mediterranean Hydrogen Technologies Conference (Attendee)	Taormina, Italy
4-6 June 2012	International Conference on Recycling and Reuse (R&R 2012) (Contribution in article for oral presentation)	Istanbul, Turkey
21-24 Nov. 2011	International Chemical Engineering Congress & Exhibition (IChEC 2011) (Contribution in article for oral presentation)	Kish Island, Iran
23-26 May 2011	First International and 12 th Iranian Congress of Microbiology (KICM 2011) (Contribution in oral presentation)	Kermanshah, Iran

PUBLICATIONS

Articles in Journals
P. Roustazadeh Sheikhyousefi, M. Nasr Esfahany, A. Colombo, A. Franzetti, S.P. Trasatti, P. Cristiani. "Investigation of different configurations of microbial fuel cells for the treatment of oilfield produced water", Applied Energy, Volume192, 2017, P:457-465
E. Abdollahzadeh Sharghi, B. Bonakdarpour, P. Roustazadeh, M.A. Amoozegar, A.R. Rabbani. "The biological treatment of high salinity synthetic oilfield produced water in a submerged membrane bioreactor using a halophilic bacterial consortium", Journal of Chemical Technology and Biotechnology, Volume 88, 2013, P:2016-2026
Congress Proceedings
Colombo, P. Roustazadeh Sheikhyousefi, P. Cristiani, M. Nasr Esfahany, S.P. Trasatti. "Investigating the corrosion effect of high salinity oil field produced water on metal electrodes for microbial fuel cells", European Corrosion Congress (Eurocorr 2015), Graz, Austria, 6-10 September 2015
A. Colombo, P. Roustazadeh Sheikhyousefi, M. Nasr Esfahany, P. Cristiani, S.P. Trasatti. "Investigation of different configuration of MFCs for treatment of oilfield produced water", European Fuel Cell Technology & Applications Conference- Piero Lunghi Conference (EFC2015), Naples, Italy, 16-18 December 2015
P. Roustazadeh Sheikhyousefi, M. Nasr Esfahany, P. Cristiani, S. Marzorati, M. Longhi. "Comparison of utilizing nitrogen-doped carbon nanotubes and platinum as cathode catalyst on highly saline microbial fuel cell", International Chemical Engineering Congress & Exhibition (IChEC 2015), Shiraz, Iran, 26-28 December 2015
E. Abdollahzadeh sharghi, P. Roustazadeh, B. Bonakdarpour, M. A. Amoozegar, A. R. Rabbani, "The Use of a Submerged Membrane Bioreactor for the Biological Treatment of a Synthetic Oilfield Produced Water Using an Isolated Halophilic Bacterial Consortium", International Conference on Recycling and Reuse (R&R, 2012), Istanbul, Turkey, 4-6 June 2012
E. Abdollahzadeh sharghi, P. Roustazadeh, B. Bonakdarpour, A. R. Rabbani, M. A. Amoozegar, "Biological Treatment of Synthetic and Real Oilfield Produced Water of Varying Salinity Using an Isolated Halophilic Bacterial Consortium", International Chemical Engineering Congress & Exhibition (IChEC 2011), Kish Island, Iran, 21-24 November 2011



E. Abdollahzadeh Sharghi, P. Roustazadeh, B. Bonakdarpour, "Biodegradation of produced water by a consortium of isolated halophilic Microorganisms", International Congress of Microbiology (KICM 2011), Kermanshah, Iran, 23-26 May 2011
E. Abdollahzadeh Sharghi, P. Roustazadeh, B. Bonakdarpour, "Effect of high salinity on the performance of isolated halophilic microorganisms for biodegradation of produced water", International Congress of Microbiology (KICM 2011), Kermanshah, Iran, 23-26 May 2011

OTHER INFORMATION

Teaching Experiences	
Sep. 2020- June 2021	Naghshejahan University, Isfahan, Iran Teaching Introduction to pharmaceutical Engineering and Pharmaceutical Processes courses
Feb. 2018- June 2020	Jahad Daneshgahi Esfahan Institute of Higher Education: Teaching Chemical Engineering courses including Applied Mathematics for Chemical Engineers, Heat Transfer, Process Control, HYSYS and MATLAB Software Workshop
Sep. 2012- Jan. 2014	Islamic Azad University, Shareza, Iran Teaching Chemical Engineering courses including Economics of the Engineering Plan and Process Control
Feb. 2012- June 2014	Isfahan University of Technology, Isfahan, Iran Teaching Introduction to Waste Water Treatment course, Heat Transfer Laboratory, Process Control Laboratory
Professional Experiences	
Dec. 2018- May 2022	Tolou Shimi Sabzine Company, Isfahan, Iran: Employed as Chemical Process Engineer, I designed an aerobic waste treatment process for this company, and I developed a guideline for the company to minimize their environmental impacts. I conducted some researches and economical studies for improving production process, also I oversee the technicians that were integrated in my activities
Sep. 2020- June 2021	Contractual Assistant Professor, Department of Engineering, Naghshe Jahan University, Isfahan, Iran
Feb 2018- June 2020	Contractual Assistant Professor, Department of Engineering, Jahad Daneshgahi Esfahan Institute of Higher Education, Isfahan, Iran
Post-graduate International Courses	
Feb. 2015- April 2015	Department of Chemistry, University of Milan: I attended Aerosol Particulate Matter, and Practical Application of TiO ₂ Photocatalysis courses

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Please note that CV WILL BE PUBLISHED on the University website and It is recommended that personal and sensitive data should not be included. This template is realized to satisfy the need of publication without personal and sensitive data.

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Place and date: _____ Padua _____, _____ 1/03/2023 _____