

Seyed Mehran Abtahi Foroushani

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Education

- 2014 – expected April 2018** **Ph.D., Process and Environmental Engineering,**
Institut National Polytechnique, University of Toulouse, France.
- **Visiting scholar, January-August 2016**
Institute for Nanotechnology, University of Twente, the Netherlands.
- **Visiting scholar, July 2017-January 2018**
Membrane Technology Group, University of KU Leuven, Belgium
- 2006 - 2009** **M.Sc., Civil-Environmental Engineering,** GPA: 18.76 / 20
University of Tehran, Iran.
- 2001 - 2005** **B.Sc., Agricultural Engineering (Food industries & Technology),** GPA: 16.40 / 20
Khorasgan Branch, Islamic Azad University, Isfahan, Iran.

Doctoral Research

- 2014 - present** **Micropollutants (MPs) removal from effluent of municipal wastewater treatment plants:** Over the last few years, a great concern has been highlighted regarding the occurrence of MPs in aquatic resources and the subsequent effects on humans and the environment. In my PhD, a tertiary moving bed biofilm reactor (MBBR), filled with newly-introduced Z-carriers and bioaugmented by a selected bacteria, is under the sharp-eyed investigation to find the abiotic and biotic removal mechanisms of four MPs including Diclofenac, Naproxen, 4n-Nonylphenol and 17β-Estradiol from secondary-treated wastewater.
University of Toulouse
- January – August 2016** **Assessment of the MPs removal using nanofiltration membranes:** As a part of PhD project, the removal of target MPs was assessed using hollow-fiber nanofiltration membranes, made by applying layer by layer deposition technique on the surface of ultrafiltration membranes. Finally, we obtained unique membranes with a great potential in MPs removal combined with low salts removal from secondary-treated wastewater. This capability would allow us to have a low-saline concentrate stream which is more favorable for biological treatment, compared to the available commercial membranes found in the market.
University of Twente
- July 2017 – January 2018** **The capability of membrane bioreactors (MBRs) in MPs removal:** In another part of the PhD project, I am going to compare the efficiency of bioaugmented-MBRs in MPs removal with nanofiltration membranes. In general, here, we hope to find a cost-effective and environment-friendly method for MPs removal from the effluent of wastewater treatment plants.
University of KULeuven

Publications

- S. Mehran Abtahi, Maike Petermann, Agathe Juppeau Flambard, Sandra Beaufort, Fanny Terrisse, Thierry Trotouin, Claire Joannis Cassan, Claire Albasi; "Assessment of the micropollutants removal in tertiary moving bed biofilm reactors (MBBRs)." Submitted to the Journal of Bioresource Technology., 2017.
- S. Mehran Abtahi, Shazia Ilyas, Claire Joannis Cassan, Claire Albasi, Wiebe M. de Vos; "Micropollutant removal from secondary-treated municipal wastewater using weak polyelectrolyte multilayer based nanofiltration membranes." Submitted to the Journal of Membrane Science., 2017.
- Shazia Ilyas, S. Mehran Abtahi., Namik Akkilic, H.D.W. Roesink, Wiebe M. de Vos; "Weak polyelectrolyte multilayers as tunable separation layers for micro-pollutant removal by hollow fiber nanofiltration membranes". Journal of Membrane Science., 2017, Vol. 537, 220-228. (DOI: <https://doi.org/10.1016/j.memsci.2017.05.027>).
- S. Mehran Abtahi, Amin Mohammad Mehdi, Nateghi Roya, Vosough Ali, Dooranmahaleh Mehdi Gholizadeh; "Prediction of effluent COD concentration of UASB reactor using kinetic models of Monod, Contois, Second-Order

Grau and modified Stover-Kincannon". *Int. J. Env. Health. Eng.*, 2013, Vol. 1, Issue 8, 2-12. (DOI: 10.4103/2277-9183.110149.)

- S. Mehran Abtahi, Ali Torabian, Ali Vosoogh, Babak Jafari, Mehdi Gholizadeh Dooranmahaleh; "Comparison of the Monod and Kincannon-Stover models for kinetic evaluation in an Anaerobic Baffled Reactor (ABR)". *Environmental Sciences.*, 2011, Vol. 6, No.4, 55-66.
- Torabian Ali, S. Mehran Abtahi, Amin Mohammad Mehdi, Momeni Seyyed Alireza; "Treatment of Low-Strength Industrial Wastewater Using an Anaerobic Baffled Reactor (ABR)". *Iran. J. Environ. Health. Sci. Eng.*, 2010, Vol. 7, No. 3, 229-240.
- Torabian Ali, S. Mehran Abtahi, Amin Mohammad Mehdi, Momeni Seyyed Alireza; "Operation of an Anaerobic Baffled Reactor for Sulfate Removal of Amirkabir Industrial Estate Wastewater". *The Journal of Water and Wastewater (in Persian language).*, 2010, No.2 (74), Vol. 21, 19-26.

Presentations

- S. Mehran Abtahi, Shazia Ilyas, Claire Joannis Cassan, Claire Albasi, Wiebe M. de Vos; "Tertiary treatment of micropollutants using layer by layer-made nanofiltration membranes". *International Congress on Membranes and Membrane Processes (ICOM2017)*, July 29th - August 5th 2017, San Francisco, California, U.S.A.
- S. Mehran Abtahi, Maike Petermann, Agathe Juppeau Flambard, Sandra Beaufort, Fanny Terrisse, Thierry Trotouin, Claire Joannis Cassan, Claire Albasi; "The assessment of bioaugmented - moving bed biofilm reactor (MBBR) in micropollutants removal". *10th Micropol & Ecohazard Conference*, 17-20 September 2017, Vienna, Austria.
- S. Mehran Abtahi, Omid Yazdani, Iraj Hoshyari, Ehsan Mani; "Kinetic Analysis of Sulfate Removal in an Anaerobic Baffled Reactor (ABR)". *Proceedings of International Conference on Environmental Engineering and Technology (ICEET)*, World Academy of Science, Engineering and Technology 78, pp. 1396-1416, 2011, Amsterdam, Netherlands.
- Torabian Ali, Abtahi S. Mehran, Amin Mohammad Mehdi, Vosoogh Ali; "Comparison of Monod and Kincannon-Stover models for kinetic evaluation in an Anaerobic Baffled Reactor (ABR)". *Proceedings of 2nd International Conference on Water and Wastewater Treatment (ICWWT)*, April 21-22, 2010, Isfahan, Iran.

Published Book

- Gholamreza Nabi Bidhendi, Ali Vosoogh, Mehdi Gholizadeh, S. Mehran Abtahi; Translation of a book named: "*Wastewater Bacteria*", written by Gerardi Micheal H, into the Persian language; Printed by Tehran University Publications, 2011 (ISBN: 978-964-03-6213-6).

Work Experience

2010-2014 Senior expert of wastewater treatment processes,
Parsjooyab Consulting Engineering Company, Isfahan, Iran.

Honors and Awards







2014 The winner of the award of "EUDIME Fellowship", on behalf of the European Commission - Education, Audiovisual and Culture Executive Agency (EACEA) in 2014 (Doctoral contracts No. 2014-122).

Skills

- **Experimental**
 - Proficient in laboratorial experiments related to water and wastewater treatment.
 - Able to work with scanning electron microscope, epifluorescence microscope, confocal microscope, DNA extraction and qPCR, spectroscopic ellipsometer, reflectometer, optical density instrument, contact angle instrument, water filtration set-ups, etc.
- **Computer**
 - Engineering: BIOWIN.
 - Others: Microsoft Office, Adobe programs.

- **Language**
 - English: Full professional proficiency
 - French: A good command on it.
 - Persian: Native

References

- Claire ALBASI, Professor, INP-ENSIACET, CNRS, Laboratoire de Génie Chimique, Université de Toulouse, Toulouse, France.
 Email: claire.albasi@ensiacet.fr  Phone: +33 (0)6 62 17 64 65
- Wiebe DEVOS, Associate professor, Membrane Science and Technology, Faculty of Science and Technology, University of Twente, the Netherlands.
 Email: w.m.devos@utwente.nl  Phone: +31 (0)6 17 39 11 86.
- Claire JOANNIS CASSAN, Assistant Professor, INP-ENSIACET, CNRS, Laboratoire de Génie Chimique, Université de Toulouse, Toulouse, France.
 Email: claire.joanniscassan@ensiacet.fr  Phone: +33 (0)6 06 53 93 36.