



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE 4451

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 Agrarie e Ambientali - Produzione, Territorio, Agroenergia

Scientist- in - charge: Prof. Provolo

[Ali Heidarzadeh Vazifekhoran]

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Heidarzadeh Vazifekhoran
Name	Ali
Date of birth	21/04/1982

PRESENT OCCUPATION

Appointment	Structure
Seeking for a new opportunity	Former postdoc researcher in the University of Southern Denmark (SDU)

EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Bachelor(2001-2005)	Chemical Engineering	Semnan University	2005
Specialization	-	-	-
PhD (2013-2017)	Chemical Engineering	University of Southern Denmark	2017
Master (2005-2008)	Chemical Engineering	Tarbiat Modares University	2008
Degree of medical specialization	-	-	-
Degree of European specialization	-	-	-
Other	-	-	-



REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
-	-	-

FOREIGN LANGUAGES

Languages	level of knowledge
English	Fluent
Azerbaijani	Fluent
Danish	Basic
Arabic	Basic

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
-	-

TRAINING OR RESEARCH ACTIVITY

<p>description of activity</p> <p>2017-2019: Postdoc researcher (Full-time job), Department of Chemical Engineering, Biotechnology and Environmental Technology, University of Southern Denmark, Odense, Denmark</p> <ul style="list-style-type: none">Task: Valorization of organic residues and wastes; Supporting researchers, master and bachelor candidates in the related sub-projects <p>2009-2013: Research scientist (Full-time job), Biotechnology Institute of Tehran, Tehran, Iran</p> <ul style="list-style-type: none">Task: Development of aerobic and anaerobic microbial processes for production of different bioproducts; Enzymatic removal of phenolic compounds and wastewater treatment <p>2008-2009: Research assistant (Part-time job), Tarbiat Modares University, Tehran, Iran</p> <ul style="list-style-type: none">Internship/Project: Optimization of aerobic process for high cell density cultivation and microbial production of polyhydroxybutyrate from methanol in fed-batch mode
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PROJECT ACTIVITY

Year	Project
2013-2017	PhD project at the Department of Chemical Engineering, Biotechnology and Environmental Technology, University of Southern Denmark, Odense, Denmark: Characterization of the organic pools in biomass and the related biochemical methane



	potential
2006-2008	Master project at the Department of Chemical Engineering, Tarbiat Modares University, Tehran, Iran: Optimization of culture medium for microbial production of polyhydroxybutyrate from methanol in batch mode
2004-2005	Bachelor project at the Department of Chemical Engineering, Semnan University, Semnan, Iran: Quick freezing and freeze drying of fruit and vegetables

PATENTS

Patent
-

CONGRESSES AND SEMINARS

Date	Title	Place
-	-	-

PUBLICATIONS

Books
-

Articles in reviews
Heidarzadeh Vazifekhoran A., Triolo J. M., 2018, "A novel mathematical modelling of waste biomass decomposition to facilitate rapid methane potential prediction", <i>Journal of Cleaner Production</i> , 220: 1222-1230
Heidarzadeh Vazifekhoran A., Shin S. G., Triolo J. M., 2018, "Use of tannery wastewater as an alternative substrate and a pre-treatment medium for biogas production", <i>Bioresource Technology</i> , 258: 64-69
Heidarzadeh Vazifekhoran A., Triolo J. M., Larsen S. U., Stefanek K., Sommer S. G., 2016, "Assessment of the variability of biogas production from sugar beet silage as affected by movement and loss of the produced alcohols and organic acids", <i>Energies</i> , 9(5), 368
Larsen S. U., Hjort-Gregersen K., HeidarzadehVazifekhoran A., Triolo J. M., 2017, "Co-ensiling of straw with sugar beet leaves increases the methane yield from straw", <i>Bioresource Technology</i> , 245:106-115
Nguyen, Q. V., Jensen, L. S., Bol, R., Wu, D., Triolo, J. M., Vazifekhoran, A. H. and Bruun, S., 2017, "Biogas digester hydraulic retention time affects oxygen consumption patterns and greenhouse gas emissions after application of digestate to soil", <i>Journal of Environmental Quality</i> , 46(5):1114-1122
Boldrin A., Baral, K. R., Fitamo T. M.; Heidarzadeh Vazifekhoran A., Jensen I. G., Kjærsgaard I., Lyng K., Nguyen Q. V., Nielsen L. S., Triolo J. M., 2016, "Optimised biogas production from the co- digestion of sugar beet with pig slurry: integrating energy, GHG and economic accounting", <i>Energy</i> , 112:606-6017
Zia Mottalebipoor N., Baniyasi L., Omid M., Amoabediny G., Yazdian F., Attar H., Heydarzadeh A., Hatamian Zarami A., Sheikha M. H., 2014, "An inhibitory enzyme electrode for hydrogen sulfide detection", <i>Enzyme and Microbial Technology</i> , 63:7-12
Mokhtari-Hosseini Z. B., Vasheghani-Farahani E., Shojaosadati S. A., Karimzadeh R. and Heidarzadeh-Vazifekhoran A., 2009, "Effect of feed composition on PHB production from methanol by HCDC of



Methylobacterium extorquens (DSMZ 1340)", Journal of Chemical Technology and Biotechnology, 84:1136-1139
Mokhtari-Hosseini Z. B., Vasheghani-Farahani E., Heidarzadeh-Vazifekhoran A., Shojaosadati S. A., Karimzadeh R., Khosravi Darani K., 2009, "Statistical media optimization for growth and PHB production from methanol by a methylophilic bacterium", Bioresource Technology, 100:2436-2443
Aliofkhaezraei M., Sabour Rouhaghdam A., Heydarzadeh A., 2009, "Strong relation between corrosion resistance and nanostructure of compound layer of treated 316 austenitic stainless steel", Materials Characterization, 60:83-89
Aliofkhaezraei M., Sabour Rouhaghdam A., Heydarzadeh A., Elmkhah H., 2009, "Nanostructured layer formed on CP-Ti by plasma electrolysis (effect of voltage and duty cycle of cathodic/anodic direction)", Materials Chemistry and Physics, 113:607-612
Aliofkhaezraei M., Hassanzadeh-Tabrizi S.A., Sabour Rouhaghdam A., Heydarzadeh A., 2009, "Nanocrystalline ceramic coating on γ -TiAl by bipolar plasma electrolysis (effect of frequency, time and cathodic/anodic duty cycle)", Ceramics International, 35:2053-2059

Congress proceedings
Heidarzadeh Vazifekhoran A., Roda-Serrat M. C., El-Houri R., Triolo J. M., "Co-storage of wheat straw with alkaline or acidic waste can increase methane production", 16th World Congress on Anaerobic Digestion (AD16), Delft (The Netherlands), 23-27 June 2019
Heidarzadeh Vazifekhoran A., Triolo J. M., Larsen S. U., "Assessment of methane production from biologically and chemically pretreated straw", 4th international conference on Agricultural and Biosystems Engineering (CIGR), 26-30 June 2016
Heidarzadeh Vazifekhoran A., Triolo J. M., "Anaerobic co-digestion of pig manure and organic waste materials as affected by different hydraulic retention time", 16th International Conference-Rural- Urban Symbiosis (RAMIRAN), Hamburg (Germany), 8-10 September 2015
Larsen S. U., Hjort-Gregersen K., HeidarzadehVazifekhoran A., Triolo J. M., 2017, "Co-ensiling of straw with sugar beet leaves increases the methane yield from straw", The International Conference Progress in Biogas IV, Stuttgart (Germany), 8-11 March 2017
Triolo J. M., Vazifekhoran A. H. and Larsen S. U., 2016, "Co-ensiling as an effective biological pretreatment of lignocellulosic straw to boost biogas production", 9th Europe-Korea Conference on Science and Technology, Berlin (Germany), 27-30 July 2016
Nguyen Q. V., Vazifekhoran A. H., Wu D., Jensen L. S., Bol R., Petersen S. O., Triolo J. M., Glud R. N., Larsen M. and Bruun S., "Effects of hydraulic retention time of anaerobic co-digestion of pig slurry with agro-industrial waste on nitrous oxide emission after soil application", LivestockWaste2016: Pollution Control and Resource Recovery for the Livestock Sector NUI, Galway (Ireland), 10-12 August 2016
Triolo J. M. and Heidarzadeh Vazifekhoran A., "Lignocellulose as a key parameter on energy recovery and methane emission potential: Effect of anaerobic digestion retention time", 6th International Symposium on Energy from Biomass and Waste, Venice (Italy), 14-17 November 2016
Fitamo, T. M., Boldrin, A., Baral, K. R., Vazifekhoran, A. H., Jensen, I. G., Kjærsgaard, I., Lyng, K- A., Van Nguyen, Q., Nielsen, L. S. & Triolo, J. M., "Integration of energy, GHG and economic accounting to optimize biogas production based on co-digestion", DTU's Sustain Conference, Lyngby (Denmark), 17 December 2015
Rennuit C., Triolo J. M., Heidarzadeh A., Hafner S.D., "Solids separation from digestate and recycle for improving biogas yield: results from batch reactors", 23rd European Biomass Conference and Exhibition (EUBCE), Vienna (Austria), 1-4 June 2015
Triolo J. M., Birkmose T. S., Stefanek K., Heidarzadeh Vazifekhoran A., Sommer S. G., "Integration of



crop residues as alternative co-substrate to Danish biogas plants: Influence of ensilage”, The international Progress in Biogas III conference, Stuttgart (Germany), 10-12 September 2014
Heidarzadeh Vazifekhoran A., Triolo J. M., Larsen S. U., Stefanek K., Sommer S. G., “Effect of ensilaging on biochemical methane potential (BMP) and physiochemical characteristics of sugar beet root pulp for biogas production”, The international Progress in Biogas III conference, Stuttgart (Germany), 10-12 September 2014
Goljanian Tabrizi S., Zahmatkesh M., Heidarzadeh Vazifekhoran A., Sharifizadeh A., Amoozegar M. A., Salimi H., Sadr Mohammad Beigi S., "Evaluation of alkaline protease production in industrial culture medium by <i>Salinivibrio</i> sp. strain AF-2004", The 7th national biotechnology congress, Tehran (Iran), 12-14 September 2011
Mokhtari-Hosseini Z. B., Heidarzadeh-Vazifekhoran A., Vasheghani-Farahani E., Shojaosadati S. A., Karimzadeh R., Khosravi-Darani K., "The effect of mixed substrate on PHB production from methanol by <i>Methylobacterium extorquens</i> DSMZ 1340", 2nd international conference on environmental, industrial and applied microbiology (Bio micro world 2007), Seville (Spain), 28 November-1 December 2007
Mokhtari-Hosseini Z. B., Heidarzadeh-Vazifekhoran A., Vasheghani-Farahani E., Shojaosadati S. A., Karimzadeh R., Khosravi-Darani K., "Optimization of culture medium for <i>Methylobacterium extorquens</i> DSMZ 1340 growth", The 5th international biotechnology congress, Tehran (Iran), 24-26 November 2007
Mokhtari-Hosseini Z. B., Heidarzadeh-Vazifekhoran A., Vasheghani-Farahani E., Shojaosadati S. A., Karimzadeh R., Khosravi-Darani K., "Media selection for polyhydroxybutyrate production from methanol by <i>Methylobacterium extorquens</i> DSMZ 1338", The 5th international chemical engineering congress & exhibition (IChEC 2008), Kish island (Iran), 2-5 January 2008

OTHER INFORMATION

<p>Research areas</p> <ul style="list-style-type: none">• Anaerobic digestion and biogas production• Manure treatment and valorization of wastes• Biomass conversion and characterization• Aerobic and anaerobic bioprocess/fermentation• Bioprocess design and optimization• Environmental biotechnology• Experimental design, statistical data analysis and modelling• Greenhouse gas emission <p>Teaching and supervision in the University of Southern Denmark</p> <p>Teaching assistant:</p> <ul style="list-style-type: none">• Environmental Technology for Treatment and Management of Bio-/Wastes (MSc course)• Biorefinery (BSc course) <p>Co-supervision:</p> <ul style="list-style-type: none">• MSc thesis (Two students, 2018-2019): Biogas upgrading with hydrogen using hydrogenotrophic methanogens in a biotrickling filter• BSc thesis (2018-2019): Anaerobic digestion of food waste with mixed sludge for biogas production



- MSc thesis (2015-2016): Biogas potentials and biomass recalcitrance affected by harvest dates
- MSc thesis (2015-2016): Biogas production as an alternative treatment of tannery wastewater: potential and barriers
- MSc thesis (2015-2016): Energy recovery from organic fraction of municipal solid waste through anaerobic digestion

Computer Skills: Minitab, GraphPad Prism, Microsoft Office, RFFlow

Hobbies: Training, Trekking, Mountain Climbing, Wildlife Viewing, Cultural Events, Gardening

References

- Sven Gjedde Sommer: Professor, Department of Engineering-Air Quality Engineering, Aarhus University, Denmark. Telephone: +4593521525; Email: sgs@eng.au.dk
- Michael Evan Goodsite: Professor, Former Vice Dean at SDU TEK, Denmark. Head of School for Civil, Environmental and Mining Engineering (CEME) & Director, Innovation at the University of Adelaide, Faculty of ECMS, Australia. Telephone: +61883134320; Email: michael.goodsite@adelaide.edu.au

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.

Place and date: Iran/Tehran, 2020/01/12

SIGNATURE