



# DR. MOSTAFA RAHIMNEJAD



Babol Noshirvani University of Technology

## PROFESSOR

## PROFILE

- Date of Birth: 23/09/1980
- Marital Status: Married
- Professor of chemical engineering department of Babol Noshirvani University of Technology
- Address: Department of Chemical Engineering, Babol Noshirvani University of Technology, Babol, Iran, P.O. Box: 484, Babol, Iran
- Scopus Author ID: 23971165200
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## EDUCATION

### PH.D. 2007-2011

Ph.D. in Biotechnology-Chemical Engineering, Faculty of Chemical Engineering, University of Mazandaran, Iran. Sabbatical leave, Kangwon National University, Chuncheon, South Korea. GPA 17.5/20. Thesis title: "Fabrication and Optimization of Biological Fuel Cell"

### M.SC 2004-2007

M.Sc. in Chemical Engineering, University of Mazandaran, Iran. GPA 18.34/20 (Top student) Thesis title: "Bottom up fabrication and optimization protein nano structures as drug delivery vehicles"

### B.SC. 1999-2004

B.Sc. in Chemical Engineering, Tehran University, Tehran, Iran. Thesis title: "Consideration of antioxidant for oils"

## AWARDS

- Selected as one of the top professors at Babol Noshirvani University of Technology in 2016.
- Selected as one of the top researchers at Babol Noshirvani University of Technology in 2015.
- Winner of the Young Research Award for BIOVISION in 2013 & 2015
- Selected the best presenter in 6th Iranian Fuel Cell Seminar, Tehran, March 2013.

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- Selected the top elite researchers in Mazandran state at 2013 & 2018
  - The top Ph.D. thesis in the field of Fuel Cell in Iran, 2012.
  - Member of National Elite Foundations
  - Selected the top Ph.D. Student at Babol Noshirvani University of Technology in 2009.
  - Top student in Alumni of Faculty of Chemical Engineering, University of Mazandaran.
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## RESEARCH INTERESTS

### Industrial Biotechnology

- Biological fuel cell
  - Sensor & Biosensor
  - Purification of waste water
  - Fermentation
  - Bioethanol
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## TEACHING EXPERIENCES

1. **Genetic Engineering** (PhD), Babol Noshirvani University of Technology, Babol, Iran.
2. **Renewable Energy** (PhD & M.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
3. **Industrial Microbiology** (M.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
4. **Advanced Heat Transfer** (M.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
5. **Advanced Chemical Engineering Reaction** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.
6. **Technical Research** (M.Sc.), Mahshar Islamic Azad University, Mahshahr, Iran.
7. **Thermodynamics** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
8. **Multi component separation** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.

## EXECUTIVE ADMINISTRATIVE EXPERIENCE

9. **Mass Transfer** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
10. **Food Processing** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
11. **Biochemistry & Biotechnology** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
12. **Microbiology & QC Labaratory** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.
13. **Chemical engineering Software (Hysis)** (B.Sc.), Babol Noshirvani University of Technology, Babol, Iran.

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1. Member of the Department of Chemical Engineering Council at Babol Noshirvani University of Technology, Sept. 2015- 2019.
  2. General Head of Scientific Collaborations and International Affairs, Babol Noshirvani University of Technology, June 2016- present.
  3. Director General of the International Campus, Babol Noshirvani University of Technology, July 2014- present.
  4. Member of the University Council at Babol Noshirvani University of Technology, Sept. 2016- present.
  5. Member of the Iranian Biofuel Committee & Founder, Oct. 2014- present.
  6. Member of the Board of Founders of the Iranian Biofuel Union, 2014.
  7. Dean of Education at Department of Chemical Engineering, Babol Noshirvani University of Technology, Feb.2012- July 2014.
  8. Head of the Renewable Energies and Biofuels Research Centre, July 2011- present.

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## PUBLICATIONS

### Books:

11. Rahimnejad M., Asghary M., Fallah M., " Microbial Fuel Cell (MFC): An Innovative Technology for Wastewater Treatment and Power Generation" Book chapter (July. 2020). Pages 215-235 [https://doi.org/10.1007/978-981-13-3426-9\\_9](https://doi.org/10.1007/978-981-13-3426-9_9)

10. Tofighi A., Rahimnejad M., " Synthetic polymer-based membranes for microbial fuel cellsl" Book chapter 14 (July. 2020). Pages 309-335  
<https://doi.org/10.1016/B978-0-12-818485-1.00014-9>
9. Ezoji H., Rahimnejad M., "Nanoparticles Based (electrochemical) Sensors and Biosensors" Book chapter 12 (July. 2019).  
<https://doi.org/10.1039/9781788016292-00329>
8. Rahimnejad.M., "Theory of Heat Transfer with Forced Convection Film Flows", Translating to Persian (Sep. 2019).
7. Rahimnejad M., Asghari M., Fallah M. "Bioremediation of Industrial Waste for Environmental Safety, Volume II: Biological Agents and Methods for Industrial Waste Management", Springer, Book chapter 9 (Feb. 2015). [https://doi.org/10.1007/978-981-13-3426-9\\_9](https://doi.org/10.1007/978-981-13-3426-9_9)
6. akeri GH., · Kazemi A., Rahimnejad M., Fauzi Ismail A., Matsura T., "Separation of olefins from paraffin by membrane contactor - A Review" Book chapter 22 (Feb. 2016).
5. Rahimnejad M. and Najafpour G. "BIOCHEMICAL ENGINEERING AND BIOTECHNOLOGY, 2nd Edition", Elsevier, Book chapter 18 (Feb. 2015). <https://doi.org/10.1016/B978-0-444-63357-6.00018-3>
4. Rahimnejad M., Jahanshahi M and Najafpour G. "Fabrication and optimization of BSA nanoparticles", Lambert Academic Publishing (May. 2011).
3. Rahimnejad M., Najafpour G., and Ghoreyshi A.A. "Mass transfer in chemical engineering process", INTECH, Book chapter (June. 2011).
2. Najafpour.G., Ghoreyshi.A., Rahimnejad.M., "Microbial fuel cell", Translating to Persian (July. 2011).
1. Ghoreyshi.A., Rahimnejad.M., "Adsorption technology & design", Translating to Persian (Sep. 2007).

## PATENTS

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8. Sadeghi M. Rahimnejad M. (2020) "Biological synthesis of ZnPO<sub>4</sub> nanoparticles for medical applications" Iran Patent Iran Patent 102609
7. Zabioallahpour A., Rahimnejad M. (2020) "Electrochemical voltammetric DNA-biosensor based on MoS<sub>2</sub> and Fe<sub>2</sub>O<sub>3</sub> for determination of Gabapentin drug." Iran Patent 101960.

6. Msoudi M. Rahimnejad M., Mashkour M., "Designing and fabricating a membraneless aircathode single chamber microbial fuel cell for biological wastewater treatment and electricity generation simultaneously" Iran patent 102660
5. Ezoji H., Rahimnejad M. (2020) "Design and fabrication of a self-powered electrochemical biosensor for determination of DNA damage." Iran Patent 101971.
4. Asghari M., Raoof J., Rahimnejad M., Ojani R., (2016) "DNA biosensor for detection of genetic defects by microbial fuel cell" Iran Patent 011131.
3. Rahimnejad M., Najafpour G.D., Ghoreyshi A. and Mokhtarian M. (2010)" Production of bioelectricity by S. Putida", Iran Patent 56515.
2. Rahimnejad M., Najafpour G.D., Ghoreyshi A. and Mokhtarian M. (2010) "Continue Production of voltage and current by Saccharomyces Cerevisiae", Iran Patent 56516.
1. M., Najafpour G.D., Ghoreyshi A. and Mokhtarian M. (2009)" Continue Production of voltage and current by Saccharomyces cerevisiae", Iran Patent 55670.

## CONFERENCE AND JOURNALS

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### Journals:

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146. M. Mashkour, M. Rahimnejad, M. Mashkour, F. Soavi, "Increasing bioelectricity generation in microbial fuel cells by a high-performance cellulose-based membrane electrode assembly." Applied Energy (2021); Vol. 282, pp 116150.
145. Masodi M., Rahimnejad M., Mashkour M., "Enhancing operating capacity of microbial fuel cells by using low-cost electrodes and multi anode-cathode connections in a membrane-less configuration " International Journal of Hydrogen Energy (2020); <https://doi.org/10.1016/j.ijhydene.2020.12.019>.
144. Y. Afsharian, M. Rahimnejad, "Bioactive electrospun scaffolds for wound healing applications: A comprehensive review" Polymer Testing (2020); Vol. 93, pp 106952. <https://doi.org/10.1016/j.polymertesting.2020.106952>
143. M. Mashkour, M. Rahimnejad, M. Mashkour, F. Soavi, "Electro-polymerized polyaniline modified conductive bacterial cellulose anode for supercapacitive microbial fuel cells and studying the role of anodic biofilm in the capacitive behavior." Journal of Power Sources (2020); Vol. 478, pp 228822. <https://doi.org/10.1016/j.jpowsour.2020.228822>

143. M. Mashkour, M. Rahimnejad, M. Mashkour, F. Soavi, "Electro-polymerized polyaniline modified conductive bacterial cellulose anode for supercapacitive microbial fuel cells and studying the role of anodic biofilm in the capacitive behavior." *Journal of Power Sources* (2020); Vol. 478, pp 228822. <https://doi.org/10.1016/j.jpowsour.2020.228822>
142. E. Fallah Talooki, M. Ghorbani, M. Rahimnejad, M. Soleimani Lashkenari " Evaluation of a visible light-responsive polyaniline nanofiber-cadmium sulfide quantum dots photocathode for simultaneous hexavalent chromium reduction and electricity generation in photo-microbial fuel cell" *Journal of Electroanalytical Chemistry* (2020);  
Vol. 873, pp 114469. <https://doi.org/10.1016/j.jelechem.2020.114469>
141. Rahimnejad M., Zokhtare R., Moghadamnia A.A., Asghary M., An Electrochemical Sensor Based on Reduced Graphene Oxide Modified Carbon Paste Electrode for Curcumin Determination in Human Blood Serum." *Portugaliae Electrochimica Acta* (2020); Vol. 38 (1), pp 29-42. <http://dx.doi.org/10.4152/pea.202001029>
140. Sadeghi M., Rahimnejad M., Pourali M.," Bio-Mediated Synthesis and Characterization of Zinc Phosphate Nanoparticles Using Enterobacter aerogenes Cells for Antibacterial and Anticorrosion Applications ." *Current Pharmaceutical Biotechnology* (2020); Vol. 21(12), pp.  
1232-1241. <http://doi.org/10.2174/1389201021666200506073534>
139. Pirzadeh K., Ghoreyshi A., Rohani S., Rahimnejad M., "CO2 and N2 adsorption and separation using aminated UiO-66 and Cu 3 (BTC) 2: A comparative study " *Korean Journal of Chemical Engineering.* (2020); Vol. 37 (3), pp.513-524. <http://doi.org/10.1007/s11814-019-0433-5>
138. Rahmani A., Navidjouy N., Rahimnejad M., Alizade S., Samarghandi M.,Nematollahi D., "Effect of different concentrations of substrate in microbial fuel cells toward bioenergy recovery and simultaneous wastewater treatment " *Environmental Technology* (2020); <https://doi.org/10.1080/09593330.2020.1772374>
137. Zabihollahpour A., Rahimnejad M., Najafpour Gh., Moghadamnia A., "Recent Advances in Electroanalytical Methods for the Therapeutic Monitoring of Antiepileptic Drugs: A Comprehensive Review " *Journal of Pharmaceutical and Biomedical Analysis* (2020);  
Vol. 188 (5), pp. 113394. <https://doi.org/10.1016/j.jpba.2020.113394>
136. Nori M., Rahimnejad M., Najafpour G., Moghadamnia A., "Simultaneous Voltammetric Determination of Rizatriptan and Acetaminophen by using a Carbon Pastet Electrode Modified with NiFe2O4 Nanoparticles " *Microchimica Acta* (2020); Vol. 187, pp. 1-9. <https://doi.org/10.1007/s00604-020-04290-y>

135. Zabihollahpour A., Rahimnejad M., Najafpour Gh., Moghadamnia A., "Biomedical application of a novel nanostructured-based electrochemical platform for therapeutic monitoring of an antiepileptic drug; gabapentin " Analytical and Bioanalytical Electrochemistry (2020); Vol. 12 (4), pp. 536-552.
134. Masodi M., Rahimnejad M., Mashkour M., "Fabrication of anode electrode by a novel acrylic based graphite paint on stainless steel mesh and investigating biofilm effect on electrochemical behavior of anode in a single chamber microbial fuel cell " Electrochimica Acta (2020); Vol. 344, pp. 136168.  
<https://doi.org/10.1016/j.electacta.2020.136168>
133. Birjandi N., Younesi H., Ghoreyshi A., Rahimnejad M., "Enhanced medicinal herbs wastewater treatment in continuous flow bio-electro-Fenton operations along with power generation" Renewable Energy (2020); Vol. 155, pp. 1079-1090.  
<https://doi.org/10.1016/j.renene.2020.04.013>
132. Shabani M., Younesi H., Rahimpour A., Rahimnejad M., "A critical review on recent proton exchange membranes applied in microbial fuel cells for renewable energy recovery " Journal of Cleaner Production. (2020); Vol. 264, pp. 121446  
<https://doi.org/10.1016/j.jclepro.2020.121446>
131. Ezoji H., Rahimnejad M., Najafpour G., "Advanced Sensing Platform for Electrochemical Monitoring of the Environmental Toxin; Bisphenol A " Ecotoxicology and Environmental Safety (2020); Vol. 190, pp. 110088. <https://doi.org/10.1016/j.snb.2018.07.147>
130. Mehrabi A., Rahimnejad M., Mohammadi M., Pourali M., "Electrochemical detection of flutamide with gold electrode as an anticancer drug" Biocatalysis and Agricultural Biotechnology (2020); Vol. 22, pp. 101375.  
<https://doi.org/10.1016/j.bcab.2019.101375>
129. Mohammadpour M., Najafpour Gh., Rahimnejad M., "Heterogeneous catalyst HZSM5 in Biodiesel production from rapeseed oil in batch process " Iranian Journal of Energy and Environment (2017); Vol, 4 (46), pp.13421-13426.  
<https://doi.org/10.5829/ijee.2017.08.02.01>.
128. Pirzadeh K., Ghoreyshi A., Rohani S., Rahimnejad M., "Strong influence of amine grafting on MIL-101 (Cr) metal organic framework with exceptional CO<sub>2</sub>/N<sub>2</sub> selectivity "Industrial & Engineering Chemistry Research. (2020); Vol, 59, pp.366-378.  
<https://doi.org/10.1021/acs.iecr.9b05779>

127. Fallah M., Rahimnejad M., Asghary M., Mashkour M., " An Electrochemical sensor based on carbon paste electrode for determination of buserelin " Analytical Methods. (2020); Vol, 12 (1), pp.33-38. <https://doi.org/10.1039/C9AY01760G>
126. Nuori M., Rahimnejad M., Najafpour G., Moghadamnia A., "A Gr/ $\alpha$ Fe<sub>2</sub>O<sub>3</sub>/Carbon Paste Electrode Developed as an Electrochemical Sensor for Determination of Rizatriptan Benzoate: An Antimigraine Drug " ChemistrySelect. (2020); Vol. 4 (46), pp. 13421-13426. <https://doi.org//10.1002/slct.201902845>
125. Fallah E., Ghorbani M., Rahimnejad M., Soleymani M., "Investigating the effects of in-situ fabrication of a binder-free Co<sub>3</sub>O<sub>4</sub>- polyaniline cathode towards enhanced oxygen reduction reaction and power generation of microbial fuel cells " Journal of Synthetic Metals. (2020); Vol. 258, pp. 116225. <https://doi.org/10.1016/j.synthmet.2019.116225>
124. Rahmani A., Navidjouy N., Nematollahi D., Rahimnejad M., Leili M., Samarghandi M., Alizade S., "Application of the eco-friendly bio-anode for ammonium removal and power generation from wastewater in bio-electrochemical systems " Journal of Cleaner Production. (2020); Vol. 243, pp. 118589. [doi.org/10.1016/j.jclepro.2019.118589](https://doi.org/10.1016/j.jclepro.2019.118589)
123. Pirzadeh K., Ghoreyshi A., Rahimnejad M., "Optimization of electrochemically synthesized Cu<sub>3</sub>(BTC)<sub>2</sub> by Taguchi method for CO<sub>2</sub>/N<sub>2</sub> separation and data validation through artificial neural network (ANN) modeling " Frontiers of Chemical Science and Engineering. (2020); Vol. 14, pp. 233-247. <https://doi.org/10.1007/s11705-019-1893-1>.
122. Hejazi F., Ghoreyshi A., Rahimnejad M., "Simultaneous phenol removal and electricity generation using a hybrid Granular Activated Carbon adsorption-biodegradation process in a batch recycled tubular microbial fuel cell " Biomass and Bioenergy. (2019); Vol. 129, pp. 105336. <https://doi.org/10.1016/j.biombioe.2019.105336>
121. Shabani M., Younesi H., Rahimpour A., Rahimnejad M., "Upgrading the electrochemical performance of graphene oxide-blended sulfonated polyetheretherketone composite polymer electrolyte membrane for microbial fuel cell application " Biocatalysis and Agricultural Biotechnology. (2019); Vol. 22, pp. 101369. <https://doi.org/10.1016/j.bcab.2019.101369>
120. Asghari M., Raoof J., Rahimnejad M., Ojani R., " Usage of gold nanoparticles/multi-walled carbon nanotubes-modified CPE as a nano-bioanode for enhanced power and current generation in microbial fuel cell" Journal of the Iranian Chemical Society (2019); Vol. 16, pp. 1677-1685. <https://doi.org/10.1007/s13738-019-01645-y>.

119. Zokhtare R. and Rahimnejad M., “Investigation of New Electrochemical Sensors for Curcumin Detection: A Mini Review” *Analytical Methods*. (2019); Vol. 11 (35), pp. 4401-4409. <https://doi.org/10.1039/C9AY01352K>.
118. Zahirifar F., Rahimnejad M., Najafpour Gh., Rafid A., “Determination of Diazinon in Fruit Samples Using Electrochemical Sensor Based on Carbon Nanotubes Modified Carbon Paste Electrode” *Biocatalysis and Agricultural Biotechnology*. (2019); Vol. 20, pp. 101245. <https://doi.org/10.1016/j.bcab.2019.101245>
117. Edrisi S., Bakhshi H., Rahimnejad M., “Experimental and Thermodynamic Modeling of Quaternary Aqueous Two-Phase System of Poly Ethylene Glycol, Sodium Tartrate, Water and Penicillin G” *Journal of Solution Chemistry*. (2019); Vol. 48, pp. 1206–1221. <https://doi.org/10.1007/s10953-019-00906-x>
116. Edrisi S., Bakhshi H., Rahimnejad M., “Aqueous two-phase systems for cephalexin monohydrate partitioning using poly ethylene glycol and sodium tartrate dihydrate: Experimental and thermodynamic modeling” *Korean Journal of Chemical Engineering*. (2019); Vol. 36 (5), pp. 780-788. <https://doi.org/10.1007/s11814-019-0256-4>
115. Lashkari S.M., Kariminezhad H., Amani H., Mataji P., Rahimnejad M., “Introduction of 5-aminolevulinic acid as a theranostics agent in dentistry” *Photodiagnosis and Photodynamic Therapy*. (2019); Vol. 25, pp. 336-343. <https://doi.org/10.1016/j.pdpdt.2019.01.021>
114. Alipanahi R., Rahimnejad M., Najafpour Gh., “Improvement of sediment microbial fuel cell performances by design and application of power management system” *International Journal of Hydrogen Energy*. (2019); Vol. 44 (31), pp. 16965-16975. <https://doi.org/10.1016/j.ijhydene.2019.04.162>
113. Alipanahi R., Rahimnejad M., “Effect of different ecosystems on generated power in sediment microbial fuel cell” *Energy Research Journal*. (2019); Vol. 42 (16), pp. 4891-4897. <https://doi.org/10.1002/er.4199>.
112. Alipanahi R., Rahimnejad M., “Effect of sediment on performance of sediment microbial fuel cell.” *Shimi and Mohandes Shimi Iran* (2019) Accepted. [http://www.nsmsi.ir/article\\_33216.html](http://www.nsmsi.ir/article_33216.html) (In Persian)
111. Khalse R., Ghoreyshi A., Rahimnejad M., Esfahanian M., Mehdipour H., Khoshhal S., “Bioethanol production from *Saccharomyces cerevisiae* through conventional and membrane batch fermentation: experimental and modeling studies” *Theoretical foundation of Chemical Engineering* (2019); Vol. 53 (1), pp. 139–146. <https://doi.org/10.1134/S0040579519010081>

110. Hassan S., Grung A., Kang W., Shin B., Rahimnejad M., Jeon B., Kim J., Oh S., "Real-time monitoring of water quality of stream water using sulfur-oxidizing bacteria as bio-indicator" *Chemosphere*. (2019); Vol. 223, pp. 58-63. <https://doi.org/10.1016/j.chemosphere.2019.01.089>
109. Zabihollahpour A., Rahimnejad M., Najafpour Gh., Moghadamnia A., "Gold nanoparticle prepared by electrochemical deposition for electrochemical determination of gabapentin as an antiepileptic drug" *Electroanalytical chemistry*. (2019); Vol. 835, pp. 281-286. <https://doi.org/10.1016/j.jelechem.2019.01.039>
108. Pashaei E., Najafpour G., Jahanshahi M., Rahimnejad M., "Highly Sensitive Amperometric Sensor Based on Gold Nanoparticles Polyaniline Electrochemically Reduced Graphene Oxide Nanocomposite for Detection of Nitric Oxide" *International Journal of Engineering (IJE), IJE TRANSACTIONS B: Applications* (2018); Vol. 31 (2), pp. 188-195. <https://doi.org/10.5829/ije.2018.31.02b.01>
107. Rahimnejad M., Pirzade K., Mahdavi I., Peyghambarzade S. M. "Pb (II) removal from aqueous solution by adsorption on activated carbon from kiwi peel" *Environmental Engineering and Management Journal* (2018); Vol. 17 (6), pp. 1293–1300. <http://www.eemj.icpm.tuiasi.ro/>; <http://www.eemj.eu>,
106. Ezoji H., Rahimnejad M., "Electrochemical behavior of the endocrine disruptor bisphenol A and in situ investigation of its interaction with DNA" *Sensors & Actuators: B. Chemical.* (2018); Vol. 274, pp. 370-380.. <https://doi.org/10.1016/j.snb.2018.07.147>
105. Ivars-Barcelo F., Zuliani A., Fallah M., Mashkor M., Rahimnejad M., Luque R., "Novel Applications of Microbial Fuel Cells in Sensors and Biosensors" *Applied Science* (2018); Vol. 8, pp. 1184. <https://doi.org/10.3390/app8071184>.
104. Zokhtare R., Rahimnejad M., "A Novel Sensitive Electrochemical Sensor Based on Nickel Chloride Solution Modified Glassy Carbon Electrode for Curcumin Determination" *Electroanalysis* (2018); Vol. 30 (5), pp. 921-927. <https://doi.org/10.1002/elan.201700770>
103. Hassaninejad-Darzi S.K., Rahimnejad M., Shajie F., Shahbazi A., "Electrocatalytic Oxidation of Formaldehyde onto Carbon Paste Electrode Modified with Hydrogen Titanate Nanotubes, Including Nickel Hydroxide" *Iranian journal of science and technology* (2018); Vol. 42 (3), pp 1259-1268.
102. Pashaei E., Najafpour M., Jahanshahi M., Yazdian F., Rahimnejad M., "An electrochemical nitric oxide biosensor based on immobilized cytochrome c on a chitosan-gold nanocomposite modified gold electrode" *International Journal of Biological Macromolecules* (2018); Vol. 108, pp 250-258.

101. Tofighi A., Rahimnejad M., Ghorbani M., "Ternary nanotube  $\alpha$ -MnO<sub>2</sub>/GO/AC as an Excellent Alternative Composite Modifier for Cathode Electrode of Microbial Fuel cell" Journal of Thermal Analysis and Calorimetry (2018); Vol. 15 (12), pp. 445-453. <https://doi.org/10.1007/s10973-018-7198-7>.
100. Asghari M., Raoof J., Rahimnejad M., Ojani R., "Microbial fuel cell-based self-powered biosensing platform for determination of ketamine as an anesthesia drug in clinical serum samples" Journal of the Iranian Chemical Society (2018); Vol. 15 (12), pp. 445-453. <https://doi.org/10.1007/s13738-017-1245-3>.
99. Pirzadeh K., Ghoreyshi A., Rahimnejad M., Mohammadi M., "Electrochemical synthesis, characterization and application of a microstructure Cu<sub>3</sub>(BTC)<sub>2</sub> metal organic framework for CO<sub>2</sub> and CH<sub>4</sub> separation" Korean Journal of chemical engineering (2018); Vol. 35 (4), pp 974-978. <https://doi.org/10.1007/s11814-017-0340-6>.
98. Zare H., Najafpour G., Jahanshahi M., Rahimnejad M., Rezvani M., "High performance biosensor based on electrodeposition of silver nanoparticles on glucose oxidase-chitosan matrix for glucose detection". Advances in Environmental Biology (2017); Vol. 11 (3), pp 68-74.
97. Zare H., Najafpour G., Jahanshahi M., Rahimnejad M., Rezvani M., "Highly stable biosensor based on glucose oxidase immobilized in chitosan film for diagnosis of diabetes ". Romanian Biotechnological Letters (2017); Vol. 22 (3), pp 12611-12619.
96. Mashkor M., Rahimnejad M., Pourali S. M., Ezoji H., ElMekawy A., Pant D., "Catalytic Performance of Nano-Hybrid Graphene and Titanium Dioxide Modified Cathodes Fabricated with Facile and Green Technique in Microbial Fuel Cell "Progress in Natural Science: Materials International (2017); Vol. 27, pp 647-651. <https://doi.org/10.1016/j.pnsc.2017.11.003>
95. Zokhtare R., Rahimnejad M., Moghadamnia A.A., Asghary M., "Fabrication of electrochemical curcumin sensor based on carbon paste electrode." Journal of Applied Chemistry (2018); Vol. 47, pp 91-103. <https://doi.org/10.22075/CHEM.2018.2864> (In Persian)
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93. Fatemi S., Ghoreyshi A., Rahimnejad M., Najafpour G.D., Depak P., "Sulfide as an alternative electron donor to glucose for power generation in mediator-less microbial fuel cell." Journal Environmental Science Health Part A (2017); Vol. 52, pp 1150-1157. <https://doi.org/10.1080/10934529.2017.1342500>.

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91. Aghili F., Ghoreyshi A., Rahimpour A., Rahimnejad M., "Coating of mixed-matrix membranes with powdered activated carbon for fouling control and treatment of dairy effluent" Process Safety and Environmental Protection (2017);  
<http://dx.doi.org/10.1016/j.psep.2017.03.013>
90. Mashkor M., Rahimnejad M., Mashkor M., "Bacterial cellulose-polyaniline nano-biocomposite: A porous media hydrogel bioanode enhancing the performance of microbial fuel cell" Journal of Power Sources (2016); Vol. 325, pp 322-328.  
<https://doi.org/doi.org/10.1016/j.jpowsour.2016.06.063>.
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22. Rahimnejad M., Mokhtarian M., Najafpour G.D., Ghoreyshi A and Ramli W., "Waste water treatment and production of bioelectricity simultaneously", First International congress on advances in waste water treatment and reuse, Tehran., (Nov., 2009).
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18. Rahimnejad M., Ghasemi M., Mokhtarian M. and Zareh H., "Production of Protein Nanoparticles for Food and Drug Delivery System", International congress Of food and hygiene , Iran-Tehran, (Apr., 2009).
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11. Rahimnejad M. "Production of DME from methanol", National congress of modern research about chemical engineering, Iran-Mahshahr., (May, 2008).
10. Rashidi M and Rahimnejad M., " Investigation of different methods for separation of H<sub>2</sub>S in membrane systems", The national congress of modern research about chemical engineering, Iran-Mahshahr., (May, 2008).

9. Rashidi M and Rahimnejad M., "Increase of activity of cellulose with immobilize them on chitozane nanoparticle.", The 1th International congress on Nanobiotechnology, Iran-Jouybar., (May, 2008).
8. Rahimnejad M., Rashidi M and Mohamadi M., " Investigation of different methods for production of protein nanoparticel as drug vehicles", The 1st International Congress on Nanobiotechnology, Iran-Jouybar., (May, 2008).
7. Rahimnejad M., Jahanshahi M and Hajizadeh S." Fabrication of BSA protein nano-particle characterized by FTIR and AFM", The 1th International Congress on Nanoscience & Nantchnology Tehran., (Dec., 2006).
6. Rahimnejad M. and Jahanshahi M., "Optimize the BSA protein nano-particle characterized by FTIR and AFM", The 11th congress of chemical engineering, Tehran., (Nov., 2006).
5. Rahimnejad M. and Jahanshahi M., "Fabrication and Optimization BSA Nanoparticles as Drug Delivery Systems", The 11th congress of chemical engineering, Tehran, (Nov., 2006).
4. Jahanshahi M., Rahimnejad M. and Hajizadeh S., "Optimize the fabrication of BSA nano structure by taguchi methods", 1th International conference on Bionanotechnology Emirat., (Nov., 2006).
3. Jahanshahi M., Najafpour G., Hajizadeh S. and Rahimnejad M. "Optimisation of BSA nanoparticle fabrication as drug delivery vehicles", Nanobiotechnology conference, France, (June, 2006).
2. Jahanshahi M., Hajizadeh S. and Rahimnejad M. "Fabrication of BSA Nanostructure: Study of Optimization Parameters", The 8th International Conference on Nanostructured Materials, India, (Aug., 2006).
1. ahanshahi M., Mehdinia M. and Rahimnejad M. "Adsorbent Desing Implication for The Recovery of Nanoparticle Bioproducts", The10th congress of chemical engineering, Zahedan, I.R.I., (Nov., 2005).

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**HIGHLY  
QUALIFIED  
PERSONNEL  
SUPERVISION**

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**Ph. D. students**

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- Fabrication of alginate-based wound dressing with drug release using electrospinning technique. (Mona Sadeghi, Current).
- Design and fabrication of an electrochemical sensor modified by nanocomposite for simultaneous determination of heavy metals in aqueous samples. (Ali Nourbakhsh, Current).

- Optimization of effective parameters on superficial characteristics of crude oil during EOR through microbial method (Mahboubeh Alizadeh Tir, Current).
- Cathode enhancement by photo catalyst nanocomposite for waste water treatment and electricity generation in a photo hybrided microbial fuel cell (Elaheh Fallah, 2021).
- Fabrication of supercapacitors based on cellulose nanocomposites for use in biological fuel cell. (Mehrdad Mashkour, 2021).
- Design and fabrication of biosensor for detection an antimigraine drug, Rizatriptan benzoate in biological samples (Maedeh Nouri, 2020).
- Design and fabrication of a self-powered electrochemical biosensor for determination of DNA damage. (Hoda Ezoji, 2020).
- Design and construction of a new generation of nanobiosensor and evaluating its performance for Gabapenti detection (Atieh Zabiollahpour, 2020).
- Synthesis of sulfonated graphene oxide-sulfonated polyether ether ketone (SGO-SPEEK) composite polymer membrane to increase efficiency of a microbial fuel cell in industrial wastewater treatment. (Mehri Shabani, 2019).
- Synthesis of amine-functionalized metal organic framework for storage and separation of carbon dioxide from nitrogen (Kasra Pirzadeh, 2019).
- Application of three-chamber microbial fuel cell and electricity generation and ammonium and chemical oxygen demand removal from aqueous solutions. (Nahid Navidjoy, 2019)
- Performance improvement of anodic chamber and oxidant removal from cathodic chamber in dual chamber microbial fuel cell and its use in onstruction of self-powered and portable DNA biosensor to diagnose genetic defects based on gold nanoparticles modified graphite electrode (Maryam Asghary, 2017).
- Medicinal Herb WastewaterTreatment in a Bioelectro-Fenton System along with Power Generation (Nooshin Birjandi, 2015).
- Synthesis of a new generation of functionalized polyaniline nanoparticles and their antimicrobial properties (Mohammad Soleimani 2013)

### **M.Sc. students**

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- Improvement in performance of microbial fuel cell using photocatalytic characteristics (Neda Taqavi, Current).
- mprovement in performance of sediment microbial fuel cell using electrode modifications (Deris Abdollahi, Current).
- Fabrication of electrochemical sensor for detection of antiepileptic drug and its modification with nanoparticles and different modifiers (Elham Rasouli, Current).
- Fabrication of nanomaterials modified Electrochemical sensors for detection of heavy metal ions in ground water resources. (Fatemh Amiri, Current).

- Using microfluidic paper-based analytical devices for drug detection (Fatemeh Ghorbani, Current)
- Synthesis and evaluation of a scaffold as wound dressing and evaluation of its effect on wound healing. (Mojgan Oshrieh, Current).
- Synthesis of a wound dressing scaffold and to evaluate its effect on wound healing (Mohammad Hosseini, Current).
- Designing and fabricating a single chamber membraneless microbial fuel cell for biological wastewater treatment and electricity generation simultaneously (Mahsa Masoudi, 2020).
- Fabrication of electrochemical sensor for detection of anticoagulant drugs and its modification with nanoparticles and different modifiers (Mehraneh Hashemi 2019).
- Using Deep Eutectic Solvents to remove heavy metals from waste via employing carbon nanomaterial (Neda Rahmati, 2019).
- Determination of an anticancer drug by using electrochemical sensor and applying microbial fuel cell as a biosensor based on a carbon paste electrode (Marjan Fallah, 2019).
- Preparation and optimization of electrode with nanoparticle for electrochemical detection of agricultural pesticides (Fatemeh Zahirifar 2018).
- Electrochemical-Based Detection of Protein Secretion in Microfluidic Platforms (Amir Ghaffari, 2018).
- Enhancing the performance of sediment microbial fuel cell by manipulating its configuration (Rasool Alipanahi, 2017).
- Water reclamation from cattle manure wastewater using aerobic granular SBR and photo-fenton process (Ali Matinfar 2017).
- Laboratory study of aqueous biphasic system for antibiotic isolation (Sanaz Edrisi, 2017)
- Fabrication of electrochemical sensor for detection of anticancer drugs and modified it with nanoparticles (Afshan Mehrabi, 2017).
- Elimination of Phenol from aqueous solution in a microbial fuel cell. (Fatemeh Hejazi, 2017).
- Fabrication of curcumin sensor with Electrochemical technique in blood serum and comparison of the results with other methods (Rozan Zokhtare, 2016).
- Bio-mediated synthesis of zinc phosphate components nanoparticles. (Mona Sadeghi, 2016).
- Synthesis and study of a nanostructure scaffold and evaluation of biological effect for wound healing. (Soheila Mohammadyani, 2016).
- Fabrication of biosensor based on modified electrodes for determination of Bisphenol A in rat blood serum (Hoda Ezoji, 2016).
- Extraction of curcumin from turmeric by subcritical water method (Mohammad Valizdeh, 2015)
- Production of value added chemicals from citrus wastes (Mohammad Roostaei 2015).
- Experimental study on the effect of nano metal oxides (aluminium oxide, titanium oxide) on the heat transfer in a double tube heat exchanger (Alireza Faramarzi 2015).

- Fabrication of semiconducting Nanobio composite based on Bacterial Cellulose and its application as electrode in Microbial Fuel Cell (Mehrdad Mashkour, 2015).
- Simultaneous determination of carbamazepine, pramipexole and acetaminophen drugs using modified carbon paste electrode with ZSM-5 nanozeolite and TiO<sub>2</sub> nanoparticles by voltammetrics methods (Farshad Shajie, 2015).
- Investigation of *Streptococcus sangus* bacterium by photodynamic method using 5-aminovolonic acid with the help of LED light source (Parisa Mataji, 2014)
- Electrocatalytic oxidation of formaldehyde and ethanol on modified carbon paste electrode with nickel-porous NS phosphate VSB-5 and multi-walled carbon nanotubes nano-porous molecular sieving (Mojtaba Gholami, 2014).
- Preparation and evaluation of biological nano particle from thyme oil (Atieh Neshati, 2014).
- Production of alkaline protease enzyme by *Bacillus.sp* from starchy wastes (Zahra Jafari, 2014).
- Synthesis of silicoaluminophosphat molecular sieves in nano dimensions and their applications (Elham Mokhtari, 2014)
- Fabrication of alcohol biosensor based on glassy carbon electrode modified by gold nanoparticles to determine ethanol of drinks (Samira khaleghpanah, 2014).
- Investigation of *Streptococcus mutans* bacterial destruction by photodynamic method (Mohammad Reza Kardgar, 2014).
- Membrane bioreactor using membrane-activated carbon hybrid for the treatment of industrial wastewater (Fatemeh aghili, 2014).
- Hydrogen production in microbial electrolysis cells (Fatemeh Hamze Saravi, 2014).
- Experimental investigation of the effective parameters associated with the simultaneous electricity generation and chocolate industry wastewater treatment and using batch annular single chamber microbial fuel cell (Parisa Nouri, 2014).
- Preparation enzyme cocktails to degrade cellulosic materials (Mehdi Kabiri, 2014).
- Feasibility study of Phytoremediation of radioactive contaminated soils by Native Plants in Iran (Golshan Hosseini, 2014).
- Modelling and simulation of fuel cells with consideration of biological and electrochemical interactions (Sara Ahangari, 2013).
- Fabrication of Lab Scale Sediment microbial fuel cell (Zahra Najafgholi, 2013).
- Biodiesel production from cholza seeds with the aid of catalytic methods in batch system in the presence of HZSM5 (Meghdad Mohammadpour, 2013).
- Membrane bioreactor modelling for biofuel production (Roghaye Khalseh, 2013).
- Sulfur elimination for bioelectricity production simultaneously by Microbial Fuel Cell. (Paniz Izadi, 2013)
- Ethanol production from sorghum stem broom by sugar fermentation method resulting from acid hydrolysis (Saeedeh sadat Riazi, 2012).

## PROFESSIONAL MEMBERSHIP

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- 1) Member of Iranian talented student
  - 2) Member of Iranian Biotechnology Society
  - 3) Member of Iranian Chemical Engineering Society
  - 4) Member of Iranian Nanotechnology Society
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## COMPUTING SKILLS

- Windows Office
  - Programming using C++, Matlab
  - Internet
  - Simulation by Aspen
  - Simulation by HYSYS
- 

## REFEREES

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## INTERESTS

Movies, News, Reading, Internet

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## SPORTS

Swimming, Running, Gym

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## WORLD TRAVEL

France, Portugal, Spain, Italy, South Korea, Singapore, Emirate, Pakistan, India, Nepal, Turkey, Austria, Slovakia, Saudi Arabia, Erbil, Quarter, Russia, Czech Republic, Germany