

T. Bagheri Lotfabad



Qualifications: B.Sc. Chemical Engineering-Petroleum Refining, Tehran University,1996

M.Sc. Chemical Engineering- Biotechnology, Sharif University of Technology,2001

Ph.D., Chemical Engineering- Biotechnology, Sharif University of Technology,2009

Phone: 98-21-44787321

Email: bagheril@nigeb.ac.ir
bagheril@yahoo.com
bagheril@alum.sharif.edu

Research activities

- Bioprocess Engineering (Design of experiments, process optimization and mathematical modeling)
- Natural Surfactants and Emulsifiers (production, extraction, characterization and industrial applications)
- Environmental Biotechnology (petroleum biotechnology and biological treatments)
- Research projects with integration of Nanotechnology and biotechnology

Teaching activities

- Graduate courses: “Engineering mathematics”
“Enzyme technology”
“Environmental Biotechnology”
“Air pollution control”
- Undergraduate courses: “Mass transfer”
“Material and Energy Balances”
“Chemical Kinetics and Reactor Design”
“Processes Control”

Journal Publications

- H. Soltaninejad, **T. B. Lotfabad** and S. Yaghmaei (2016) Enhanced Soil Remediation via Plant-Based Surfactant Compounds from *Acanthophyllum Laxiusculum*, Tenside Surf. Det (**Accepted**).
- Z. Madadi, **T. B. Lotfabad** (2016) Aqueous Extract of *Acanthophyllum Laxiusculum* Roots as a Renewable Resource for Green Synthesis of Nano-sized Titanium Dioxide Using the Sol - gel method. Advanced Ceramics Progress, (**Accepted**).

- H. Soltaninejad, Z. Madadi, **T. B. Lotfabad**, A. Pirani, N. Ebadipour (2016) Physico-chemical features of aqueous extract of *Acanthophyllum laxiusculum* roots from natural steppe habitats of Iran: evaluating surface activity and thermal behavior of partially purified extract, Iranian Chemical Communication, Vol. 4.
- **T. B. Lotfabad**, N. Ebadipour, R. RoostaAzad (2015) The Evaluation of a Recycling Bioreactor for Biosurfactant Production by *Pseudomonas aeruginosa* MR01 using Soybean Oil Waste. Journal of Chemical Technology & Biotechnology (**Accepted**).
- D. Pertuit, **T. B. Lotfabad**, A.-C. Mitaine Offer, T. Miyamoto, C. Tanaka, and M.-A. Lacaille-Dubois (2015) Two New Triterpene Saponins from *Acanthophyllum laxiusculum*, Helvetica Chimica Acta, Vol. 98(pp 611 -617).
- N. Ebadipour, **T. B. Lotfabad**, S. Yaghmaeia & R. RoostaAzad (2015) Optimization of Low-Cost Biosurfactant Production From Agricultural Residues through the Response Surface Methodology , Preparative Biochemistry and Biotechnology, DOI: 10.1080/10826068.2014.979204.
- M. Partovi, **T. B. Lotfabad**, R. Roostaazad, M. Bahmaei, S. Tayyebi (2013) Management of soybean oil refinery wastes through recycling them for producing biosurfactant using *Pseudomonas aeruginosa* MR01, **World Journal of Microbiology and Biotechnology**, 291039 -1047.
- S. Tayyebi, **T. B. Lotfabad**, R. Roostaazad (2013) Applying Neural Network to Dynamic Modeling of Biosurfactant Production Using Soybean Oil Refinery Wastes, **Iranica Journal of Energy & Environment**, 4(2), 161-170.
- **T. B. Lotfabad**, S. Tayyebi, R. Roostaazad (2013) Kinetic Measurements for *Pseudomonas aeruginosa* MR01 During Biosurfactant Production in Two-phase System and Developing a Double-Exponential Model for Viable Cell Profile, **World Applied Sciences Journal**, 22(6), 809-816.
- **T. B. Lotfabad**, F. Shahcheraghi, F. Shooraj (2013) Assessment of Antibacterial Capability of Rhamnolipids Produced by Two Indigenous *Pseudomonas aeruginosa* Strains, **Jundishapur Journal of Microbiology**, 6(1) 29 35.
- H. Abbasi, M. M. Hamed, **T. B. Lotfabad**, H. S. Zahiri, H. Sharafi, F. Masoomi, A. A. Moosavi-Movahedi, A. Ortiz, M. Amanlou, K. A. Noghabi (2012) Biosurfactant-producing bacterium, *Pseudomonas aeruginosa* MA01 isolated from spoiled apples: Physicochemical and structural characteristics of isolated biosurfactant, **Journal of Bioscience and Bioengineering(Elsevier)** 113(2),211-219
- N. Masoudzadeh, F. Zakeri, **T. B. Lotfabad**, H. Sharafi, F. Masoomi, H. S. Zahiri, G. Ahmadian, K. A. Noghabi (2011) Biosorption of cadmium by *Brevundimonas* sp. ZF12 strain, a novel biosorbent isolated from hot-spring waters in high background radiation areas, **Journal of Hazardous Materials (Elsevier)** 197,190-198.
- M. R. Adelzadeh, R. Roostaazad, M. R. Kamali, **T. B. Lotfabad** (2010) A Technical Feasibility Analysis to Apply *Pseudomonas aeruginosa* MR01 Biosurfactant in

- Microbial Enhanced Oil Recovery of Low-Permeability Carbonate Reservoirs of Iran, *Scientia Iranica, Transactions C: Chemistry and Chemical Engineering*, 17(1), 46-54.
- **T. B. Lotfabad**, H. Abassi, R. Ahmadkhaniha, R. Roostaazad, F. Masoomi, H. S. Zahiri, G. Ahmadian, H. Vali, K. A. Noghabi (2010) Structural Characterization of a Rhamnolipid- type Biosurfactant Produced by *Pseudomonas aeruginosa* MR01: Enhancement of di-rhamnolipid magnitude using Gamma Irradiation, *Colloids and Surfaces B: Biointerfaces*, (Elsevier) 81, 397-405.
 - M. Shourian, K. A. Noghabi, H. S.i Zahiri, **T. B. Lotfabad**, G. Karballaei, M. Mollaei, I. Rad, S. Ahadi, J. Raheb, H. Abbasi (2009) Efficient phenol degradation by a newly characterized *Pseudomonas* sp. SA01 isolated from pharmaceutical wastewaters, *Desalination* (Elsevier) 246 (1-3), 577-594.
 - **T. B. Lotfabad**, M. Shourian, R. Roostaazad, A. R. Najafabadi, M. R. Adelzadeh, K. A. Noghabi (2009) An efficient biosurfactant-producing bacterium *Pseudomonas aeruginosa* MR01, isolated from oil excavation areas in south of Iran, *Colloids and Surfaces B: Biointerfaces* (Elsevier) 69 (2), 183–193.
 - S. Afshar, **T. B. Lotfabad**, R. Roostaazad, A. R. Najafabadi, K. A. Noghabi (2008) Comparative approach for detection of biosurfactant-producing bacteria isolated from Ahvaz petroleum excavation areas in south of Iran, *Annals of Microbiology*, 58 (3) 79-83. (Co -first author)
 - **T. B. Lotfabad**, R. Roostaazad (2004) Immobilization of *Rhizomucor miehei* Lipase on High Density Polyethylene, *Iranian Journal of Chemical Engineering*, 1 (2), 29 37.
 - **طیبه باقری لطف آباد**، مریم پرتوی، منوچهر بهمنی (۱۳۹۱) تولید بیوسورفکتانت رامنولیپیدی توسط سودوموناس آئروژینوزا MR01 از ضایعات فرآوری روغن گیاهی، *مجله تازه‌های سلولی-ملکولی*، دوره دوم، شماره نهم، زمستان ۱۳۹۱.
 - آزاده اصلانی، **طیبه باقری لطف آباد**، حسین عطار، علی وزیری (۱۳۹۴) ارزیابی عملکرد کنسانتره گیاه (*آکانتوفیلوم* لکسیوسکولوم) برای سنتز نانو ذرات سیلیکا به روش سل-ژل استور، *فصلنامه علمی پژوهشی علم و مهندسی سرامیک*، دوره ۴، شماره ۳، پاییز ۱۳۹۴.

Patents

The process of biosynthesis of surface active agents by indigenous bacteria of *Pseudomonas aeruginosa* MR01 using the vegetable oil refinery wastes, *Inventor: T. B. Lotfabad*, *Owner: National Institute of Genetic Engineering and Biotechnology*, Iranian Patent, 2013.

Application of aqueous extract of *Acanthophyllum* for the production of Nano-sized Titanium Dioxide Using the Sol - gel method, *Inventors: T. B. Lotfabad* and Z. Madadi, *Owner: National Institute of Genetic Engineering and Biotechnology*, Iranian Patent, 2014.

Books

M. Mohammadi, **T. Bagheri Lotfabad**, Translation of "Basic principles and calculations in chemical engineering-8th ed." in Farsi, ed. David M. Himmelblau, James B. Riggs. (Under revision for publishing), 2013

International conferences

- H. Fallah, F. Tabandeh, T. Bagheri, M. Shayesteh, Comparison of growth and urease activity for *sporoscarcina pasteurii* and *staphylococcus pasteurii*, The 16th International and Iranian Congress of Microbiology, **2015**, August 25-27, Shahid Beheshti International conference center-University, Tehran, Iran.
- A. Aslani, **T. Bagheri Lotfabad**, H. Attar, A. Vaziri, Synthesis of Silicium Dioxide Nanoparticles by the Sol-Gel Method using the natural surfactant, The 5th International Congress on Nanoscience & Nanotechnology (**ICNN2014**), **2014**, October 22-24, Tehran, Iran.
- Z.Madadi, **T.Bagheri Lotfabad**, M.Soltanieh, B.Sohrabi, Synthesis of Titanium Dioxide, Nanoparticles by the Sol-Gel Method using the natural surfactant, The 8th International Chemical Engineering Congress and Exhibition (**IChEC 2014**), **2014**, February 24-27, Kish, Iran.
- N.Ebadipour, **T.Bagheri Lotfabad**, S.Yaghmaee, R.Roostaazad, Biotreatment of corn steep liquor by a bioprocess for biosurfactant production, The 8th International Chemical Engineering Congress and Exhibition (**IChEC 2014**), **2014**, February 24-27, Kish, Iran.
- H.Soltaninejad, **T.Bagheri Lotfabad**, S.Yaghmaei, Application of the plant-derived surfactants to remediate PAHs contaminated soils, The 8th International Chemical Engineering Congress and Exhibition (**IChEC 2014**), **2014**, February 24-27, Kish, Iran.
- **T. B. Lotfabad**, S. Tayebi, A. Bodagh, Empirical modelling of batch fermentation kinetics for rhamnolipid production by *pseudomonas aeruginosa* MR01, *Colloids and Nanomedicine 2012*, July 15-17, 2012, Amesterdam, Netherland.
- **T. B. Lofabad**, M. Partovi, M. Bahmaei, Application of vegetable oil refinery soapstock to rhamnolpid biosurfactant manufacturing, The 13th Iranian and The second International Congress of Microbiology, July 14-16, **2012**, Ardebil, Iran.
- **T. Bagheri Lotfabad**, F. Masoumi, R. Roostaazad, A. Saidi, K. Akbari Noghabi, An efficient biosurfactant-producing bacterium *Pseudomonas aeruginosa* MR01, isolated from oil excavation areas in south of Iran, 14th European congress on biotechnology, 13-16 September, 2009, Barcelona, Spain, (**New Biotechnology**, 25, Supplement 1, September **2009**, Page S80).

National conferences

- Z.Madadi, **T.Bagheri Lotfabad**, M.Soltanieh, B.Sohrabi, Titanium Dioxide manufacturing in presence of natural surface active agents by using the Sol-Gel technique, The fifteenth conference for nanotechnology graduate students, **2014**, April 24-25, Tehran, Iran.
- N.Ebadipour, **Tayebe Bagheri Lotfabad**, Challenges in the use of probiotic products, The 2nd National Food Safety Specialist Congress, November 25-26, **2013**, Tehran, Iran.

- N.Ebadipour, **Tayebe Bagheri Lotfabad**, S.Yaghmaee, R.Roosta Azad Bioprocessing of agro – industrial waste corn steep liquor, The 6th Symposium on Losses of Agricultural Products, November 20, **2013**, Tehran, Iran.
- Z. Madadi, **Tayebe Bagheri Lotfabad**, M. Soltanieh, B. Sohrabi, Synthesis of Titanium Dioxide Nanoparticles using the Bio-Sol-Gel Method, The 3rd National conference on application of chemistry in novel technologies, November 7, **2013**, Isfahan, Iran.
- H.Soltaninejad, **Tayebe Bagheri Lotfabad**, S.Yaghmaei, Remediation of PAHs contaminated soils using saponin, The 2nd National Conference on Planning and Environmental Protection, August 15, **2013**, Hamedan, Iran.
- **Tayebe Bagheri Lotfabad**, Reza Roostaazad, Shokoufe Tayyebi, Evaluation of MR01 rhamnolipid biosurfactant capability for enhanced oil recovery in carbonate reservoirs, 14th Iranian National Congress of Chemical Engineering, October 16-18, **2012**, Tehran, Iran.
- **Tayebe Bagheri Lotfabad**, Reza Roostaazad, Structural characterization of the biosurfactant produced by *Pseudomonas aeruginosa* MR01, The 3rd Surfactant and Detergent Technology conference, October 10-11, **2012**, Tehran, Iran.
- **Tayebe Bagheri Lotfabad**, Reza Roostaazad, Comparison of screening approaches for detection of biosurfactant-producing bacteria, The 3rd Surfactant and Detergent Technology conference, October 10-11, **2012**, Tehran, Iran.
- **T. B. Lotfabad**, R. Roostaazad, M. Partovi, Production of natural surfactants, 14th Iranian Inorganic Chemistry Conference, August 28–29, **2012**, Tehran, Iran.
- **T. B. Lotfabad**, M. Partovi, M. Bahmaei, Rhamnolipid biosurfactant production by *Pseudomonas aeruginosa* MR01 using vegetable oil refinery wastes, The first national conference on new cellular and molecular biotechnology, May 16-17, **2012**, Tehran, Iran.
- **T. B. Lotfabad**, M. Partovi, K.A. Noghabi, A. Bodagh, Application of vegetable oil processing wastes for production of rhamnolipid biosurfactant, The 17th National and regional conference of the Iranian society of environmentalists and 7th Green development festival, February 29-31, **2012**, Tehran, Iran.
- **T. B. Lotfabad**, H. Sharafi, K.A. Noghabi, A. Bodagh, M. Partovi, Isolation of probiotic bacteria from yogurt to use in dairy industries, The 20th National food science and industries congress chemical and petroleum engineering Sharif University of Technology, November 22-24, **2011**, Tehran, Iran.
- **T. B. Lotfabad**, A. Bodagh, S.M.A. Marashi, K.A. Noghabi, Application of whey protein concentrate in low fat salad sauces, The 20th National food science and industries congress chemical and petroleum engineering Sharif University of Technology, November 22-24, **2011**, Tehran, Iran.