



NASER VALIPOUR MOTLAGH

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RESEARCH INTERESTS

- Surface coating
- Biopolymers
- Medical textiles
- Biodegradable food packages
- Injectable hydrogels
- Advanced carriers for drug delivery
- Tissue Engineering

SUMMARY OF OUTPUTS

Publications: 20 papers

Funds: 3 industrial projects

Supervision: 11 MSc. & PhD students

Academic Job: 9 years- 4 universities

Patent: 2 national patents

No of courses: 14 courses

Industrial job: 4.5 years

Other jobs: 7 years

ACADEMIC BACKGROUND

PhD in Chemical Engineering

Ferdowsi University, Mashhad, Iran, 2009-2013

Thesis: Experimental studies of anti-stiction films on metal surface

GPA: 18.42/20 (salutatorian award)

M.Sc. in Chemical Engineering

Ferdowsi University, Mashhad, Iran, 2006-2008

Thesis: The effect of nanosilver packages on the quality and shelf life of barberry in comparison with common packages

GPA: 16.42/20 (salutatorian award)

B.Sc. in Chemical Engineering

Islamic Azad University, Birjand, Iran, 1999-2003

Thesis: Setting up a distillation system in a pilot scale

GPA: 16.53/20 (salutatorian award)

WORK EXPERIENCE

Academic Positions

- Postdoctoral researcher (one-year), Université du Québec à Chicoutimi, Québec, Canada, 2022-05/13/2023
- Assistant Professor, Department of Chemistry, University of Birjand, Iran, 2014-2021
- Adjunct Assistant Professor, Department of Chemical Engineering, Islamic Azad University, Birjand, Iran, 2015-2017
- Adjunct Assistant Professor, Department of Chemical Engineering, Birjand University of Technology, Birjand, Iran, 2015-2017

Industrial Position

- laboratory, R&D and HSE unit manger, RizanFelezToos, Mashhad, Iran, 2010-2014

Administrative Positions

- Director of Industrial Relations & Entrepreneurship Office, University of Birjand, Iran, 2015-2019
- Labor Inspector, Ministry of cooperatives, Labour and Social Welfare, Iran, 2007-2012
- Inspector of Foodstuffs and Hygienic and Toilet Materials, Birjand University of Medical Science, 2004-2005

SOFTWARES

- Matlab
- ChemDraw
- ChemOffice
- Design Expert
- Python (beginner)
- Minitab
- SPSS
- Endnote
- Origin
- Mendeley

PUBLICATIONS AND TECHNICAL REPORTS

PATENTS

- J. Sargolzaei, N. Valipour Motlagh, N. Shahtahmassebi, Durable, Super-liquid-repellent and anticorrosion Coatings, 79590, Iran, 2013.
- R. Darzi, S. Doroudi, N. Valipour Motlagh, N. Rahimi, Barberry sauce based on organic agricultural materials and without chemical and synthetic additives, 102126, Iran, 2019.

PUBLISHED PAPERS

Papers in ISI journals

1. N. Valipour Motlagh, M.T. Hamed Mosavian, S.A. Mortazavi and A. Tamizi, Beneficial Effects of Polyethylene Packages containing micrometer-sized silver particles on the Quality and Shelf Life of dried Barberry (*Berberis vulgaris*), *Journal of food science*, Vol 77, Issue 1, pp. E2-E9, 2012.
2. N. Valipour Motlagh, M.T. Hamed Mosavian and S. A. Mortazavi, Effect of Polyethylene Packaging Modified with Silver Particles on the Microbial, Sensory and Appearance of Dried Barberry, *Packaging technology and science*, Vol 26, Issue 1, pp. 39-49, 2013.
3. N. Valipour M., F. Ch. Birjandi, J. Sargolzaei, N. Shahtahmassebi, Durable, Superhydrophobic, Superoleophobic and Corrosion Resistant Coating on the Stainless Steel Surface Using a Scalable Method, *Applied surface science*, Vol. 283, pp. 636–647, 2013.
4. Naser Valipour Motlagh, Javad Sargolzaei and Nasser Shahtahmassebi, Super-liquid-repellent coatings on the carbon steel surface, *surface and coating technology*, Vol. 235, pp. 241–249, 2013.
5. N. Valipour M., F. Ch. Birjandi, J. Sargolzaei, Super-non-wettable surfaces: A review, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, Vol. 448, pp. 93–106, 2014.
6. Naser Valipour Motlagh, Rouhollah Khani, Saeed Rahnama; Super dewetting surfaces: Focusing on their design and fabrication methods, *Colloids and Surfaces A: Physicochem. Eng. Aspects*, Vol. 484, pp. 528–546, 2015.
7. Rouhollah Khani, Reza Rahmanian, Naser Valipour Motlagh; UV–Visible Spectrometry and Multivariate Calibration as a Rapid and Reliable Tool for Simultaneous Quantification of Ternary Mixture of Phenolic Acids in Fruit Juice Samples, *Food Anal. Methods* Vol. 9, pp. 1112–1119, 2016.
8. Mehran Taghipour-Gorjikotaie a, Naser Valipour Motlagh; Predicting wettability behavior of fluorosilica coated metal surface using optimum neural network, *Surface science*, Vol. 668, pp. 47-53, 2018.
9. Naser Valipour Motlagh, Mehran Taghipour-Gorjikotaie; Fuzzy based models for estimating static contact angle and sliding angle of liquid drops, *Progress in organic coatings*, Vol. 119, pp. 183-193, 2018.
10. Naser Valipour Motlagh, Mehran Taghipour-Gorjikotaie; Comparison of heuristic methods for developing optimized neural network-based models to predict amphiphobic behavior of fluorosilica coated surfaces, *Surface & Coatings Technology*, Vol. 119, pp. 289-295, 2018.
11. N. Valipour Motlagh, S. Arianezhad, Investigation of the carbon dioxide adsorption behavior and the heterogeneous catalytic efficiency by a novel Ni-MOF with nitrogen-rich channels, *RSC Advances*, 10, 29772 – 29779, 2020.
12. Valipour Motlagh, N., Aghazamani, J. & Gholami, R. Investigating the Effect of Nano-silver Contained Packaging on the Olivier Salad Shelf-life. *BioNanoSci.* 11, 838–847, 2021.
13. N. Valipour Motlagh, Gh. Bagherzade, S. Derogar, R. Gholami, Preparation and characterization of anti-stain self-cleaning coating on ceramic; *Materials Chemistry and Physics*, 29, 125278, 2021.

Papers in national peer-reviewed Journals

14. N. Valipour Motlagh, M.T. Hamed Mosavian, S. A. Mortezaei, The comparison effect of nanosilver packages on the microbial and appearance factors of barberry with polyethylene packaging, *Iranian Food Science & Technology Research Journal*, p.p 75, vol 5, issue 2, 2010.

Conferences

15. N. Valipour Motlagh, M.T. Hamed Mosavian, S. A. Mortezaei, The effect of nanosilver packages on quality and shelf life of barberry in comparison with common polyethylene packages, 18th National Congress of Food Industry, Mashhad, Iran, 2008.
16. N. Valipour Motlagh, M.T. Hamed Mosavian, S. A. Mortezaei, A. Nakhai, Study on effects of packages containing silver nanoparticles on quality and shelf life of barberry in comparison with common packages, 1th National Conference of Saffron and Barberry, Qayen, Iran, 2008.
17. N. Valipour Motlagh, M.T. Hamed Mosavian, S. A. Mortezaei, A. Nakhai, The effect of packages containing silver nanoparticles on appearance and microbial factors of barberry in comparison with common polystyrene packages, 1th National Conference of Saffron and Barberry, Qayen, Iran, 2008.
18. Z. Rashidzadeh, N. Rahimi, N. Valipour Motlagh, The optimization of extract conditions of petal saffron by ultrasonic method, 4th National Conference of Saffron, Qayen, Iran, 2015.
19. A. Nikakhtar, N. Valipour Motlagh, S. Y. Ahmadi Brooghani, M. A. Yaserinezhad, Kh. Khorshidzade, M. Kamkar, S. A. Soleymani, The Calculation of the Swelling Properties and Diffusion Coefficient of Radial Tire, 14th National Congress of Tire, Tehran, Iran, 2019.
20. N. Valipour Motlagh, Majid Aliabadi, Elnaz Rahmani, Samira Ghorbanpour, The Effect of Nanosilver Package on Quality Maintenance of Fresh Strawberry, 22th International Conference on Food and Beverage Packaging, Tokyo, Japan, 2020.

TRANSLATED BOOKS

- Nanomaterial-based drug delivery carriers for cancer therapy; Authors: Tao Feng, Yanli Zhao; ISSN 2191-530X, ISSN 2191-5318 (electronic), DOI 10.1007/978-981-10-3299-8, Translated to Persian language by: N. Valipour Motlagh, Z. Arabpour, A. R. Sabzari, R. Jahanshahi, 2019.

PAPERS UNDER REVIEW & REVISION

1. N. Valipour Motlagh, M. Samanian, The static and dynamic contact angles measurement of water droplet on the metal surface: a molecular dynamics study
2. Khashayar Khorshidzade, Naser Valipour Motlagh, Ali Nikakhtar, Seyed Yousef Ahmadi Brooghani, Mohammad Ali Yaserinezhad; Experimental and statistical investigation of the effect of pressing time on the swelling properties, diffusion coefficient and mechanical properties of radial tire tread
3. N. Valipour Motlagh, Z. Arabpour; Applied polymers as a suitable replacement for the natural materials in the various layers of green roofs and their characteristics.
4. Naser Valipour Motlagh, Reyhaneh Gholami, Seyed Sajad Azimi, Artemis Stamboulis, “Smart coatings on orthopedic implants: a mini review”
5. S. Ghorbanpour, N. Valipour-Motlagh, A. Mahmoodi-Rad, Beneficial Effect of Consuming Pomegranate Juice on Renal Function: A Single-Blind Randomized Control Trial Study.
6. A. Soltany-Mahboob, M. Taghipour-Gorjikotaie, N. Valipour-Motlagh, S. H. Zahiri, Optimum Design of ANFIS models for Contacting and Sliding Angles to Estimate Effective Variables of Surface Wettability.

PROJECTS

INTERNATIONAL PROJECTS

Naser Valipour Motlagh, Reza Jafari Aminabadi, Gelareh Momen; Fabrication of multilayer antibacterial PHBV-based micro/nanomembrane through the electrospinning technique, sponsored by Mitacs and Be-Up technology company, Postdoctoral internship, Université du Québec à Chicoutimi, Quebec, Canada, 2022-2023.

FINISHED INDUSTRIALLY FUNDED PROJECTS

- Naser Valipour Motlagh, Ali Nikakhtar, Seyed Yousof Ahmadi Broghani; Research and laboratory phase to investigate the possibility of tire curing by hybrid method (IR curing after curing press method), sponsored by Kavir Tire Co., Birjand. Iran, 2018.
- Naser Valipour Motlagh, the production and formulation of edible sauce from barberry fruit, sponsored by Nozhan Faravar Co., Birjand. Iran, 2019.

FINISHED PROJECTS FUNDED BY UNIVERSITY OF BIRJAND

- Adsorption of carbon dioxide from the gas mixture by the covered surface with Metal-Organic framework, University of Birjand, Birjand, Iran, 2017.
- Nanocomposite coating on the metal substrates with super liquid repellent property, University of Birjand, Birjand, Iran, 2016.

CURRENT PROJECTS

- Fabrication of multilayer antibacterial PHBV-based micro/nanomembrane through the electrospinning technique, Postdoctoral researcher, Université du Québec à Chicoutimi, Quebec, Canada, 2022-2023.
- pH-sensitive, osteogenic and antibacterial electrospun coating on bone implants; University of Birjand, Iran, PI: Naser Valipour Motlagh. 2021-Cont.
- Metal-organic framework-based drug delivery system for wound healing; PhD thesis, University of Birjand, Iran, Second supervisor: Naser Valipour Motlagh, 2021-Cont.
- New metal organic framework coating on bone implants to reduce biofilm formation and induce cell growth; PhD thesis, University of Birjand, Iran, Second supervisor: Naser Valipour Motlagh, 2021-Cont.
- Chemical pre-processing of lignocellulosic materials using organic solvent for bioethanol production; MSc. thesis, Department of Biotechnology, University of Birjand, Iran, Supervisor: Naser Valipour Motlagh, 2021-Cont.

COOPERATION WITH PEER-REVIEWED JOURNALS

MEMBER OF EDITORIAL BOARD

- Barberry and Jujube Journal, South Khorasan Agricultural and Natural Resources Research and Education Centre, Birjand, Iran, 2017-2020

REVIEWER

- ACS Applied Materials & Interfaces
- Industrial & Engineering Chemistry Research
- ACS Sustainable Chemistry & Engineering
- International Journal of Adhesion & Adhesives
- International Journal of Fruit Science
- Journal of the Iranian Chemical Society
- Materials Chemistry Horizons

IN-LAB SKILLS

- FTIR
- GC/MS
- UV-VIS
- DSC
- Profilometry
- EDS
- XPS
- SEM
- DLS analysis
- Scratch test
- Swelling test
- Roughness measurement
- Contact angle goniometer
- Potentiodynamic Polarization Test
- Tensile strength
- Elongation percentage
- Hardness
- Abrasion resilience
- Tear strength

COURSES TAUGHT

AT DEPARTMENT OF CHEM. ENG.

- Fluid Mechanics I&II
- Thermodynamics I&II
- Mass Transfer
- Physical Chemistry

AT DEPARTMENT OF CHEMISTRY

- Polymer Chemistry
- Technology of Polymers
- Chemistry and Technology of Petroleum and Gas
- Industrial Chemistry II (similar to Transfer Phenomena)
- Solid State and Surface Chemistry
- Food Chemistry and Technology
- Principles of Bioreactor Design
- Bio-Separation
- Analytical Chemistry I
- General Chemistry I&II
- Physical Chemistry
- Safety in the Laboratory
- Industrial Inorganic Chemistry
- Principles of Chemical Industries

OTHER INFORMATION

DISTINCTIVE TRAITS

Diligent, teamwork and responsible

SOCIAL ACTIVITIES

Head of "Child Foundation" institute (a charity institute) in Birjand, Iran

OTHER ACTIVITIES

- Helping to establish "Innovation and Accelerating Center" at the University of Birjand, Iran
- Helping to establish "Technical and Vocational Training Center" at the University of Birjand, Iran
- Directing a startup team to launch a digital health idea in Canada
- Conducting long-term and short-term workshops related to "Business Plan" writing