

Curriculum Vitae

Rasoul Moradi

Department of Chemistry and Chemical Engineering
Khazar University
Baku, Azerbaijan
Tel: (+994)555613482
rmoradi@khazar.org



Objective

Scientific and technical research with special interests in following areas:

Nano-enabled Water and Energy Systems, Nano-Bio, Molecular Dynamics and Fluid Dynamics, Performance Materials

Current Positions:

- Senior Lecturer in Chemistry & Chemical Engineering Department, Khazar University, Baku, Azerbaijan (since 2016)
- Leading Investigator of Nanotechnology Research Laboratory, Khazar University, Baku, Azerbaijan (since 2018)
- Adjunct Professor. Department of Chemical & Biological Engineering, Korea University, Seoul, Korea

Education

- Ph.D. Nanotechnology-Chemical Engineering (2011-2016)
University of Tehran, Tehran, Iran
GPA: 16.65/20 (*Top 20% among 10 Students*)
- B.Sc. & M.Sc., Sharif University of Technology, Tehran, Iran (2002-2008)
GPA: 17.21/20 (*Top 10% among 20 Students*)
- Erasmus Mobility Training Program-
Polytechnic Institute of Bragança (*IPB*), Braganza, Portugal (2019)

Current Projects:

- Metal nano-clusters for bio sensing purposes(Computational and Experimental Research)
- Nanofibrous Scaffolds for Regenerative Medicine and Drug Delivery
- Nano-enabled Biosensors for early Prognosis of Breast Cancer via Detection of HER2
- Water Repelling-Antibacterial Surface Engineering using PVDF-HFP/ZnO Nanofiber Coatings
- Computational and Experimental Investigation of Fe₃O₄ and CuO Ethylene Glycol Nanofluids for Renewable Energy Applications
- Study on Energy Storage Capacity of Graphene-PVDF Nanocomposites
- Hexagonal Boron Nitride Nanotubes (BNNTs) as Promising Nano-vehicles for Doxe Encapsulation: Molecular Modelling Survey

- Graphene-Aptamer Nano-Biosensor for Early Detection of BNP Biomarker
- Molecular dynamic simulation of SARS-Cov-2 viral entry to host cell and potent drugs blocking viral Spike protein

Industrial Projects:

- AI-integrated-CFD analysis of oil wells in sandstone reservoirs for prediction of catastrophic sand event at upstream

Work Experience

- Assistant professor and Head of Department of Chemistry and Chemical Engineering, Khazar University, Baku, Azerbaijan, 2016-present
- Lecture, Chemistry and Chemical Engineering Courses, Baku Engineering University, Baku, Azerbaijan, 2019-present
- Head of Nanotechnology Lab, Khazar University, Baku, Azerbaijan, 2017-present
- PhD Researcher, Nanotechnology Lab, University of Tehran, Tehran, Iran, 2011-2015

Instrumental Skills

- Nanomaterial and Nanoparticles Synthesis
- Electrospinning Micro Electro-Mechanical Systems (MEMS) Systems
- Microscopy Instruments: SEM, AFM
- Instruments: Fluorescence and Phosphorescence, FT-IR, UV-Vis, NMR, Raman Spectroscopy, DSC, TGA, Universal Tensile test,
- Instrumental analyses: GC, GC-MS, HPLC, MS/MS, ICP-MS
- Separation Technologies
- Biosensor and Sensor design and development

Computer and Programming Skills

- Conversancy in working with: DOE, Hyperchem, LAMMPS, Gaussian, Materials Studio, Gromacs, COMSOL, HYSYS, ProMax, CFD (Ansys)
- Programming Language: PASCAL, MATLAB
- Computer Literacy: Adobe Photoshop, Microsoft Office, Linux and Windows

Teaching Courses

Chemistry: Analytical Chemistry, Physical Chemistry, Computational Chemistry: Molecular Mechanics and Dynamics, Modeling and Simulations, Thermodynamics, Molecular Thermodynamics, Nanocomposites, Nanoscience and NanoEngineering, Separation Processes, Instrumental Analysis,...

Engineering: Fluid Dynamics and Computational Fluid Flow, Heat and Mass Transfer, Sensor and Biosensor Technology, Industrial Chemistry, ...

Thesis

- PhD. Thesis:

Super-Hydrophobic Nanocomposite Nanofibrous Membranes of PVDF/ Graphene
2011-2016, Final Score: 19.0/20

Honors and Awards

- Being named an inaugural Highly Ranked Scholar by ScholarGPS
- Ranked 1st in Engineering and Technology Research in Azerbaijan, Research.com
- Ranked Top 3 Most Productive Researcher in Azerbaijan (<https://az.hindex.com/en/scopus>)
- Ranked among world's top 2% researcher(single year performance) 2022, 2023
- Best Researcher , Khazar University, Baku Azerbaijan, 2020
- Ranked 2nd in the 1st Nation-Wide Scientific PhD Entrance Exam on Chemical Engineering, Iran, 2011
- Ranked 5th in the 10th Nation-Wide Scientific University Student Olympiad on Chemistry, Iran, 2006
- Ranked 4th in the Nation-Wide Master's Degree Entrance Exam among almost 8,500 students, Iran, 2005
- Ranked 720th among over than 500,000 Candidates in the Nation-Wide University Entrance Exam, 2002

Publications (100 listed) (h-index: 47)

ResearchGate:

https://www.researchgate.net/profile/Rasoul_Moradi2

Google Scholar:

<https://scholar.google.com/citations?user=f583h9wAAAAJ&hl=en>

1. Metal Nanoclusters in Point-of-Care Sensing and Biosensing Applications
H Nasrollahpour, BJ Sánchez, M Sillanpää, R Moradi
ACS Applied Nano Materials 6 (14), 12609-12672
2. Nanoarchitectonics for Abused-Drug Biosensors
R Moradi, NP Khalili, NLW Septiani, CH Liu, E Doustkhah, Y Yamauchi, ...
Small 18 (10), 2104847
3. Functionalized Carbon Nanostructures for Smart Bio-imaging Devices, R Moradi, NP Khalili, V Aliyeva, Handbook of Functionalized Carbon Nanostructures, 1-38
4. Functionalized Carbon Nanostructures for Wearable Biosensors
B Emdadi, R Moradi
Handbook of Functionalized Carbon Nanostructures, 1-41
5. Chemically crosslinked polyvinyl alcohol for water shut-off and conformance control treatments during oil production: The effect of silica nanoparticles
MS Rajabi, R Moradi, LO Andrade
Journal of Applied Polymer Science 140 (4), e53382
6. Wind Climates and Annual Energy Production
B Emdadi, R Moradi
Reference Module in Earth Systems and Environmental Sciences,
Carbon Capture by Bacteria and Enzymes, R Moradi, A Aliyev
7. Synthesis methods and characterization techniques of fluoropolymers
B Emdadi, R Yusifov, R Moradi
Advanced Fluoropolymer Nanocomposites, 29-77
8. Fluoropolymer nanocomposites for electromagnetic interference shielding application
S Mirzaliyev, Z Farzizada, R Musayev, M Hajiyev, R Moradi

- Advanced Fluoropolymer Nanocomposites, 391-444
9. Functionalized nanofibers for the realization of superhydrophobic surfaces
R Moradi, A Aliyev
Functionalized Nanofibers, 329-367
 10. Functionalized nanofiber-based drug delivery systems and biosensing devices
R Moradi, NP Khalili, B Emdadi, I Eminli
Functionalized Nanofibers, 211-251
 11. An overview of nanotechnology in upstream and downstream of oil and gas industry: Challenges and solutions
M Sadegh Rajabi, R Moradi, H Pirouz Kavehpour
Journal of Energy Resources Technology 144 (8), 080801
 12. Interfacial tension of acidic heavy crude oil type and dolomite surface wettability: salinity and nanoparticles impact
MS Rajabi, R Moradi, HP Kavehpour
Energy Sources, Part A: Recovery, Utilization, and Environmental Effects 44 ...
 13. An insight into detection pathways/biosensors of highly infectious coronaviruses
M Entesari, M Zamani, M Heidarizadeh, R Moradi, F Khakdan, F Rafiei
Molecular Biotechnology, 1-16
 14. Polyvinyl alcohol nanofibers encompass Chitosan/Tripolyphosphate nanogels for controlled release of gemifloxacin antibiotic
NP Khalili, M Parsa, R Moradi
Materials Today: Proceedings 65, 2920-2925
 15. Comparison of convergent/divergent ramp on fuel mixing of single jet at supersonic crossflow, G Fan, A Almarashi, P Guo, NH Abu-Hamdeh, AM Abusorrah, R Moradi
Aerospace Science and Technology 120, 107236
 16. In silico Investigation on the Inhibiting Role of Nicotine/Caffeine by Blocking the S Protein of SARS-CoV-2 Versus ACE2 Receptor, October 2020, Microorganisms DOI: 10.3390/microorganisms8101600
 17. Fabrication and biocompatibility of BNNT supramolecular complexes and PCL/BNNTs nanofibers, N.P Khalili, R. Moradi, P. Kavehpour, F. Islamzade, March 2020, Materials today: proceedings DOI: 10.1016/j.matpr.2020.02.782
 18. Boron nitride nanotube clusters and their hybrid nanofibers with polycaprolacton: Thermo-pH sensitive drug delivery functional materials, N.P Khalili, R. Moradi, P. Kavehpour, F. Islamzade, European Polymer Journal, Volume 127, 15 March 2020, 109585
 19. Nanofibrous poly (ϵ -caprolactone)/poly (vinyl alcohol)/chitosan hybrid scaffolds for bone tissue engineering using mesenchymal stem cells, The International journal of artificial organs, 2007, 30 (3), 204-211
 20. Optimization of micro Knudsen gas sensor for high precision detection of SO₂ in natural gas, Yuanzhou Zheng, Tran Dinh Manh, M. Barzegar Gerdroodbary Rasoul Moradi, March 2020, Results in Physics 16:102933
 21. Air Gap Membrane Distillation for Enrichment of H₂O in Natural Water using Poly (vinylidene fluoride) Nanofibrous Membrane, December 2015, Chemical Engineering and Processing 100, DOI:10.1016/j.cep.2015.11.015
 22. Optimal modification of poly(Vinylidene fluoride) membrane surface by using surface-modifying macromolecules for application in membrane distillation April 2017, Desalination and water treatment, 71(5-7):62-78 DOI 10.5004/dwt.2017.20292
 23. Synthesis and Preparation of Mono-Layer h-BN Nanopowders by Using a Combination of CVD Method with Isopropanol-Assisted Exfoliation Process,

- February 2017, Powder Metallurgy and Metal Ceramics, 55(9-10)
DOI10.1007/s11106-017-9836-1
24. Produced Water Treatment by Using Nanofibrous Polyvinylidene Fluoride Membrane in Air Gap Membrane Distillation (Azeri), January 2017 SPE Annual Caspian Technical Conference and Exhibition, DOI 10.2118/189051-AZ
 25. Produced Water Treatment by Using Nanofibrous Polyvinylidene Fluoride Membrane in Air Gap Membrane Distillation January 2017 Conference: SPE Annual Caspian Technical Conference and Exhibition, DOI 10.2118/189051-MS
 26. Optimal control of batch cooling crystallizers by using genetic algorithm, September 2016, Case Studies in Thermal Engineering, DOI10.1016/j.csite.2016.09.001
 27. Experimental investigation of nanofibrous poly(vinylidene fluoride) membranes for desalination through air gap membrane distillation process, July 2016, Korean Journal of Chemical Engineering 33(10), DOI10.1007/s11814-016-0137-z
 28. Vacuum enhanced membrane distillation for trace contaminant removal of heavy metals from water by electrospun PVDF/TiO₂ hybrid membranes, June 2016, Korean Journal of Chemical Engineering 33(7), DOI10.1007/s11814-016-0081-y
 29. Preparation and Characterization of Polyvinylidene Fluoride/Graphene Superhydrophobic Fibrous Films for Contorted Release. *Polymers* 2015, 7(8), 1444-1463.
 30. Air Gap Membrane Distillation for Enrichment of H₂18O in Natural Water using Poly(vinylidene fluoride) Nanofibrous Membrane for Synthesize of FDG Radio-Drug, *Journal of Chemical Engineering*, 2016 (100) 26-36
 31. Synthesis of nanofibrous PVDF membranes for desalination using air gap membrane distillation process: A comparative evaluation, *ACES*, 8(12), 2014.
 32. Functionally Graded Nanocomposite Cylinders Reinforced by Wavy Carbon Nanotube, *Advanced Design and Manufacturing Technology*, 7(4) 2014.
 33. Drag and heat flux reduction induced by the pulsed counterflowing jet with different periods on a blunt body in supersonic flows, December 2018, DOI: 10.1016/j.ijheatmasstransfer.2018.08.066
 34. Heat transfer enhancement of ferrofluid inside an 90° elbow channel by non-uniform magnetic field, Apr 2018, *Journal of Magnetism and Magnetic Materials*, DOI 10.1016/j.jmmm.2018.03.070
 35. Bioinspired Superhydrophobic PVDF/Graphene Nanofibrous Film, *Nanotechitaly*, 2014. Venice, Italy
 36. Development of Knudsen thermal force for mass analysis of CH₄/He gas mixture January 2019 *International Journal of Modern Physics C*, DOI: 10.1142/S0129183119500025
 37. Development of Knudsen thermal force for mass analysis of CH₄/He gas mixture January 2019 *International Journal of Modern Physics C* DOI: 10.1142/S0129183119500025
 38. Nanofluid turbulent flow in a pipe under the effect of twisted tape with alternate axis, March 2018, *Journal of Thermal Analysis and Calorimetry*, DOI 10.1007/s10973-018-7093-2
 39. Calibration of low-pressure MEMS gas sensor for detection of hydrogen gas, March 2018, *International Journal of Hydrogen Energy*, DOI 10.1016/j.ijhydene.2017.11.087

40. Heat transfer enhancement of ferrofluid inside an 90° elbow channel by non-uniform magnetic field, April 2018, Journal of Magnetism and Magnetic Materials DOI10.1016/j.jmmm.2018.03.070
41. Mass analysis of CH₄/SO₂ gas mixture by low-pressure MEMS gas sensor, March 2018, Journal of Natural Gas Science and Engineering 53 DOI10.1016/j.jngse.2018.03.002
42. CNT-water nanofluid thermal radiation heat transfer over a stretching sheet considering heat generation, April 2017, Journal of Molecular Liquids 237, DOI 10.1016/j.molliq.2017.04.058
43. Numerical simulation for heat transfer intensification of nanofluid in a porous curved enclosure considering shape effect of Fe₃O₄ nanoparticles, December 2017, Chemical Engineering and Processing, DOI 10.1016/j.ces.2017.12.005
44. Fe₃O₄-Ethylene glycol nanofluid forced convection inside a porous enclosure in existence of Coulomb force, November 2017, Journal of Molecular Liquids 249 DOI 10.1016/j.molliq.2017.11.048
45. Combined thermophoresis and Brownian motion effects on nanofluid free convection heat transfer in an L-shaped enclosure, October 2017, Chinese Journal of Physics- Taipei- 55(6) DOI 10.1016/j.cjph.2017.09.011
46. Heat transfer of Fe₃O₄-water nanofluid in a permeable medium with thermal radiation in existence of constant heat flux, September 2017, Chemical Engineering Science. 174 DOI 10.1016/j.ces.2017.09.026
47. Numerical investigation of drag and heat flux reduction mechanism of the pulsed counterflowing jet on a blunt body in supersonic flows, March 2018, Acta Astronautica 146, DOI10.1016/j.actaastro.2018.02.040
48. Application of direct simulation Monte Carlo for development of micro gas sensor, Bulgarian Chemical Communications, Volume 50, Issue 2, (298–305) 2018
49. PVDF/h-BN hybrid membranes and their application in desalination through AGMD, Jul 2018, Membrane Water Treatment 9(4):221-231, DOI: 10.12989/mwt.2018.9.4.221
50. Application of Knudsen thermal force for detection of inert gases, JUN 2018, RESULTS IN PHYSICS 9(4), 351-358 10.1016/j.rinp.2018.02.002
51. Application of direct simulation Monte Carlo for development of micro gas sensor, Bulgarian Chemical Communications, Volume 50, Issue 2, (pp. 298 – 305) 2018
52. Design and high-speed aerodynamic performance analysis of vortex lift waverider with a wide-speed range, July 2018, Acta Astronautica 151, DOI 10.1016/j.actaastro.2018.07.034
53. Mixing enhancement mechanism induced by the cascaded fuel injectors in supersonic flows: A numerical study, July 2018, Acta Astronautica, DOI: 10.1016/j.actaastro.2018.07.027
54. Shape effect of cavity flame-holder on mixing zone of hydrogen jet at supersonic flow, July 2018, International Journal of Hydrogen Energy, DOI: 10.1016/j.ijhydene.2018.06.166
55. The influence of coolant jet direction on heat reduction on the nose cone with Aerodome at supersonic flow, June 2018, Acta Astronautica 151, DOI: 10.1016/j.actaastro.2018.06.026
56. Heat transfer study of mechanical face seal and fin by analytical method, Journal of Engineering Science and Technology, May 2018, DOI: 10.1016/j.jestch.2018.05.001

57. Effect of dual micro fuel jets on mixing performance of hydrogen in cavity flameholder at supersonic flow, April 2018, International Journal of Hydrogen Energy 43(20), DOI: 10.1016/j.ijhydene.2018.03.230
58. Numerical experiment on the flow field properties of a blunted body with a counterflowing jet in supersonic flows, April 2018, Acta Astronautica 147, DOI: 10.1016/j.actaastro.2018.04.018
59. Heat transfer enhancement of ferrofluid inside an 90° elbow channel by non-uniform magnetic field, April 2018, Journal of Magnetism and Magnetic Materials 460, DOI: 10.1016/j.jmmm.2018.03.070
60. Flame propagation and stabilization in dual-mode scramjet combustors: A survey, June 2018 Progress in Aerospace Sciences, DOI: 10.1016/j.paerosci.2018.06.003
61. Two phase model for nanofluid heat transfer intensification in a rotating system under the effect of magnetic field, January 2018, Chemical Engineering and Processing 123:47-57 DOI 10.1016/j.cep.2017.10.024
62. The influence of non-uniform magnetic field on heat transfer intensification of ferrofluid inside a T-junction January 2018, Chemical Engineering and Processing 123(1):47-57 DOI 10.1016/j.cep.2017.10.021
63. Application of molecular force for mass analysis of Krypton/Xenon mixture in low-pressure MEMS gas sensor December 2017, Vacuum DOI 10.1016/j.vacuum.2017.12.042
64. Forced convection in existence of Lorentz forces in a porous cavity with hot circular obstacle using nanofluid via Lattice Boltzmann method, September 2017, Journal of Molecular Liquids, 246, DOI 10.1016/j.molliq.2017.09.053
65. The influence of upstream wavy surface on the mixing zone of the transverse hydrogen jet at supersonic free stream ,2019 Aerospace Science and Technology
66. Mixing augmentation of transverse hydrogen jet by injection of micro air jets in supersonic crossflow, May 2017, Acta Astronautica 137 DOI 10.1016/j.actaastro.2017.05.007
67. TiO₂ Containing PVDF-HFP Electrospun Films as Antibacterial Wound Dressings, Nanotechitaly, 2015. Bologna, Italy.
68. Introducing Hierarchical Nanostructure into Graphene/PVDF Nanocomposite Films to Induce Superhydrophobicity, IWCPE-2014. International Workshop of Chemical Engineering, 2014 Istanbul.
69. Synthesis and Characterization of Hexagonal Boron nitride 2D Nanosheets, Nanostructures conference, Kish island, Iran, 2016.
70. Synthesis and Characterization of PVDF/Nanoclay Electrospun hallow fibers. International Conference of Chemical Engineering, March 2014, Kish, Iran.
71. Handbook of Iranian Lubricant Industry, (In Persian), Book Chapter, 2008. Sharif University publication.
72. Application of KKL model in studying of nanofluid heat transfer between two rotary tubes Open Access Alsagri, A.S., Moradi, R. 2019 Case Studies in Thermal Engineering
73. Effect of fuel jet arrangement on the mixing rate inside trapezoidal cavity flame holder at supersonic flow Du, S., Al-Rashed, A.A.A.A., Moradi, R Barzegar Gerdroodbary, M., (...), Shahsavar, A., Talebizadehsardari, P. 2019 International Journal of Hydrogen Energy
74. Drag and heat flux reduction induced by the pulsed counterflowing jet with different waveforms on a blunt body in supersonic flows Zhang, R.-R., Huang, W., Yan, L., Chen, Z., Moradi, R. 2019 Acta Astronautica

75. MHD nanofluid heat transfer between a stretching sheet and a porous surface using neural network approach Geng, Y., Moradi, R. Hassanvand, A., 2019 International Journal of Modern Physics C
76. Influence of various shapes of CuO nanomaterial on nanofluid forced convection within a sinusoidal channel with obstacles Moradi, R. Saidizad, A., Jafaryar, M., (...), Shafee, A., Li, Z. 2019 Chemical Engineering Research and Design
77. Measurement of low-pressure Knudsen force with deflection approximation for gas detection Open Access Vo, D.D., Moradi, R., Barzegar Gerdroodbary, M., Ganji, D.D. 2019 Results in Physics
78. Injection of multi hydrogen jets within cavity flameholder at supersonic flow Edalatpour, A., Moradi, R., Amini, Y. 2019 International Journal of Hydrogen Energy
79. Study of Strength of Interaction between Solute and Solvent Molecules in Aqueous Solutions of Ethylene Glycol, D-Mannitol, D-Fructose, Sucrose, and Maltose at 294.15, 298.15, and 303.15 K and Atmospheric Pressure using Refractometry Moradi, R., Kiani, F., Sarikavakli, N. 2019 Russian Journal of Physical Chemistry A
80. Mixing augmentation mechanism induced by the dual injection concept in shcramjet engines Du, Z.-B., Huang, W., Yan, L., Chen, Z., Moradi, R. 2019 Acta Astronautica
81. Numerical mesoscopic method for transportation of H₂O-based nanofluid through a porous channel considering Lorentz forces Shekholeslami, M., Moradi, R., Shafee, A., Li, Z. 2019 International Journal of Modern Physics C 30(2-3),1950007
82. Application of Neural Network for estimation of heat transfer treatment of Al[Formula presented]O[Formula presented]-H[Formula presented]O nanofluid through a channel Sheikholeslami, M., Gerdroodbary, M.B., Moradi, R., Shafee, A., Li, Z. 2019 Computer Methods in Applied Mechanics and Engineering 344, pp. 1-12
83. Nanofluid turbulent flow in a pipe under the effect of twisted tape with alternate axis Jafaryar, M., Sheikholeslami, M., Li, Z., Moradi, R. 2019 Journal of Thermal Analysis and Calorimetry 135(1), pp. 305-323
84. Transient nanofluid squeezing cooling process using aluminum oxide nanoparticle Tlili, I., Moradi, R., Gerdroodbary, M.B. 2019 International Journal of Modern Physics C Article in Press
85. Optimization of micro Knudsen gas sensor for high precision detection of SO₂ in natural gas, Tlili, I., Moradi, R., Gerdroodbary, Results in Physics Available online 9 January 2020, 102933
86. Influence of backward-facing step on the mixing efficiency of multi microjets at supersonic flow, Li, Z., Moradi, R., Marashi, S.M., Babazadeh, H., Choubey, G. 2020 , Acta Astronautica , 175, pp. 37-44
87. Mixing enhancement of multi hydrogen jets through the cavity flameholder with extended pylon, Li, Z., Barzegar Gerdroodbary, M., Sheikholeslami, M. , Moradi, R., 2020 Acta Astronautica 175, pp. 300-307
88. Three-dimensional DSMC simulation of thermal Knudsen force in micro gas actuator for mass analysis of gas mixture, Li, Y., Abazari, A.M., Barzegar Gerdroodbary, M., Moradi, R., Babazadeh, H., 2020 Measurement: Journal of the International Measurement Confederationm160,107848
89. Mixing enhancement of the multi hydrogen fuel jets by the backward step, Peng, Y., Barzegar Gerdroodbary, M., Sheikholeslami, M., Moradi, R., 2020 Energy 203,117859

90. Impact of MHD on hybrid nanomaterial free convective flow within a permeable region, Manh, T.D., Nam, N.D., Abdulrahman, G.K., Moradi, R., Babazadeh, H., 2020 Journal of Thermal Analysis and Calorimetry, 140(6), pp. 2865-2873
91. Alumina nanoparticle flow within a channel with permeable walls, , Nam, N.D., Abdulrahman, G.K., Moradi, R., 2020 International Journal of Modern Physics C 31(4),2050050
92. Effect of inclined block on fuel mixing of multi hydrogen jets in scramjet engine, Aerospace Science and Technology, 2020, 105, 106035
93. Effect of cavity back height on mixing efficiency of hydrogen multi-jets at supersonic combustion chamber, International Journal of Hydrogen Energy, 2020, 45(51), pp. 27828–27836
94. Computational study of the multi hydrogen jets in presence of the upstream step in a Ma=4 supersonic flow,International Journal of Hydrogen Energy, 2020, 45(55), pp. 31118–31129
95. Effect of strut angle on performance of hydrogen multi-jets inside the cavity at combustion chamber, International Journal of Hydrogen Energy, 2020, 45(55), pp. 31179–31187
96. Thermal effects of the nonuniform magnetic force on nanofluid stream along the convergent tube: A computational study, International Journal of Modern Physics B, 2020, 34(28), 2050264
97. Characterization of New Wire Gauze-Structured Packing: Experimental Study, Chemical Engineering and Technology, 2020, 43(12), pp. 2469–2476
98. Characterization of a New Structured Packing by Computational Fluid Dynamics, Chemical Engineering and Technology, 2021, 44(1), pp. 156–163
99. Effect of downstream sinusoidal wall on mixing performance of hydrogen multi-jets at supersonic flow: Numerical study, Aerospace Science and Technology, 2021, 109, 106410
100. Effect of sinusoidal splitter on mixing performance of co-flow jets of hydrogen and air inside dual-combustor ramjet, Acta Astronautica, 2021, 180, pp. 211–217

Journals Reviewer Summary

For manuscripts reviewed from date range May 2019 - February 2023:

- (35 manuscripts) International Journal of Hydrogen Energy
- (23 manuscripts) Journal of Thermal Engineering
- (7 manuscripts) Scientific Reports
- (6 manuscripts) Desalination
- (3 manuscripts) High Performance Polymers
- (2 manuscripts) International Journal of Thermal Sciences
- (2 manuscripts) International Communications in Heat and Mass Transfer
- (2 manuscripts) Journal of Heat Transfer
- (2 manuscripts) Colloid and Polymer Science
- (1 manuscripts) AEJ - Alexandria Engineering Journal. (1 manuscripts) Journal of Mechanical Engineering Science. (1 manuscripts) Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science.. (1 manuscripts) Engineering Science and Technology, an International Journal. (1 manuscripts) Biofouling . (1 manuscripts) Engineering Applications of Computational Fluid Mechanics (1 manuscripts) Journal of Computational Science (1 manuscripts) Journal of Fluorine Chemistry.(1 manuscripts) Journal of Environmental Science and Health, Part A

Editorial Board Membership

- Journal of Material Science and Research
- Journal of Drug Research

Recent Scientific Presentations

- Leading and Holding (chair) the first Eurasian Nanotechnology Conference, Baku. Azerbaijan, October 2021, Nanotech Eurasia 2021
- Leading and Holding (co-chair) the first Eurasian Nanotechnology Conference, Baku. Azerbaijan, October 2019, Nanotech Eurasia 2019
- Erasmus+ Faculty Member Mobility IPB (Postdoctoral research outcome Presentation), Braganza, Portugal, 2019
- Produced Water Treatment, SPE Caspian Conference, Baku, Azerbaijan, 2017
- Separations on Microfluidics platform, University of Tehran, Tehran. 2015
- Electrospinning for producing Nanofibrous Scaffolds, University of Tehran, Tehran, 2014
- Lab-on-Chips, University of Tehran, Tehran. 2013
- Two Dimensional Framework and Membranes, Sharif University of Technology, Tehran, 2011

MSc & PhD Student Supervision

- 5 MSc student thesis supervising
- 3 PhD Student thesis supervising

Languages

- English: Excellent
- Azerbaijani: Mother Tongue
- Persian: Native
- Turkish: Fluent

References

- Professor Pirouz Kavehpour, Mechanical Engineering & Bioengineering, Email: pirouz@seas.ucla.edu
Phone: +1 (310) 825-6494, Website: Complex Fluids & Interfacial Physics Laboratory
- Professor Slava V. Rotkin, Frontier Professor at Pennsylvania State University, Engineering Science & Mechanics,
- Professor Hamlet Isakhnli, Khazar University (Founder), Baku, Azerbaijan, hamlet@khazar.org
Phone: +1 (814) 863-3087 Email: rotkin@psu.edu
- Professor Hamid Bahrami, Electrical Engineering Department, University of Akron, Phone: +1 (330) 972 7940 Email: hamid.bahrami@gmail.com
- Dr. Hassan Niknafs (Former Rector and Dean at Khazar University)
PhD in Mechanical Engineering, Akron University, USA.
Email: dr.nik2010@gmail.com