

Specialized Biography

1. Personal Information

Name and surname: Aziz Babapoor

Professor of Chemical Engineering

Faculty Member, University of Mohaghegh Ardabili, Ardabil, Iran

2003: Bachelor of Chemical Engineering - Sharif University of Technology, Iran

2005: Master of Chemical Engineering - Sharif University of Technology, Iran.

2015: PhD of Chemical Engineering - Shiraz University, Iran.



Year of birth: 1978

Place of birth: Ahar

Father's name: Bek Baba

Marital Status: Married - Two Children

Gender: Male

Permanent Residence Address: No. 23, Safa Alley, Sotwan Reyhani Street, Ahar, East Azerbaijan, Iran.

Current Residence Address: Unit 5, Plot 270, Block 7, Kowsar Town, Ardabil, Ardabil, Iran.

University website address:

<https://academics.uma.ac.ir/profiles?Name=babapoor>

Email Addresses:

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Top:

World's Top 2% Scientist- 2020

World's Top 2% Scientist- 2021

World's Top 2% Scientist- 2022

World's Top 2% Scientist- 2023

World's Top 2% Scientist- 2024

2. Educational qualifications and honors:

First student in class, school, region and city throughout the entire period of study up to diploma. Achieving various scientific-cultural positions at the provincial and national levels.

1998: 72nd place in the mathematics and physics Iranian national university entrance exam (Konkour exam).

2006 - 2008: Researcher, Biochemical Engineering and Environmental Control Research Center, Sharif University of Technology

2014: Received a scholarship from the Ministry of Science, Research and Technology for the University of Mohaghegh Ardabili

2019: Top researcher at the University of Mohaghegh Ardabili

2020: First place in the festival of top researchers of Ardabil province

2020: Among the top two percent of scientists in the world in 2020

2021: Among the top two percent of scientists in the world in 2021

2022: Among the top two percent of scientists in the world in 2022

2023: Among the top two percent of scientists in the world in 2023

2024: Among the top two percent of scientists in the world in 2024

2024: Top researcher at the University of Mohaghegh Ardabili

2021: Executive and expert professor of the Shahid Ahmadi Roshan National Elite Foundation Problem-Based Project-5 (Synthesis of Nanosilver Disinfectant Solution)

2022: Patent for the simulation of the process of absorbing toxic HCN gas on pure and transition metal-doped graphite-like carbon nitride, 2022.

2020: International patent under the title: "Synthesis of porous nanostructure IRMOF-3 by sol-thermal method for removing light and heavy hydrocarbons from oil wastewater"

2023: University Research Excellence Award in 2023

2024: University Research Excellence Award in 2024

3. Academic and educational background:

1. PhD in Chemical Engineering - defended in 2015 with honors (Shiraz University, Iran).
2. Scholarship from University of Mohaghegh Ardabili since 2013.
3. Faculty member of the Ahar Azad University (2015-2019).

4. Director of the Department of Composition, Consulting and Planning of the Department of Chemical Engineering and Related Fields in Sanjesh 3 (under the supervision of the Iranian Broadcasting and Sanjesh Organizations).
5. Director of the Department of Composition, Consulting and Planning of the Department of Chemical Engineering and Related Fields in Alavi Publications (It should be noted that all courses in the aforementioned fields include 10 books).
6. Compilation and compilation of 3 teaching aid books: General Microbiology and Biochemistry (first edition 2004), Application of Mathematics in Chemical Engineering (first edition 2004 - second edition 2009), Fluid Mechanics (first edition 2005) in Sanjesh Publications.
7. Compilation and compilation of teaching aid books: 1- Mass Transfer and Unit Operations 2- Thermodynamics 3- Reactor Design 4- Language 5- Process Control 6- Petroleum and Reservoir Engineering in Alavi Publications (First Edition 2007).
8. Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Sarvenaz Salahi, Mojgan Hosseini, Ali Mohammad Amani and Aziz Babapoor (September 12th 2018). Development of Clay Nanoparticles Toward Bio and Medical Applications, Current Topics in the Utilization of Clay in Industrial and Medical Applications Mansoor Zoveidavianpoor, IntechOpen, DOI: 10.5772/intechopen.77341. Available from: <https://www.intechopen.com/books/current-topics-in-the-utilization-of-clay-in-industrial-and-medical-applications/development-of-clay-nanoparticles-toward-bio-and-medical-applications>.
9. Seyyed Alireza Hashemi, Seyyed Mojtaba Mousavi, Ali Mohammad Shakibafard, Ghasem Shouli, Yousef Amrollahi and Aziz Babapoor, Development of Efficient Composites via Renewable, Recyclable, and Degradable Additives, IntechOpen (London, SE1 9SG, UNITED KINGDOM), 2019, DOI: <http://dx.doi.org/10.5772/intechopen.84560>.
10. Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Chin wei Lai, Wei-Hung Chiang, Gity Behbudi, Ahmad Gholami, Ali Alizadeh, Khadijeh Yousefi, Aziz Babapoor, Graphene Nanocomposites based Nanoproducts for Renewable Energy Application, In book: Handbook of Consumer Nanoproducts, Publisher: Springer, 2020.
11. Sargol Mazraedoost, Seyyed Mojtaba Mousavi, Kimiya Kazemi, Seyyed Alireza Hashemi, Wei-Hung Chiang, Ahmad Gholami, Navid Omidifar, Marziyeh Afsa, Aziz Babapoor, Maryam Zarei, Molecular Dynamic Simulation with Protein and Detection of Repurposable Drugs for COVID-19, Elsevier, 2020.
12. Farzad Raeisi, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Leila Malekpour, Sonia Bahrani, Chin Wei Lai, Wei-Hung Chiang, Aziz Babapoor, Sargol Mazraedoost, and Hossein Esmaili, Application of biosurfactant as a demulsifying and emulsifying agent in the formulation of petrochemical products, Green Sustainable Process for Chemical and Environmental Engineering and Science, Microbially-Derived Biosurfactants for Improving Sustainability in Industry, 2021, Pages 399-422, Elsevier Inc., <https://doi.org/10.1016/B978-0-12-823380-1.00016-2>.
13. Seyyed Mojtaba Mousavi, Masoomeh Yari Kalashgarani, Seyyed Alireza Hashemi, Chin wei Lai, Aziz Babapoor, An Overview on Clinical Applications of Biosensor, In book: SEMICONDUCTING POLYMER MATERIALS FOR BIOSENSING APPLICATIONS" Publisher: Elsevier, January 2022.

14. Farnaz Niknam, Vahid Rahmanian, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Aziz Babapoor and Chin Wei Lai, Bioinspired Hydrogels Through 3D Bioprinting (Chapter 6 of Book: BIOMIMICRY MATERIALS AND APPLICATIONS), 2023.
15. Sina Yaghoubi, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Aziz Babapoor and Chin Wei Lai, Sustainable Substitutes for Fluorinated Electrolytes in Electrochemical Capacitors, Sustainable Materials for Electrochemical Capacitors, (221–246) © 2023 Scrivener Publishing LLC.
16. Professor of exercise solving for various courses in the Faculty of Chemical and Petroleum Engineering, Sharif University of Technology.
17. Compiled 10 courses out of 16 courses in the educational package of Chemical and Petroleum Engineering and related disciplines in supplementary assessment.
18. Director of the compilation, consulting and planning group for mechanical engineering, management, MBA, accounting, chemistry, electricity, etc. in Alavi.
19. Lecturer of various courses (gas processes, reactor design - heat transfer - fluid mechanics - thermodynamics - balance - unit operations, etc.) at the University of Shiraz, Zanzan, Alzahra Tabriz, Payam Noor Zanzan, non-profit, Azad, Jihad Daneshgahi Tehran and schools such as Sharif Scholars, Sharif Elites, Sanjesh 3, Rahpoyan, Allameh, etc.
20. Teaching in all levels from elementary to postgraduate level since 1975 until now in class and private.
21. Forming and managing 3 different teams for research, translation and compiling academic and industrial reference books on science and technology: 1- Gas 2- Oil 3- Basic sciences, in which the presence of doctoral students and distinguished and distinguished master's students of Sharif University of Technology is used.
22. Head of the petroleum books compilation group (including 4 published books) at Setayesh Publications.

4. Work and research background

- 1- Presented and published 130 ISI articles, 20 scientific and research articles and ISC, 3 international conference articles and 75 national conference and symposium articles and 15 ISI articles submitted and under review
- 2- Compiled the book "Fluid Mechanics Laboratory", Mohaghegh Ardabili University Publications, 2010.
- 3- Compiled the book "Bitumen and Asphalt", Yavorian Publications, 2018.
- 4- Compiled the book "Vegetable Oil", Negin Sabalan Ardabil Publications, 2018.
- 5- Member of the University's Board of Examiners.
- 6- Deputy Director of University Research.

- 7- Compiling the book "Application of Nanotechnology in Modern Thermal Systems", Mohaghegh Ardabili University Publications, 1402.
 - 8- Setting up and preparing the instructions for the Fluid Mechanics Laboratory at Islamic Azad University of Ahar
 - 9- Passing the military service as an elite commandant at Sharif University of Technology as a consultant for master's degree projects
 - 10- Production Manager of Azar Shamim Chemical Company in 1381
 - 11- Working on the explanatory plan of the MTBE production unit - Radha Engineering Design and Consulting Company, 2003-2004
 - 12- Working on the explanatory plan of the Gilan Refinery - Radha Engineering Design and Consulting Company, 2003-2004
 - 13- Investigating and optimizing the treatment of industrial wastewater containing oil using the MF-UF membrane combination method while carrying out a master's degree project at Sharif University of Technology
 - 14- Assistant for the PhD thesis in Polymer Engineering - Polymer Research Laboratory - Sharif University of Technology
 - 15- Assistant Doctoral thesis in chemical engineering (process design) - Research Laboratory 8 of Dr. Farhadi - Sharif University of Technology
 - 16- Carrying out various projects on oil, gas, nano, food industries, polymers, environment, etc.
- Completing an internship for 240 hours at Tabriz Petrochemical
- 12- Carrying out a research project entitled "Simulation of fire events in a tunnel using CFD technique" at Islamic Azad University of Ahar
 - 13- Director of Research and Development of Sahand and Darvish Food Industries Company, Tabriz, 87-88
 - 14- Reviewer of the Journal of Chemistry and Chemical Engineering (IJCCE) (Persian: Scientific and English: ISI)
 - 15- Reviewer of the Journal of ISI (Polish Journal of Food and Nutrition Sciences)
 - 16- Reviewer of the Journal of ISI (Food science & Nutrition Journal)
 - 17- Reviewer of the Journal of ISC (International Journal of Nano Dimension (IJND))
 - 18- Reviewer of the Journal of ISI (Journal of Inorganic and Organometallic Polymers and Materials)
 - 19- ISI Journal Reviewer (Applied Thermal Engineering)
 - 20- ISC Journal Reviewer
 - 21- ISC Journal Reviewer (Journal of Petroleum Research)
 - 22- ISC Journal Reviewer (Journal of Petroleum Science and Technology)
 - 23- ISC Journal Reviewer (Nano Reviews and Experiments Journal)
 - 24- ISC Journal Reviewer (Gas Processing)
 - 25- ISC Journal Reviewer (Anthropogenic Pollution Journal (AP))

- 26- ISC Journal Reviewer (Therapeutic Delivery)
- 27- ISC Journal Reviewer (Energy Conversion and Management)
- 28- ISC Journal Reviewer (Asian Journal of Nanosciences and Materials)
- 29- ISC Journal Reviewer (Modeling in Engineering)
- 30- ISC Journal Reviewer (Energy & Fuels)
- 31- ISC Journal Reviewer (ISC Journal of Ultrafine Grained and Nanostructured Materials)
- 32- ISC Journal Reviewer (Solar Energy Materials and Solar Cells)
- 33- ISC Journal Reviewer (Thermal Science)
- 34- Reviewer ISI Journal (International Journal of Hydrogen Energy)
- 35- Reviewer ISI Journal (Iranian Journal of Materials Science and Engineering)
- 36- Reviewer ISI Journal (Energy Reports)
- 37- Reviewer ISI Journal (Journal of Energy Storage)
- 38- Reviewer ISI Journal (Journal of Thermal Analysis and Calorimetry)
- 39- Reviewer ISI Journal (Fuel)
- 40- Reviewer Journal of Environmental Treatment Techniques
- 41- Reviewer Journal of Composites and Compounds
- 42- Reviewer Journal of Nanoanalysis
- 43- Reviewer ISC Journal (New and Renewable Energy Quarterly)
- 44- Reviewer ISI Journal (Desalination)
- 45- Reviewer ISI Journal (Indian Journal of Science and Technology)
- 46- Reviewer ISI Journal (International Journal of Energy Research)
- 47- Reviewer ISI Journal (Journal of Rare Earths)
- 48- Reviewer ISI Journal (Colloids and Surfaces B: Biointerfaces)
- 49- Reviewer ISI Journal)) Alloys and Compounds
- 50- Reviewer ISI Journal)) Progress in Organic Coatings
- 51- Reviewer Journal (ISI) Journal of the Taiwan Institute of Chemical Engineers
- 52- Reviewer Journal (ISI) Energies
- 53- Reviewer Journal (ISI) Journal of the European Ceramic Society
- 54- Reviewer Journal (ISI) Journal: Vaccines
- 55- Reviewer Journal (ISI) Journal of Hazardous Materials
- 56- Reviewer Journal (ISI) Microporous and Mesoporous Materials
- 57- Reviewer Journal (ISI) Inorganic and Nano-Metal Chemistry

- 58- Reviewer Journal(ISI) Advances in Environmental Technology
- 59- Reviewer Journal(ISI) Frontiers in Pharmacology
- 60- Reviewer Journal(ISI) Materials Today Bio
- 61- Reviewer Journal(ISI) Journal of Nanoparticle Research
- 62- Reviewer Journal(ISI) Journal of Nanoparticle Research
- 63- Reviewer Journal(ISI) Chemical Engineering Journal
- 64- Reviewer Journal(ISI) South African Journal of Chemical Engineering
- 65- Reviewer (ISI) Journal of Water Process Engineering
- 66- Reviewer (ISI) Journal of Chemical Physics Impact
- 67- Reviewer (ISI) Journal of Pollution
- 68- Reviewer (ISI) Journal of Pharmaceutical and Biomedical Analysis
- 69- Reviewer (ISI) Journal of International Communications in Heat and Mass Transfer
- 70- Reviewer (ISI) Journal of Environment, Development and Sustainability
- 71- Reviewer (ISI) Journal of Chemistry Select
- 72- Reviewer (ISI) Journal of Molecular Liquids
- 73- Reviewer of the journal (ISI) Renewable and Sustainable Energy Reviews
- 74- Reviewer of the journal (ISI) Coordination Chemistry Reviews
- 75- Member of the specialized working group on skills training at the University of Mohaghegh Ardabili: 99- continued
- 76- Member of the working group on monitoring and evaluating technical and vocational universities in Ardabil province: 1401- continued.
- 77- Referee of the 9th National Student Conference on Chemical Engineering in Iran - September 2018
- 78- Head of the Chemistry Department's Referee Team of the First Tabriz Metropolitan Municipality's Inventions and Inventions Festival - April 2018
- 79- Member of the Recruitment Working Group and Representative of Shiraz University in the 93rd Shiraz Petrochemical Recruitment Exam
- 80- Referee of the National Conference on the Application of Chemical Sciences in Pharmaceutical, Chemical and Environmental Industries, Islamic Azad University, Ahar Branch, March 2018
- 81- Referee of the Fourth International Congress on Progress in Chemistry, Chemical Engineering and Metallurgy, Tehran, September 2016
- 82- Referee of the Thirteenth Student Scientific Conference on Materials Engineering and Metallurgy, Tehran, 2016.
- 83- Referee of the First National Conference on New Technologies in Chemistry and Chemical Engineering, Islamic Azad University, Ahar Branch, November 2016.

- 84- Referee and Supervisor of the Technology Units Growth Center Projects of Mohaghegh Ardabili University from 2016 to Now. (1- Anti-icing design of aircraft and Taxi way)
- 85- Member of the scientific committee and referee of the first annual conference of chemistry and chemical engineering of Iran, Kish, June 2017.
- 86- Member of the scientific committee and referee of the international conference on modern research in science and engineering of the 21st century, November 2017- Astara-Iran.
- 87- Member of the scientific committee and referee of the second conference on applied chemical sciences and technologies: sensors and biosensors, September 2018, Shiraz, Iran.
- 88- Referee of the Second National Conference on New Technologies in Chemistry and Chemical Engineering, Islamic Azad University, Ahar Branch, December 2017.
- 89- Member of the Executive Committee of the Wind Energy Conference, University of Mohaghegh Ardabili, Ardabil, November 2016.
- 90- Supervision of more than 200 undergraduate theses in different universities
- 91- Supervision and consulting of more than 20 master's theses
- 92- Co-executor of the research project: Separation of hydrogen sulfide and carbon dioxide from methane using membrane contactors, National Iranian Gas Company, Project Executing Organization: Sharif University of Technology, 2008-2011.
- 93- Holding a training workshop on "Nanotechnology and Renewable Energy" under the supervision of the Iranian Energy Association, University of Mohaghegh Ardabili, November 2016.
- 94- Holding a training workshop on "Application of Phase Change Nanomaterials in Energy Optimization", under the supervision of the National Nano Headquarters, June 2017.
- 95- Participating in a training workshop on "Bio-mimic Nanotechnology", under the supervision of the Iranian Nanotechnology Association, University of Mohaghegh Ardabili, November 2016.
- 96- Participating in a workshop on "Introduction to Library Portal and Databases", University of Mohaghegh Ardabili, November 2016.
- 97- Member of the Executive Committee of the "Wind Energy Conference", Ardabil, University of Mohaghegh Ardabili, November 2016.
- 98- Participated in the workshop "Application of energy storage resources alongside renewable energy sources", University of Mohaghegh Ardabili, November 2016.
- 99- Participated in the workshop "Technologies for Utilizing Wind Turbines", University of Mohaghegh Ardabili, November 2016.
- 100- Participated in the workshop "Potential Assessment and Outlook of Wind Energy in Ardabil Province", University of Mohaghegh Ardabili, November 2016.
- 101- Participated in the specialized roundtable "Capacities and Challenges of Developing Wind Power Plants in Ardabil Province", University of Mohaghegh Ardabili, November 2016.
- 102- Participated in the workshop "Endnote and Mendeley", University of Mohaghegh Ardabili, January 2016.
- 103- Participated in the workshop "Educational Hadith Studies", University of Mohaghegh Ardabili, January 2016.

- 104- Participated in the workshop "From the World of Microns to Nano", University of Mohaghegh Ardabili, February 2016.
- 105- Participated in the workshop "Professional Ethics", University of Mohaghegh Ardabili, March 2016.
- 106- Participation in the workshop "National Strategic Document on Elite Affairs", Ardabil Province Elite Headquarters, October 2017.
- 107- Participation in the Banquet of Professors' Thought, Mashhad, July 2017 and July 2013.
- 108- Judge of the Alborz Regional Inventions and Innovations Festival, July 2017, Ardabil.
- 109- Judge of the IRGC's scientific and research projects.
- 110- Participation in the course "Introduction to the Viewpoint Software (Chargun)", University of Mohaghegh Ardabili, December 2016.
- 111- Supervisor and advisor to the Chemical Engineering Student Scientific Association of Mohaghegh Ardabili University since the fall of 2016.
- 112- Member of the think tank and advisor to the Iranian Nanotechnology Association - Ardabil Province Branch.
- 113- Conducting 10 research projects at the University of Mohaghegh Ardabili.
- 114- Research project leader: "Investigating the effect of process fluid flow arrangement inside the pipe on the efficiency of air coolers", 95-96.
- 115- Main collaborator: "Risk assessment in the underground storage process of oil and petroleum products", University of Mohaghegh Ardabili, 95-96.
- 116- Main collaborator: "Synthesis and chemical modification of magnetic iron nanoparticles with polythiophene for the removal of nitrobenzene derivatives from wastewater", University of Mohaghegh Ardabili, 95-96.
- 117- Principal collaborator of the research project "Synthesis and identification of zinc-naproxen and zinc-ibuprofen nanodrugs and investigation of their cytotoxicity", University of Mohaghegh Ardabili, end of 96.
- 118- Principal collaborator of the research project "Experimental and theoretical study of the inhibitory effect of pure and functionalized N,N-bis(salicylidine)-1,2-phenylenediamine compounds on the corrosion of mild steel in hydrochloric acid solution", University of Mohaghegh Ardabili, ongoing.
- 119- Executive of the research project "Design of a biosensor for detecting mercury in contaminated soils using rhamnolipid biosurfactant and luminescent bacteria", ongoing.
- 120- Executive of the research project "Synthesis and identification of magnetic nanoparticles modified with porous materials SBA-15 and amine functional groups for the separation of heavy metals from industrial wastewater", University of Mohaghegh Ardabili, end of 98.
- 121- Executive of the research project "Synthesis and identification of properties of Thermal and biological properties of new porous coordination polymers of scandium in single crystal and nanometer dimensions", University of Mohaghegh Ardabili, Khatameh 98.
- 123- Executive of the research project "Green synthesis of nanocomposite - cobalt manganese ferrite ternary oxide - multi-walled carbon nanotube and investigation of its supercapacitive behavior", ongoing.

- 124- Translation of 3 books under the supervision University of Mohaghegh Ardabili Press
- 125- Author of the analytical article "The use of phase change materials as an important solution in implementing the resistance economy", Special Letter of the Supreme Leader's Representative Office at Mohaghegh Ardabili University (Aqiq), No. 6, April 2017.
- 126- Executive Secretary of the "First International Conference on Separation Science and Engineering", Ardabil.
- 127- Executive Secretary of the "Fifth National Conference on Separation Science and Engineering", Ardabil.
- 128- Director of Information Technology of the Iranian Nanotechnology Association - Ardabil Province Branch - continuing since 2017.
- 129- Lecturer of HSE course with official license from Mohaghegh Ardabili University.
- 130- Representative of Entrepreneurship Committee of Mohaghegh Ardabili University in Technical Faculty since October 2018-Continued.
- 131- Director of Chemical Engineering Department - Mohaghegh Ardabili University: July 2018-Continued.
- 132- Deputy Director of Research of the University.

Publications:

a) Congresses, conferences and symposiums:

- 1-"Treatment of Oil-Containing Industrial Wastewater Using MF Membrane", Aziz Babapoor, Reza Roustazadeh, Jalil Razavi, 10th National Iranian Chemical Engineering Congress, 84 Zahedan, Iran.
- 2-"Simulation of Pool Fire in Tunnel by Dynamic Fire Simulator", Mehdi Ahmadi Sabeq, Aziz Babapoor, Vahid Bab, 4th National Conference on Safety Engineering and HSE Management, 90, Sharif Industrial Complex, Tehran, Iran.
- 3-"Simulation of a Tunnel Fire by CFD Technique", A. Babapoor, V.Bab, M.Ahmadi Sabegh, 3rd National Conference on Modern Researches in Chemistry and Chemical Engineering, 2011, Mahshahr, Iran.
- 4- "Influence of particle size on Thermal stability of NiO Nanoparticle", A.Babapoor, V.Bab, 3rd International Conference on Nanotechnology: Fundamentals and Applications, August 7-9, 2012, Montreal Canada.
- 5-"Evaluation of Solid Substance Conveying Zone in Extruders and Modeling the Pressure Pattern and Compare it with Experimental Results in this Area", A.Babapoor, A.Ramezani, 6th International Chemical Engineering Congress& Exhibition, 2009 Kish .Iran.
- 6-"Electro-oxidation of Ethanol on Pt/CC nanoparticle electrocatalyst in alkaline medium: analysis of the reaction mechanism", International Conference on Nanotechnology: Fundamentals and Applications, August 4-6, 2010 Ottawa Canada.

- 7- "Numerical modeling of the application of phase change nanomaterials", Aziz Babapoor, Fariba Karimian, Gholamreza Karimi, National Conference on Mechanical Engineering 2013, Malayer, Iran.
- 8- "Thermal management in lithium ion batteries using phase change materials", Aziz Babapoor, Malihe Heravi, Mazyar Mahmoudi, Gholamreza Karimi, National Conference on Mechanical Engineering 2013, Malayer, Iran.
- 9- "Prevention of corrosion of energy transmission lines due to stray currents generated by metro lines", Aziz Babapoor, Yaser Bakhshodehnia, Ali Hosseinzadeh, Third Oil, Gas and Petrochemical Conference 2013, Gachsaran, Iran.
- 10- "Optimal selection of energy transmission line material for implementation considering the corrosion factor within the metro lines", Aziz Babapoor, Yaser Bakhshodehnia, Mohammad Bakhshodehnia, Farid Balochi, Third Oil, Gas and Petrochemical Conference 2013, Gachsaran, Iran.
- 11- "Safety Case Assessment for Modification of Existing Systems", Aziz Babapoor, Yaser Bakhshodehnia, Mohsen Mihan-Doost, 3rd Oil, Gas and Petrochemical Conference 2013, Gachsaran, Iran.
- 12- "A Review of Numerical Modeling and Analysis of the Application of Phase Change Materials in Buildings to Reduce Energy Consumption", Aziz Babapoor, Yaser Bakhshodehnia, Mohammad Bakhshodehnia, 5th Conference on Renewable, Clean and Efficient Energies, March 2013, Tehran, Iran.
- 13- "A Review of the Structure of Zeolites and Their Environmental Applications", Mahmoud Reza Arami, Mostafa Honarmand Azimi, Aziz Babapoor, 2nd National and Specialized Conference on Iranian Environmental Research, August 2014, Hamadan, Iran.
- 14- "A Review of Phase Change Materials as a Valuable Source of Energy", Mahdiah Masoudi Reyhan, Aziz Babapoor, 6th Conference on Renewable, Clean and Efficient Energies, November 2014, Tehran, Iran.
- 15- "A Review of Energy Consumption Optimization in Buildings from a Chemical Engineering Perspective", Ali Rezaei, Aziz Babapoor, Mehdi Ahmadi, 6th Conference on Renewable, Clean and Efficient Energies, November 2014, Tehran, Iran.
- 16- "A Review of Crisis Management and HSE Assessment in Refineries Under Construction in Iran", Ataollah Ramezani Amiri, Hakimeh Ghareh Daghi, Maryam Zahedaniya, Aziz Babapoor, 2nd National Conference on Crisis Management and HSE in Vital Arteries, Industries and Urban Management, January 2014, Tehran, Iran.
- 17- "A Review of the Application of Nanotechnology in Food Packaging", Nemat A... Shapouri, Aziz Babapoor, Third National Conference on Nanotechnology from Theory to Application, Jami University, February 2014, Isfahan, Iran.
- 18- "Review of the application of phase change materials in temperature control of battery types", Mohammad Mehdi Azizi, Aziz Babapoor, Reza Pishkar-Azari, Araz Hossein Asadi, First National Conference on Application of Chemical Sciences in Pharmaceutical, Chemical and Environmental Industries, Islamic Azad University, Ahar Branch, March 2014.
- 19- "Review of Environmental Pollutants in Cement Industry", Reza Morad Eskandari, Shahab Hashemi Nogurani, Mohsen Ba'emani, Aziz Babapoor, National Conference on Environmental Science and Engineering, Shahid Chamran University, Ahvaz, February 19-21, 2014.
- 20- "Review of the Relationship between Air Pollution in Oil, Gas and Petrochemical Industries and Sustainable Development", Younes Abbasi, Mir Hossein Mazloumi-Asl-Sheikhlar, Amir Behrouzi,

Bahram Panahi, Aziz Babapoor, Second National Conference on Planning, Protection, Environmental Protection and Sustainable Development, Hamadan, Shahid Mofateh University, March 2014.

21- "A review of the use of alginate biopolymer in wound healing and treatment", Athamar Ghadblan, Sirous Zahid Karakaj, Aziz Babapoor, First National Conference on the Application of Chemical Sciences in Pharmaceutical, Chemical and Environmental Industries, Islamic Azad University, Ahar Branch, March 2014.

22- "A review of the use of chitosan biopolymer in wound healing and treatment", Athamar Ghadblan, Sirous Zahid, Aziz Babapoor, Nasrin Mirzaei Nasirabad, First National Conference on the Application of Chemical Sciences in Pharmaceutical, Chemical and Environmental Industries, Islamic Azad University, Ahar Branch, March 2014.

23- "A review of membrane nanofilters used in water purification", Aziz Babapoor et al., First National Conference on the Application of Chemical Sciences in Pharmaceutical, Chemical and Environmental Industries, Islamic Azad University, Ahar Branch, March 2014.

24- "A review of the application of Smart Nanomaterials in Textile Industry", Aziz Babapoor et al., 4th Annual Conference on Chemistry and Petroleum (Process Engineering), Tehran, June 2015.

25- "A Review of the Application and Structure of Air Reactors", Aziz Babapoor et al., 4th Annual Conference on Chemistry and Petroleum (Process Engineering), Tehran, June 2015.

26- "A Review of CO₂ Gas Separation Using Different Methods", Aziz Babapoor et al., 4th Annual Conference on Chemistry and Petroleum (Process Engineering), Tehran, June 2015.

27- "A Review of Hospital Wastewater Treatment from the HSE Perspective", Fariba Khalilvand, Lida Soori, Aziz Babapoor, Nasrin Mirzaei Nasirabad, 9th National Conference on World Environment Day, Tehran, June 2015.

28- "A Review of the Application and Structure of Polyethylene Reactors", Aziz Babapoor, Yasna Rayesi, Samira Ghahremani, Mina Shams, Fourth Process Engineering Conference, Tehran, June 2015.

29- "A Review of Sustainable Urban Development with an Environmental Approach", Aziz Babapoor, Meysam Kermanshahi, Davud Mohammadi Mazra Khalafi, Second National Conference on Environmental Hygiene, Health and Sustainable Environment, Hamedan, June 2015.

30- "A Review of Factors and Hazards Threatening the Environment of the Persian Gulf", Aziz Babapoor, Mohammad Gitizadeh, Third National Conference on Environment, Energy and Biodefense, Tehran, June 2015.

31- "A Review of the Use of Cellulosic Materials to Remove Heavy Metals in the Wastewater Output of Various Industries", Mohammad Ghasti, Aziz Babapoor, First International Conference on Natural Hazards and Environmental Crises of Iran, Solutions and Challenges, Ardabil, 2016.

32- "A review of the use of cellulose materials to remove heavy metals from wastewater from various industries", Mohammad Qostai, Aziz Babapoor, First International Conference on Natural Hazards and Environmental Crises of Iran, Solutions and Challenges, Ardabil, 2016.

33- "A review of membranes and the application of membrane processes in various industries", Aziz Babapoor, Mohammad Saeed Mohammadi, Abuzar Jozouni, Samaneh Ghanbarloo, Sahar Khishkar, Third International Conference on New Research Achievements in Chemistry and Chemical Engineering, Amirkabir University of Technology, October 2016.

- 34- "A review of various new and effective methods for hospital waste management", Fariba Khalilvand, Aziz Babapoor, Nasrin Mirzaee, International Conference on Civil Engineering, Architecture, Urban Management and Environment in the Third Millennium, Rasht, September 2016.
- 35- "Investigation of the performance of two-phase and three-phase thermosyphons with nanofluid flow", Aziz Babapoor, Mohammad Saeed Mohammadi, Vahid Vahid Fard, Pouria Abbasi, Abuzar Jozouni, Third International Conference on New Research Achievements in Chemistry and Chemical Engineering, Amirkabir University of Technology, 2016.
- 36- "Carbon Nanotube Reinforced Nanocomposites: Challenges and Solutions", Aziz Babapoor et al., Third International Conference on New Research Achievements in Chemistry and Chemical Engineering, Amirkabir University of Technology, 2016.
- 37- "A review of various methods for treating wastewater from paint industries", Aziz Babapoor et al., First Conference International Conference on Water, Environment and Sustainable Development (ICWEST2016), University of Mohaghegh Ardabili, October 2016.
- 38- "A Review of Heat Transfer Enhancement Using Nanofluids", Aziz Babapoor et al., First National Conference on New Technologies in Chemistry and Chemical Engineering, Islamic Azad University, Ahar Branch, November 2016.
- 39- "New Dryers, a Development Factor in Food Industries", Sasan Foladi Vanda, Aziz Babapoor, Yousef Mousavi, Omid Rafiei, Fourth National Conference on Separation Science and Engineering, Anoushirvan University of Technology, Babol, June 2017.
- 40- "Investigation of the Structure of Systems Used in Absorption-Diffusion Refrigeration Cycles", Bahman Monjezi, Aziz Babapoor, Majid Oroji, Giti Behboudi, Fourth International Conference on Recent Innovations in Chemistry and Chemical Engineering, Allameh Tabatabaei University, Tehran, July 2017.
- 41- Parvin, Najmeh; Nematollahzadeh, Ali; Babapoor, Aziz, Petrochemical Wastewater Treatment with Modified Magnetic Nanoparticles, Third National Conference and Specialized Workshops on Nano Science and Technology, September 2017, Kerman, Iran.
- 42- Types of Liquid Membranes and Their Applications in Environmental Sanitation, Samaneh Ghanbarloo, Ali Nematollahzadeh, Aziz Babapoor, Mandana Amiri, Third Iranian Conference on Heat and Mass Transfer, Babol Noshirvani University of Technology, Babol, Iran. December 96.
- 43- A new look at renewable energy in Iran, Elham Ghazanfari, 11 th congress Biosystem Engineering, Hamadan, Iran, 2018.
- 44- Masoumeh Yari, Aziz Babapoor, It Nouri, Treatment of petroleum wastewater using nano-adsorbents for the separation of suspended hydrocarbons, 16th National Congress of Iranian Chemical Engineering, Tehran 2018.
- 45- Zeinab Emamghlou, Ayla Piri, Masoumeh Yari, Aziz Babapoor, A new look at the role of nanofluids in optimizing transport phenomena, The First International Congress and Exhibition of New Sciences and Technologies, Babol 2018.
- 46- Ayla Piri, Zeinab Emamghlou, Aziz Babapoor, Insulators of very cold (cryogenic) tanks: a new way to design special buffers, The First International Congress and Exhibition of New Sciences and Technologies, Babol, 2018.
- 47- Lida Hassanzadeh, Aziz Babapoor, Ali Nematollahzadeh, The use of organic-metallic nanoframeworks as a new way for controlled drug release, 15th National Chemistry Conference, Ardabil 2018.

- 48- Lida Hassanzadeh, Aziz Babapoor, Ali Nematollahzadeh, Investigation of different types of nanocarriers for drug delivery, 15th National Chemistry Conference, Ardabil, 2018.
- 49- Aziz Babapoor, Omid Rafiei, Seyed Karim Shafaghi Asl, Investigation and comparison of different methods for separation of heavy metals, 15th National Chemistry Conference, Ardabil, 2018.
- 50- Aziz Babapoor, Omid Rafiei, Ayat Nouri, Removal of heavy metals from aqueous solutions using low-cost adsorbents, 15th National Chemistry Conference, Ardabil, 2018.
- 51- Shayan Naqadi, Pooya Motamedi, Farshad Joudi, Aziz Babapoor, Laboratory measurement of carbon dioxide removal with TUF for adsorption properties and modeling using CFD approach, 9th National Conference on Application of Computational Fluid Dynamics in Chemical and Petroleum Industries, Tehran, 2018.
- 52- Safoora Pourroostam, Aziz Babapoor, Ali Nematollahzadeh, Ayat Nouri, Characterization of Mesoporous SBA-15 for Phenol Separation, International Conference on Nanoscience and Technology, University of Tehran, 2020.
- 53- Fatemeh Madadi, Aziz Babapoor, Hadi Bashar Nawaz, Review of HCN Gas Adsorption on Pure and Transition Metal-Modified Graphite-Like Carbon Nitride, International Conference on Nanoscience and Technology, University of Tehran, 2020.
- 54- Akbar Toosi, Shabnam Mokhtari Fateh, Aziz Babapoor. "Reuse of Abandoned Oil and Gas Wells for Geothermal Energy Production". 7th International Conference on Energy Technology and Management, 1400
- 55- Mohammad Reza Bidaghdari, Fahmieh Houriabab Sabour, Aziz Babapoor, Mehrdad Asgari. "Spectrophotometric Study of Congo Red Dye Absorption by Metal-Organic Framework 100- "MIL Third National Conference on Laboratory Equipment and Technologies, 1401.
- 56- Fereshteh Rahmani, Morteza Gholizadeh, Aziz Babapoor. "Investigation of the process of producing slow-release chemical fertilizers using pyrolysis oil". 24th International Conference on Modern Research in Science and Technology, 1401.
- 57- Nastaran Ali Nian Maryan, Fahimeh Houri Abad Sabour, Aziz Babapoor. "Fabrication and evaluation of chemical gas sensor based on semiconducting metal oxide nanofibers". 3rd International Conference on Research in Science and Technology. 1402.
- 58- Fatemeh Madadi, Aziz Babapoor, Hadi Beshrnawaz "Investigation of the adsorption of toxic HCN gas on graphite-like carbon nitride: using the DFT method" International Conference on Nano Science and Technology. 2010.
- 59- Zahra Shahbazi, Aziz BabapoorHadi Beshrnawaz "Investigation of a new method for reducing the risks of heavy metals by modified graphite carbon nitride" International Conference on Nano Science and Technology. 2010.
- 60- Zahra Shahbazi, Aziz Babapoor, Hadi Beshrnawaz "Investigation of systematic methods for reducing environmental pollution by density functional theory" International Conference on Nano Science and Technology. 2010.
- 61- Elaheh Taghizadeh Alisaraei, Aziz Babapoor, Sudabeh Khalili, Fahmieh Houriabab Sabour "Characterization of Mesoporous SBA-15 for Separation of Phenol from Organic Pollutants" International Conference on Nano Science and Technology. 2010.
- 62- Reza Ezzatkah, Aziz Babapoor, Ayat Nouri "A New Look at the Wide Applications of Mesoporous Silicate Nanosorbent SBA-15" International Conference on Nano Science and Technology. 2010.

- 63- Nastaran Alinia Marian, Yasmin Alinejad, Matin Ebn Abbas, Pouria Ali Mohammadzadeh Najjar, Dr. Aziz Babapoor "Renewable Energies: An Optimal Solution in Energy Management" 7th International Conference on Energy Technology and Management. 2011.
- 64- Aziz Babapoor, Reza Fasih Ramandi, Parisa Mamivand Farshad Pirzadeh, Mehdi Sharif "The role of phase change nanomaterials in energy optimization in automotive industries" 7th International Conference on Energy Technology and Management with an Approach to Water, Energy and Global Warming. 1400.
- 65- Mahdiah Bavi, Seyed Sadeq Jafari Koushk, Hossein Alipour Moghadam, Aziz Babapoor "Application of phase change materials in the oil, gas and petrochemical industry" 7th International Conference on Energy Technology and Management with an Approach to Water, Energy and Global Warming. 1400.
- 66- Mohammad Reza Fuji, Aziz Babapour, Farshad Arab Nouri "Investigation of energy status on various equipment of gas refineries" 7th International Conference on Energy Technology and Management with an Approach to Water, Energy and Global Warming. 1400.
- 67- Mohammad Haddadi, Maral Rashedi, Aziz Babapoor "Application of nanoparticles in energy optimization in nanofluids" 7th International Conference on Energy Technology and Management with an Approach to Water, Energy and Global Warming. 1400.
- 68- Sevin Mokhtarnia, Shiva Shaddel, Mohammad Shafqat, Nasser Hamid, Aziz Babapoor "Energy optimization in new generation clothing using phase change materials" 7th International Conference on Energy Technology and Management with an Approach to Water, Energy and Global Warming. 1400.
- 69- Elaheh Taghizadeh, Aziz Babapoor, Ali Khodayari, Fahimeh Sabour, Sudابه Khalili "Investigation of methane gas absorption by various metal-organic frameworks" 2nd International conference on Nanotechnology and Nanoscience. 1399.
- 70- Farnaz Niknam, Niloufar Nasirpour, Aziz Babapoor, Hadi Beshrnawaz "Hydrogels as promising candidates for energy storage" 7th International Conference on Energy Technology and Management with an Approach to Water, Energy and Global Warming. 1400.
- 71- Farnaz Niknam, Niloufar Nasirpour, Aziz Babapoor "Synthesis of temperature-sensitive hydrogel based on chitosan and polyethylene glycol" 17th National Congress of Chemical Engineering. 1400.
- 72- Ghahraman Mansour Lekourj, Aziz Babapoor, Hadi Beshrnawaz, Raha Hadi "Investigation of colored pollutants and methods for their separation from aqueous environments" 5th Conference on Applied Chemical Sciences and Technologies. 1400.
- 73- Ghahraman Mansour Lekourj, Aziz Babapoor, Hadi Beshrnawaz, Reha Hadi "Investigation of the application of modified carbon nitride for the separation of colored pollutants from aqueous environments" Fifth Conference on Applied Chemical Sciences and Technologies. 1400.
- 74- Milad Fathi, Aziz Babapoor, Hadi Beshrnawaz "Applications of graphite carbon nitride nanoparticles in the separation of heavy metals from wastewater" Fifth Conference on Applied Chemical Sciences and Technologies. 1400.
- 75- Milad Fathi, Aziz Babapoor, Hadi Beshrnawaz "Investigation and comparison of the most important methods for the separation of heavy metals from wastewater" Fifth Conference on Applied Chemical Sciences and Technologies of Oil, Gas and Petrochemicals. 1400.
- 76- Elaheh Taghizadeh, Aziz Babapoor, Sudابه Khalili, Fahimeh Sabour, Ali Khodayari "Carbon Dioxide Separation by (Organic-Metallic) Nanostructures" 2nd International conference on Nanotechnology and Nanoscience. 2021.

- 77- Mohammad Reza Bidaghdari, Fahimeh Hourri Abad Sabour, Aziz Babapoor, Mehrdad Askari "Optimization of the process of adsorption of various pollutants from the aqueous environment by metal-organic frameworks" 2nd International conference on Nanotechnology and Nanoscience.2021.
- 78- Negar Anjamani Vermouni, Giti Behboudi, Ali Nematollahzadeh, Aziz Babapoor "Determination of the size of nanoparticles in the dynamic light scattering method: a review study" 3rd National Conference on Laboratory Equipment and Technologies.1401.
- 79- Negar Anjamani, Aziz Babapoor, Ali Nematollahzadeh "A look at the structure and operation of the TGA device in energy optimization in the oil and gas industries using phase change materials" 3rd National Conference on Laboratory Equipment and Technologies.1401.
- 80- Aziz Babapoor, Aref Levaei Isa-Lou, Fahimeh Hourri-Abad Sabour, Majid Safajoo "Optimization of thermal energy management in batteries using phase change material nanocomposites" 7th International Conference on Energy Technology and Management. 1400.
- 81- Aziz Babapoor, Hadi Kouh Sangi, Behrouz Mirzaie, Hadi Seyed Bagheri "Investigation of sulfur deposition in the regulator of natural gas transmission pipelines" The 12th International Chemical Engineering Congress and Exhibition (ICHEC 2023). 2023.
- 82- Naser Hamid, Shiva Shaddel, Behrouz Mirzaie, Aziz Babapoor, Ahmadreza Rahbar "Methods of increasing the efficiency of heat exchangers in preheating the feed of the catalytic conversion unit" The 12th International Chemical Engineering Congress and Exhibition (ICHEC 2023). 2023.
- 83- Aziz Babapoor, Sahar Falahatpisheh, Gholamreza Ghanbari Kadkani "Supercritical fluids (SCF) and their application in extraction and separation" 5th National Conference on Sustainable Development in Agricultural Sciences, Natural Resources and Environment of Iran. 1402.
- 84- Saeed Mohammadpour, Fahimeh Hourriabad Sabour, Aziz Babapoor "Supercarbon catalyst derived from organic-metallic frameworks" 18th National Congress of Iranian Chemical Engineering, 1403.
- 85- Saeed Mohammadpour, Fahimeh Hourriabad Sabour, Aziz Babapoor "Clean energy technologies based on organic-metallic frameworks" 18th National Congress of Iranian Chemical Engineering, 1403.
- 86- Nasser Hamid, Shiva Shaddel, Behrouz Mirzaei, Aziz Babapour, Ahmadreza Rahbar "Methods for increasing the efficiency of heat exchangers using finned tubes in preheating the feed of the catalytic conversion unit" The Fourth National Conference on Soft Computing in Engineering Sciences in Industry and Society, 1403.
- 87- Maryam Behzadi, Aziz Babapour, Hadi Seyed Bagheri, Fahimeh Hourriabad Sabour "Simulation and optimization of energy using slurry of phase change materials in heat exchangers" The Fourth National Conference on Soft Computing in Engineering Sciences in Industry and Society, 1403.
- 88- Maryam Behzadi, Aziz Babapour, Hadi Seyed Bagheri, Fahimeh Hourriabad Sabour "A review of energy optimization in heat exchangers using nanocomposite of phase change materials" The Fourth National Conference on Soft Computing in Engineering Sciences in Industry and Society, 1403.

b) JCR and ISC journals:

- 1- "A new method for treating industrial wastewater containing oil using a combined MF-UF system", Aziz Babapoor, Reza Rustaazad, Jalil Razavi, Mehrdad Hessampour, Iranian Journal of Chemistry and Chemical Engineering, Volume 28, Issue 1, 88.

- 2- "Investigation of the effect of operating conditions on membrane fouling in the treatment of industrial wastewater containing oil using a new combined MF-UF system", Aziz Babapoor, Reza Rustaazad, Narges Rajabi, Iranian Journal of Chemistry and Chemical Engineering, Volume 28, Issue 2, 88.
- 3- "Separation of mercaptans from natural gas by surface adsorption method", Seyed Hadi Najafi Nasab, Roya Aminpour, Aziz Babapoor, The Application of Chemistry in Environment, Volume 5, Issue 20, Winter 93, Pages 39-44. (The Application of Chemistry in Environment):ISSN: 2228-768X
- 4- "Process Optimization Solidification in TiO₂-phase change material nanocomposite " Alireza Haggi, Aziz Babapoor, Zahra Javanshir, Quarterly Journal of Environmental Chemistry Applications, Volume 7, Issue 26, Fall 95, pages 25-30.
- 5- "Synthesis and Thermal Analysis of CuO-phase Change Material Nanocomposite During the Melting Process", Alireza Haggi, Aziz Babapoor, Zahra Javanshir, Quarterly Journal of Environmental Chemistry Applications, Volume 7, Issue 28, Fall 95, pages 1-6.
- 6- "A Review of Mass Transfer Modeling in Polymer Electrolyte Membrane Fuel Cell", Samaneh Ghanbarloo, Aziz Babapoor, Sahar Falahatpishe, Quarterly Journal of Environmental Chemistry Applications, Volume 7, Issue 28, Fall 95, pages 53-62. 768X-2228
- 7- "New Nanofluids for Increasing Heat Transfer", Mohammad Saeed Mohammadi, Aziz Babapoor, Abuzar Jozouni, Vahid Vahidfar, Sasan Fouladi Vanda, Bahman Monjezi, Quarterly Journal of Chemistry Applications in the Environment, Volume 7, Issue 25, Winter 2015, Pages 1-7.
- 8- "Simulation of Thermal Management of Phase Change Nanocomposite Materials by CFD Technique" Aziz Babapoor, Reza Pishkar-Azari, Seyed Iman Golestaneh, Zohreh Ghazi Tabatabaei, Iranian Journal of Chemistry and Chemical Engineering, January 2017.
- 9- "A Review of Molecularly Imaged Magnetic Polymer Nanoparticles and Their Use in the Separation of Fluoroquinolone Antibiotics from Water", Negin Sosani, Ali Nematollahzadeh, Aziz Babapoor, Quarterly Journal of Nano World (ISC), Issue 50, Spring 2018. Pages 27-34.
- 10- "Using renewable energies as an effective way to reduce environmental pollution", Alireza Haghighi, Aziz Babapoor, Bi-Quarterly Journal of Renewable and New Energies (ISC), Year 5, Issue 1, Serial No. 9, Summer 2018, pages 40 to 50.
- 11- "Separation with emulsion liquid membrane and emulsion liquid membrane stabilized with nanoparticles", Samaneh Ghanbarloo, Ali Nematollahzadeh, Aziz Babapoor, Iranian Journal of Chemical Engineering (ISC), Year 16, Issue 95, pages 72 to 85. 2018.
- 12- "Investigating the effect of different conditions of combined osmosis-ultrasound pretreatment on the amount of water lost, solids uptake and water reabsorption process of tomato slices", Limoo Salehnejad, Rozhin Rahimi, Aziz Babapoor, Iranian Journal of Chemical Engineering (ISC), Year 17, Issue 98 (2018).
- 13- "Synthesis and investigation of thermal stability of core-shell phase change nanomaterials", Aziz Babapoor, Gholamreza Karimi, Iranian Journal of Chemistry and Chemical Engineering, 2018.
- 14- M.Beigi, A. Babapoor, V. Maghsoodi, S.M. Mousavi "Batch equilibrium and kinetics studies of Cd (II) ion removal from aqueous solution using porous chitosan hydrogel beads". Iran. J. Chem. Chem. Eng. Vol. 28, No. 3, 2009.
- 15- A. Aslani, M.Arefi, A. Babapoor, A. Amiri and Kh. Beyki-Shuraki, "Solvothetral Synthesis, Characterization and Optical Properties of ZnO, ZnO-MgO and ZnO-NiO, Mixed Oxide Nanoparticles" Applied Surface Science 257 (2011) 4885–4889

- 16- A. Aslani, M.Arefi , Kh., A. Babapoor, "Direct syntheses, characterization and optical analysis of PbX₂ (X = I, Br and Cl) nanoparticles without any additives". Journal of Saudi Chemical Society, Volume 17, Issue 4, October 2013, Pages 403–407.
- 17- M..Lashkarbolooki, A.ZeinolabediniHezave and A. Babapoor" Correlation of density for binary mixtures of methanol+ionic liquids using back propagation artificial neural network", Korean Journal of Chemical Engineering, January 2013, Volume 30, Issue 1, pp 213-220, DOI: 10.1007/s11814-012-0112-2.
- 18- Aziz Babapoor; Mohammad mehdi Azizi; Gholamreza karimi, Thermal management of a Li-ion battery using carbon fiber-PCM composites, Applied Thermal Engineering, Volume 82(c), Pages 281–290, 2015.
- 19- Aziz Babapoor; Gholamreza karimi, Thermal properties measurement and heat storage analysis of paraffin-nanoparticles composites phase change material: comparison and optimization, Applied Thermal Engineering 90C (2015) pp. 945-951.
- 20- Fereshteh Samimi, Aziz Babapoor, Mohammadmehdi Azizi, Gholamreza Karimi, Thermal management analysis of a Li-ion battery cell using phase change material loaded with carbon fibers, Energy (2016) 96C pp. 355-371. DOI: 10.1016/j.energy.2015.12.064.
- 21- Aziz Babapoor; Gholamreza Karimi, Mohmmad Khorram, Fabrication and characterization of nanofiber-nanoparticle-composites with phase change materials by electrospinning, Applied Thermal Engineering, (2016) 99C, pp. 1225-1235 DOI:10.1016/j.applthermaleng.2016.02.026.
- 22- Aziz Babapoor; Gholamreza Karimi, Samad Sabbaghi, Thermal characteristic of nanocomposite phase change materials during solidification process, Journal of Energy Storage (2016) 7C pp. 74-81. 10.1016/j.est.2016.05.006.
- 23- Gholamreza Karimi, ; Mohammad mehdi Azizi, Aziz Babapoor, Experimental study of a cylindrical lithium ion battery thermal management using phase change material composites, Journal of Energy Storage, 8(2016) 168–174. DOI: 10.1016/j.est.2016.08.005.
- 24- Aziz Babapoor; Gholamreza Karimi, Seyyed Iman Golestaneh, Mehdi Ahmadi Mezjin, Coaxial electro-spun PEG/PA6 composite fibers: fabrication and characterization, Applied Thermal Engineering, 118(2017) 398-407. DOI: 10.1016/j.applthermaleng.2017.02.119.
- 25- M.R. Rahimpour, F. Samimi, A. Babapoor, T. Tohidian, S. Mohebi, Palladium membranes applications in reaction systems for hydrogen separation and purification: A review, Chemical Engineering & Processing: Process Intensification, 121(2017), 24-49.
- 26- Seyyed Iman Golestaneh, Gholamreza Karimi, Aziz Babapoor , Farshid Torabi, Thermal performance of co-electrospun fatty acid nanofiber composites in the presence of nanoparticles, Applied Energy, 212C(2018), 552-564.
- 27-Aziz Babapoor, Vahid bab, Mehdi AhmadiSabegh, A New Investigation on Tunnel Pool Fire Phenomenon Using CFD Technique, Iranian Journal of Chemistry and Chemical Engineering (IJCCE), 37(2), 169-180, 2018.
- 28- Aziz Babapoor, Mehdi Shahedi Asl, Zohre Ahmadi, Abbas Sabahi Namini , Effects of spark plasma sintering temperature on densification, hardness and thermal conductivity of titanium carbide, Ceramics International, Volume 44, Issue 12, 15 August 2018, Pages 14541-14546.
- 29- Mojtaba Mousavi, Alireza Hashemi, Aziz Babapoor, Fatemeh Mojoudi, Hossein Esmaeili, Mohammad Reza Jamshidi, Sara Jahandideh, Separation of Ni (II) from Industrial Wastewater by

Kombucha Scoby as a Colony Consisted from Bacteria and Yeast: Kinetic and Equilibrium Studies, *Acta Chimica Slovenica*, 2019.

30- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Maryam Zarei, Ali Mohammad Amani and Aziz Babapoor, Nanosensors for Chemical, Biological and Medical Applications, *Medicinal Chemistry*, Volume 8(8): 205-217 (2018). DOI: 10.4172/2161-0444.1000515.

31- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Ali Mohammad Amani, Hossein Esmaeili, Younes Ghasemi, Aziz Babapoor, Fatemeh Mojoudi, Omid Arjomand, Pb (II) Removal from Synthetic Wastewater Using Kombucha Scoby and Graphene Oxide/Fe₃O₄, *Physical Chemistry Research*, Vol. 6, No. 4, 759-771, December 2018.

32- Abbas Sabahi Namini, Zohre Ahmadi, Aziz Babapoor, Mohammadreza Shokouhimehr, Mehdi Shahedi Asl, Microstructure and thermomechanical characteristics of spark plasma sintered TiC ceramics doped with nano-sized WC, *Ceramics International*, 45 (2019) 2153–2160.

33- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Younes Ghasemi, Amir Atapour, Ali Mohammad Amani, Amir Savar Dashtaki, Aziz Babapoor & Omid Arjmand (2018) Green synthesis of silver nanoparticles toward bio and medical applications: review study, *Artificial Cells, Nanomedicine, and Biotechnology*, Volume 46, 2018 - Issue sup3, DOI: 10.1080/21691401.2018.1517769

34- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Aziz Babapoor, Bijan Medi, Enhancement of Rheological and Mechanical Properties of Bitumen by Polythiophene Doped with Nano Fe₃O₄, *The Journal of The Minerals, Metals & Materials Society (JOM)*, Vol. 71, No. 2, 531-540. 2019. DOI: 10.1007/s11837-018-3215-3.

35- Mojtaba Mousavi, Alireza Hashemi, Omid Arjmand, Ali Mohammad Amani, Aziz Babapoor, Mohammad Ali Fateh, Hamed Fateh, Fatemeh Mojoudi, Hossein Esmaeili, Sara Jahandideh, Erythrosine Adsorption from Aqueous Solution via Decorated Graphene Oxide with Magnetic Iron Oxide Nano Particles: Kinetic and Equilibrium Studies, November 2018, *Acta Chimica Slovenica* volume 65 No.4, 882-894. DOI: 10.17344/acsi.2018.4537.

36- Seyyed Mojtaba Mousavi, Maryam Zarei, Seyyed Alireza Hashemi, Aziz Babapoor, A conceptual review of rhodanine: Current applications of antiviral drugs, anticancer and antimicrobial activities, *Artificial Cells, Nanomedicine and Biotechnology*, 2019.

37- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Younes Ghasemi, Ali Mohammad Amani, Aziz Babapoor, and Omid Arjmand, Applications of graphene oxide in case of nanomedicines and nanocarriers for biomolecules: review study, *DRUG METABOLISM REVIEWS*, 2019, <https://doi.org/10.1080/03602532.2018.1522328>.

38- Seyyed Mojtaba Mousavi, Maryam Zarei, Seyyed Alireza Hashemi, Aziz Babapoor & Ali Mohammad Amani, A conceptual review of rhodanine: current applications of antiviral drugs, anticancer and antimicrobial activities, *Artificial Cells, Nanomedicine, and Biotechnology*, 47:1, 1132-1148, 2019, DOI: 10.1080/21691401.2019.1573824

39- Seyyed Mojtaba Mousavi, Sadaf Soroshnia, Seyyed Alireza Hashemi, Aziz Babapoor, Younes Ghasemi & Ali Mohammad Amani (2019) Graphene Nano-ribbon Based high potential and Efficiency for DNA, Cancer therapy and drug delivery applications, *Drug Metabolism Reviews*, DOI: 10.1080/03602532.2019.1582661

40- Mehdi Shahedi Asl, Zohre Ahmadi, Abbas Sabahi Namini, Aziz Babapoor, Amir Motallebzadeh, Spark plasma sintering of TiC–SiCw ceramics, *Ceramics International*, 45:16, 19808-19821, 2019.

- 41- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Aziz Babapoor, Sadaf Soroshnia, Applications of Polythiophene in medicine for Geno sensor, DNA detection and antimicrobial, Artificial Cells, Nanomedicine, and Biotechnology (IANB), 2019.
- 42- Amir Dashtaki, Seyyed Mojtaba Mousavi, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Aziz Babapoor, Extraction and analysis of Dorema aucheri essential oil for antimicrobial and drug applications by using rotary evaporator, Artificial Cells, Nanomedicine, and Biotechnology (IANB), 2019.
- 43- Milad Sakkaki, Farhad Sadegh Moghanlou, Soroush Parvizi, Haniyeh Baghbanijavid, Aziz Babapoor, Mehdi Shahedi Asl, Phase change materials as quenching media for heat treatment of 42CrMo4 steels, September 2019.
- 44- Farzad Raeisi, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Sargol Mazraedoost, Aziz Babapoor, chin wei lai, Maryam Zarei, Carboplatin nanoparticles as drug delivery and anticancer agents: a review, 2019.'
- 45- Risk assessment in the process of leakage from pipelines and oil and oil product storage equipment, Behrouz Mirzaei, Aziz Babapoor, Alireza Dehghan Bidokti, Meysam Par, Iranian Journal of Chemistry and Chemical Engineering,
- 46- Investigation of magnetic nanoparticles coated with SBA-15 and amine-containing functional groups for the separation of Cr^{4+} and Fe^{3+} metals from solutions contaminated with heavy metals, Aziz Babapoor, Ayat Nouri, Iranian Journal of Chemistry and Chemical Engineering, 98.
- 47- Alireza Haghighi, Aziz Babapoor, Mohammadmehdi Azizi, Zahra Javanshir, Hooman Ghasemzadeh, Optimization of the thermal performance of PCM nanocomposites, Journal of Energy Management and Technology (JEMT), 2019.
- 48- Zhila Mohajeri Avval, Leila Malekpour, Farzad Raeisi, Aziz Babapoor, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Marjan Salar, Introduction of magnetic and supermagnetic nanoparticles in new approach of targeting drug delivery and cancer therap, Drug Metabolism Reviews, 2019.
- 49- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Seeram Ramakrishna, Hossein Esmaeili, Sonia Bahrani, Mojtaba Koosha, Aziz Babapoor, Green synthesis of supermagnetic $\text{Fe}_3\text{O}_4\text{-MgO}$ nanoparticles via Nutmeg essential oil toward superior anti-bacterial and anti-fungal performance, Journal of Drug Delivery Science and Technology, 2019.
- 50- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Hossein Esmaeili, Najmeh parvin, Fathemeh Mojoudi, MohammadAli Fateh, Hamed Fateh, Aziz babapoor, Sargol Mazraedoost, Maryam Zarei, Investigating the Activity of Antioxidants Activities Content in Apiaceae and to Study Antimicrobial and Insecticidal Activity of Antioxidant by using SPME Fiber Assembly Carboxen/Polydimethylsiloxane (CAR/PDMS), Journal of Environmental Treatment Techniques, 2020, Volume 8, Issue 1, Pages: 214-224.
- 51- Bahman Najafi, Mehdi Bahari , Aziz Babapoor, Evaluation of $\alpha\text{-AL}_2\text{O}_3\text{-PW}$ nanocomposites for thermal energy storage in the agro-products solar dryer, Journal of Energy Storage, Volume 28, April 2020, 101181.
- 52- Seyyed Mojtaba Mousavi, Foo Wah Low, Seyyed Alireza Hashemi, Nurul Asma Samsudin, Mohammad Shakeri, Yulisa Yusoff, Mansoor Rahsepar, Chin Wei Lai, Aziz Babapoor, Sadaf Soroshnia, Su Mei Goh, Sieh Kiong Tiong and Nowshad Amin, Development of hydrophobic reduced graphene oxide as a new efficient approach for photochemotherapy, RSC Adv., 2020, 10, 12851.

- 53- Thang Phan Nguyen, Mohammadreza Shokouhimehr, Yashar Azizian, Aziz Babapoor, Quyet Van Le, Abbas Sabahi Namini, Mehdi Shahedi Asl, Seyed Ali Delbari, Characteristics of quadruplet Ti–Mo–TiB₂–TiC composites prepared by spark plasma sintering, *Ceramics International*, 2020.
- 54- Thang Phan Nguyen, Yaghoub Pazhouhanfar, Seyed Ali Delbari, Abbas Sabahi Namini, Aziz Babapoor, Yasaman Mohammadpourderakhshi, Shahrzad Shaddel, Quyet Van Le, Mohammadreza Shokouhimehr, Mehdi Shahedi Asl, Physical, mechanical and microstructural characterization of TiC–ZrN ceramics, *Ceramics International*, 2020.
- 55- Van-Huy Nguyen, Yaghoub Pazhouhanfar, Seyed Ali Delbari, Shahrzad Shaddel, Aziz Babapoor, Yasaman Mohammadpourderakhshi, Quyet Van Le, Mohammadreza Shokouhimehr, Mehdi Shahedi Asl, Abbas Sabahi Namini, Beneficial role of carbon black on the properties of TiC ceramics, *Ceramics International*, 2020.
- 56- Seyyed Mojtaba Mousavi, Foo Wah Low, Seyyed Alireza Hashemi, Chin wei Lai, Ghasemi Younes, Amir Savardashtaki, Aziz Babapoor, Nelson Pynadathu Rumjit, Goh, Su Mei, Amin, Nowshad, Tiong, Sieh Kiong, Development of Graphene based Nanocomposites Towards Medical and Biological Applications, *Artificial Cells, Nanomedicine and Biotechnology*, 2020.
- 57- Aziz Babapoor, Mehdi Ahmadi Mozgin, Araz Hossein Asadi, Seyed Mohammad Jokar, Meysam Par, Seyed Iman Golestaneh, Simulation and Optimization of Thermal Management in L-Shaped Tubes Coated with Phase Change Material Nanofibers, *Iranian Journal of Chemical Engineering (ISC)*, 2010.
- 58- Aziz Babapoor, Zahra Dehghan Khajeh-Bolagh, Mina Ganjkhani, Meysam Par, A Look at Energy Optimization in New Generation Clothing Using Phase Change Materials, *Scientific Quarterly - Promotion of Renewable and New Energies (ISC)*, 2010.
- 59- Van-Huy Nguyen, Seyed Ali Delbari, Abbas Sabahi Namini, Aziz Babapoor, Quyet Van Le, Ho Won Jang, Mohammadreza Shokouhimehr, Mehdi Shahedi Asl, Mohsen Mohammadi, Microstructural, mechanical and friction properties of nano-graphite and h-BN added TiC-based composites, *Ceramics International*, 2020.
- 60- Najmeh Parvin, Aziz Babapoor, Ali Nematollahzadeh, Seyyed Mojtaba Mousavi, Removal of Phenol and β -naphthol from Aqueous Solution by Decorated Graphene Oxide with Magnetic Iron for Modified Polyrhodanine as Nanocomposite Adsorbents: Kinetic, Equilibrium and Thermodynamic Studies, *Reactive and Functional Polymers*, 2020.
- 61- Samaneh Ghanbarloo, Ali Nematollahzadeh, Aziz Babapoor, Mandana Amiri, Masoud Aliakbarlou, A review of factors affecting the stability of Pickering emulsion liquid membranes with an oil industry approach, *Scientific Monthly of Oil and Gas Exploration and Production (ISC)*, Volume 1399, Number 179, Pages 42-52.
- 62- Aziz Babapoor, Reza Hajimohammadi, Seyyed Mohammad Jokar, Meysam Paar, Biosensor Design for Detection of Mercury in Contaminated Soil Using Rhamnolipid Biosurfactant and Luminescent Bacteria *Journal of Chemistry*, 2020.
- 63- Aziz Babapoor, Alireza Haghighi, Seyyed Mohammad Jokar, Mehdi Ahmadi Mezjin, The Performance Enhancement of Paraffin as a PCM During the Solidification Process: Utilization of Graphene and Metal Oxide Nanoparticles, *IJCCE*, 2020.
- 64- Ahmad Gholami, Seyyed Alireza Hashemi, Khadije Yousefi, Seyyed Mojtaba Mousavi, Wei-Hung Chiang, Seeram Ramakrishna, Sargol Mazraedoost, Ali Alizadeh, Navid Omidifar, Gity Behbudi, Aziz Babapoor

3D nanostructures for tissue engineering, cancer therapy, and Gene delivery, *Journal of Nanomaterials*, 2020.

65- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Sargol Mazraedoost, Ahmad Gholami, Wei-Hung Chiang, Khadijeh Yousefi, Yasin Sadeghipour, Aziz Babapoor, Navid Omidifar, Muhammad Akram, ,Current Trends in the Detection of Biological Proteins and Immunological Assays using Graphene Quantum Dots, *Current Analytical Chemistry*, 2020.

66- Mehdi Ahmadi Mezjin, Gholamreza Karimi , Bijan Medi, Aziz Babapoor, Meysam Paar, Passive thermal management of a lithium-ion battery using carbon fiber loaded phase change material: comparison and optimization, *IJCCE*, 2020. DOI: 10.30492/ijcce.2020.118203.3862

67- Seyed Ali Delbari, Laleh Saleh Ghadimi, Raha Hadi, Sana Farhoudian, Maryam Nedaei, Aziz Babapoor, Abbas Sabahi Namini, Quyet Van Le, Mohammadreza Shokouhimehr, Mehdi Shahedi Asl, Transition metal oxide-based electrode materials for flexible supercapacitors: A review, *Journal of Alloys and Compounds*, 2020.

68- Ali Nematollahzadeh, Aziz Babapoor, Seyyed Mojtaba Mousavi, Ayat Nuri, Nitrobenzene adsorption from aqueous solution onto polythiophene-modified magnetite nanoparticles, *Materials Chemistry and Physics*, 2021.

69- Xiaowei Yang, Jian Chen, Rong Xinng, Aziz Babapoor, Hot-pressing and characterization of TiB₂-SiC composites with different amounts of BN additive, *Ceramics International*, 2021.

70- Iman Salahshoori, Ahmad Seyfaee, Aziz Babapoor, Elevated performance of the neat, hybrid and composite membranes by the addition of nanoparticles (ZIF-67): A molecular dynamics study, *Polymer Bulletin*, 2021.

71- Iman Salahshoori, Ahmad Seyfaee, Aziz Babapoor, The effect of silica nanoparticles, temperature and pressure on the PSF/PEG/SiO₂ mixed matrix membranes performance: A molecular dynamics simulation and design of experiment study, *Journal of Molecular Liquids*, 2021.

72- Seyyed Mojtaba Mousavi, Gity Behbudi, Seyyed Alireza Hashemi, Aziz Babapoor, Wei-Hung Chiang, Seeram Ramakrishna, Mohammed m.rahman, Chin wei Lai, Khadijeh Yousefi, Ahmad Gholami, Navid Omidifar, Recent Progress in Electrochemical Detection of Human Papillomavirus (HPV) via Graphene- Based Nanosensors, *Journal of Sensors*, 2021.

73- Iman Salahshoori, Ahmad Seyfaee, Aziz Babapoor, Recent advances in synthesis and applications of mixed matrix membranes, *2SYNTHESISANDSINTERING1(2021)1–27*.

74- Bing Song, Wei Yang, Aziz Babapoor, In-situ formation of TiN during the hot-pressing of TiC–AlN ceramics, *Ceramics International*, 2021.

75- Iman Salahshoori, Noushin mobaraki, Ahmad Seyfaee, Nasrin Mirzaei Nasirabad, Zahra Dehghan, Mehrdad Faraji, Mina Ganjkhani, Aziz Babapoor, Seyede Zahra Shadmehr, Ali Hamrang, Overview of Covid-19 disease: Virology, Epidemiology, Prevention Diagnosis, Treatment, and Vaccines, *Biologics*, 2021.

76- Iman Salahshoori, Illaria Cacciotti, Ahmad Seyfaee, Aziz Babapoor, Improvement efficiency of the of poly (ether-block-amide) -Cellulose acetate (Pebax-CA) blend by the addition of nanoparticles (MIL 53 and NH₂-MIL 53): A molecular dynamics study, *Journal of Polymer Research*, 2021, DOI: 10.1007/s10965-021-02577-z.

77- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Ahmad Gholami, Navid Omidifar, Maryam Zarei, Sonia Bahrani, Khadijeh Yousefi, Wei-Hung Chiang, Aziz Babapoor, Effect of microbial

supernatant media on Polyrhodanine/Fe₃O₄ synthesis modified by Graphene oxide and their antibacterial and cytotoxic activity, *Bioinorganic Chemistry and Applications*, 2021.

78- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Sonia Bahrani, Aziz Babapoor, Chin wei Lai, Wei-Hung Chiang, Khadijeh Yousefi, Gity Behbudi, Ahmad Gholami, Navid Omidifar, Recent advances in polythiophene based materials for biomedical Application :Geno sensor and DNA detection, *International Journal of Molecular Sciences*, 2021.

79- Seyyed Alireza Hashemi, Seyyed Mojtaba Mousavi, Ahmad Gholami, Sargol Mazraedoost, Wei-Hung Chiang, Omid Arjmand, Navid Omidifar, Aziz Babapoor, Precise Blood Glucose Sensing by Nitrogen-Doped Graphene Quantum Dots for Tight-Control of Diabetes, *Journal of Sensors*, 2021.

80- Behruz Mirzayi, Hadi Basharnavaz, Aziz Babapoor, Hossein Kamali, Ali Khodayari, Shabnam Sohrabnezhad, Effects of aluminum terephthalate metal-organic framework and its nanocomposites on the corrosion of AM60B magnesium alloy in ethylene glycol solution containing chloride ions, *Materials Chemistry and Physics*, Volume 272, 1 November 2021, 125056.

81- Aziz Babapoor, Seyed Hosameddin Fatemi, Daniyal Norouzi Sarimi, Reza Heydarzadeh, Seyed Sajjad Sharifi, A new look at the use of renewable energies in agricultural industries, *Quarterly Journal of Renewable and New Energies (ISC)*, 1400.

82- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Gity Behbudi, Sargol Mazraedoost, Navid Omidifar, Ahmad Gholami, Wei-Hung Chiang, Aziz Babapoor, Nelson Pynadathu Rumjit, A review on health benefits of Malva Sylvestris L. nutritional compounds for metabolites, Antioxidant, Anti-inflammatory, Anticancer, and Antimicrobial Applications, *Evidence-based Complementary and Alternative Medicine*, 2021.

83- Ali Nematollahzadeh, Zeinab Mirzaei-Kalar; Hoda Abolhasani; Aziz Babapoor, Synthesize and multi-spectroscopic studies of zinc-naproxen nanodrug as DNA intercalator agent, *Analytical Biochemistry*, 2021.

84- Aziz Babapoor, Omid Rafiei, Yousef Mousavi, Mohammad Mehdi Azizi, Meysam Paar, Ayat Nuri, Comparison and Optimization of Operational Parameters in Removal of Heavy Metal Ions from Aqueous Solutions by Low-cost Adsorbents, *International Journal of Chemical Engineering*, 2021.

85- Yari Kalashgarani M, Babapoor A. Application of nano-antibiotics in the diagnosis and treatment of infectious diseases, *AANBT [Internet]*. 20Mar.2022 [cited 7Dec.2021];3(1):22-5. Available from: <https://www.dormaj.org/index.php/AANBT/article/view/482>.

86- Mohammadreza Beydaghdari, Fahimeh Hooriabad Saboor, Aziz Babapoor, Mehrdad Asgari, Recent Progress in Adsorptive Removal of Water Pollutants by Metal-Organic Frameworks, *ChemNanoMat*, 02 December 2021, <https://doi.org/10.1002/cnma.202100400>

85- Seyyed Alireza Hashemi, Seyyed Mojtaba Mousavi, Sonia Bahrani, Ahmad Gholami, Wei-Hung Chiang, Khadijeh Yousefi, Navid Omidifar, Neralla Vijayakameswara Rao, Seeram Ramakrishna, Aziz Babapoor, Chin wei Lai, Bio-Enhanced Polyrhodanine/Graphene Oxide/Fe₃O₄ Nanocomposite with Kombucha Solvent Supernatant as Ultra-Sensitive Biosensor for Detection of Doxorubicin Hydrochloride in Biological Fluid, *Materials Chemistry and Physics*, January 2022.

86- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Masoomeh Yari Kalashgrani, Navid Omidifar, Sonia Bahrani, Neralla Vijayakameswara Rao, Aziz Babapoor, Ahmad Gholami, Wei-Hung Chiang, Bioactive GQD based polymer composite for biomedical applications, *Polymers*, 2022.

87- Samira Moradi, Aziz Babapoor, Mohammad Mehdi Azizi, Mina Movasaghi, "Potential for application of Lignin Based Micro/Nanostructures as a Micro/Nanocarrier in the Controlled Release Systems: A Review" *Current Nanoscience*, 2022.

- 88- Mehdi Shahedi Asl, Raha Hadi, Laleh Saleh Ghadimi, Amin Goljanian Tabrizi, Sana Farhoudian Aziz Babapoor, Flexible all-solid-state supercapacitors with high capacitance, long cycle life, and wide operational potential window : recent progress and future perspectives, *Journal of Energy storage*, 2022.
- 89- Mohammadreza Beydaghdari, Fahimeh Hooriabad Saboor, Aziz Babapoor, Vikram V. Karve and Mehrdad Asgari, Recent Advances in MOF-Based Adsorbents for Dye Removal from the Aquatic Environment, *Energies*, 2022.
- 90- Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Masoomeh Yari Kalashgrani, Ahmad Gholami, Navid Omidifar, Aziz Babapoor, Neralla Vijayakameswara Rao and Wei-Hung Chiang, Recent Advances in Plasma-Engineered Polymers for Biomarker-Based Viral Detection and Highly Multiplexed Analysis, *Biosensors* 2022, 12, 286.
- 91- Zahra Pouramini, Bitia Ayati, Aziz Babapoor, Enhancing PFC ability to dye removal and power generation simultaneously via conductive spheres in the anodic chamber, *Journal of Electroanalytical Chemistry*, 2022.116410.
- 92- Shamsedin Ghorejili, Vahid Vahidfar, Yousef Mousavi,, Aziz Babapoor, Mehrdad Faraji, Effect of temperature on energy consumption and recovery rate of the reverse osmosis brackish systems in a different arrangement, *Scientia Iranica*, 2022.
- 93- Sina Yaghoubi, Aziz Babapoor, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Ahmad Gholami, Chin Wei Lai and Wei-Hung Chiang, Recent Advances in Plasmonic Chemically Modified Bioactive Membrane Applications for the Removal of Water Pollution, *Water*, 2022, 14, 3616. <https://doi.org/10.3390/w14223616>.
- 94- Shamsedin Ghorejili, Sina Yaghoubi, Farrokhfar Valizadeh Harzand, Yousef Mousavi, Aziz Babapoor, Effects of Total Dissolved Solids on Pressure Drop and Net Driving Pressure in Different Designs of Brackish and Seawater Reverse Osmosis Systems, *Arabian Journal for Science and Engineering*, 2022.
- 95- Aziz Babapoor, Novel CoMnFeO₄-MWCNT nanocomposite based on a green synthesized method for supercapacitor applications, *Canadian Journal of Chemistry*, 2022.
- 96- Zahra Pouramini,Aziz Babapoor,Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi,Chin Wei Lai,Yousef Mazaheri,Wei-Hung Chiang, Effect of metal atom in zeolitic imidazolate frameworks (ZIF-8 & 67) for removal of dyes and antibiotics from wastewater: A review, *Catalysts*, 2023.
- 97- Farrokhfar Valizadeh Harzand, Seyyed Navid Mousavi Nejad, Aziz Babapoor, Seyyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Ahmad Gholami, Wei-Hung Chiang, Maria Giovanna Buonomenna. and Chin Wei Lai Recent, "Advances in Metal-Organic Framework (MOF) Asymmetric membranes/Composites for Biomedical Applications, *Symmetry*, 2023.
- 98- Aziz Babapoor, Fereshteh Samimi, Behruz Mirzayi, Meysam Paar, "Alternative strategies for effective utilization of carbon dioxide in dimethyl ether synthesis, *Chemical Engineering & Technology*, 2023.
- 99- Zahra Pouramini, Seyyed Mojtaba Mousavi , Aziz Babapoor, Seyyed Alireza Hashemi, Nelson Pynadathu Rumjit, Shivani Garg, Shakeel Ahmed and Wei-Hung Chiang , Recent Advances in MXene-Based Nanocomposites for Wastewater Purification and Water Treatment: A Review, *Water*, 2023.
- 100- Masoomeh Yari Kalashgrani, Aziz Babapoor, Seyyed Mojtaba Mousavi, Solmaz Feizpoor, Seyyed Alireza Hashemi, Mojtaba Binazadeh, Wei-Hung Chiang and Chin Wei Lai, Synthesis of Isoreticular

Metal Organic Framework-3 (IRMOF-3) Porous Nanostructure and Its Effect on Naphthalene Adsorption: Optimized by Response Surface Methodology, Separations, 2023.

101- Sina Yaghoubi, Aziz Babapoor, Adrian Seyfaee, Thermal energy optimization using salt-based phase change materials obtained from the desalination of saline water, Renewable and Sustainable Energy Reviews, 2023.

102- Shamsedin Ghorejili, Farrokhfar Valizadeh Harzand, Sina Yaghoubi, Aziz Babapoor, Investigation of the Effects of Temperature on Net Driving Pressure and Pressure Drop in Different Configurations of the Reverse Osmosis System Using Computer Simulation, Arabian Journal for Science and Engineering, 2023, <https://doi.org/10.1007/s13369-023-07841-6>.

103- Lida Hassanzadeh, Aziz Babapoor, Ali Nematollahzadeh, Synthesis and Characterization of Zeolitic Imidazolate Framework-8 Nanoparticles for Loading and Controlled Release of Cefazolin Drug, Research & Reviews: Drug Delivery, 2022, DOI: 10.4172/resrevdrugdeliv.6.3.003

104- Safora Purrostam, Zohreh Rahimi-Ahar, Aziz Babapoor, Ali Nematollahzadeh, Iman alahshoori , Ahmad Seyfaee, Melamine functionalized mesoporous silica SBA-15 for separation of chromium (VI) from wastewater, Materials Chemistry and Physics, Volume 307, 1 October 2023, 128240

105- Reza Ezzatkhan, Zohreh Rahimi-Ahar, Aziz Babapoor, Mahin Nemati Tasandeh, Sina Yaghoubi, Farrokhfar Valizadeh Harzand, Urea-Functionalized mesoporous silica SBA-15 for heavy metal Adsorption: Synthesis, Characterization, and optimization, Materials Science and Engineering: B Volume 297, November 2023, 116799.

106- Sina Yaghoubi, Aziz Babapoor, Sayyed Mojtaba Mousavi, Seyyed Alireza Hashemi, Vahid Rahmanian, Ahmad Gholami, Navid Omidifar, Mojtaba Binazadeh, Fatemeh Fallahi Nezhad, Yousef Mazaheri, Wei-Hung Chiang, Chin Wei Lai, New trends in metal-organic framework membranes for biomedical applications, Materials Chemistry and Physics, 2023.

107- Aziz Babapoor, Mohamad Shafagati, MohammadAli Bamdezh, Optimizing energy in the car battery with the help of phase change material nanocomposites: A brief review, Journal of Renewable energy and Environment, 2023.

108- Aziz Babapoor, Hengameh Amiri, Mehrab Fallahi, Neda Azimi, Amin Hadidi, Optimization of energy in oil pipelines covered with nanofibers of phase change materials using CFD, Iranian Journal of Chemistry and Chemical Engineering (IJCCE), 2023.

109- Elnaz Rahimi, Aziz Babapoor,..... Personal Cooling Garments and Phase Change Materials: A Review, Renewable and Sustainable Energy Reviews, 2023.

110- Mehdi Zarei, Mehdi Eskandarzade, Aziz Babapoor, Adrian Seyfaee“A review of recent advances and applications of inorganic coating for oil and gas pipe systems” Surface & Coatings Technology, 2024.

111- Aziz Babapoor, Hengameh Amiri, Mehrab Fallahi-Samberan, Neda Azimi, Amin Hadidi, Simulation and optimization of energy in oil storage tanks using nanocomposite of phase change materials by Computational Fluid Dynamics, Iranian Journal of Chemical Engineering (IJChE), 2023.

112- S Ghorejili, S Yaghoubi, F Valizadeh Harzand, Aziz Babapoor, Effects of Different Designs of Pressure Vessels on Efficiency and Energy Consumption of Reverse Osmosis Systems, Scientia Iranica, 2023.

113- S Ghorejili, S Yaghoubi, Y Mousavi, A Babapoor, “Effects of the Design of Pressure Vessels on Performance and Hydrodynamic Parameters in Two-Pass Seawater Reverse Osmosis Systems” Arabian Journal for Science and Engineering, 2024.

- 114- Yaghoubi, S., Seddighi, H., Biglary, A., Saeidi, M. and Babapoor, A., 2023. Temperature control of smartphone batteries using nanocomposites of phase change materials. *Journal of Renewable and New Energy*, 10(2), pp.175-191.
- 117- S Moradi, A Babapoor, S Ghanbarlou, MY Kalashgarani, I Salahshoori, "A Seyfaee Toward a new generation of fertilizers with the approach of controlled-release fertilizers" *Journal of Coatings Technology and Research*, 2024
- 118- Fatemeh Madadi, Aziz Babapoor, "Recent advances in nano-biotechnology for breast cancer therapy". *Advances in Applied NanoBio-Technologies*, 2022.
- 119- Farrokhfar Valizadeh Harzand, Sahar Anzani, Ayda Soltani, Maryam Zare, Sevda Bakhshayesh1, Aziz Babapoor, "Synthesis of advanced gold nanoparticles for biomedical applications" *Advances in Applied NanoBio-Technologies*, 2020.
- 120- Babapoor A, KARAMI P, Johari Ahar M, Shoghi Benam M" Comparison of Electrochemical Enzymatic and Non-enzymatic Glucose Sensors Based on Literature Review" *Journal of Ardabil University of Medical Sciences*, 2021.
- 121- FV Harzand, S Anzani, A Babapoor "Recent advances in synthesis of ultra-high temperature ceramic matrix composites" *Synthesis and Sintering*, 2022.
- 122- Seyyed Mojtaba Mousavi, Zahra Pouramini, Aziz Babapoor, Mojtaba Binazadeh, Vahid Rahmanian, Ahmad Gholami, Navid Omidfar, Raed H. Althomali, Wei-Hung Chiang, Mohammed M. Rahman "Photocatalysis air purification systems for coronavirus removal: Current technologies and future trends" *Chemosphere*, 2023.
- 123- Pari Karami, Aziz Babapoor, Mahdieh Shoghi Banam, Mohammad Johari Ahar. "A comparison of enzymatic and non-enzymatic electrochemical glucose sensors based on a review of articles," *Journal of Ardabil University of Medical Sciences*, 1400.
- 124- Sina Yaghoubi, Seyyed Mojtaba Mousavi, Aziz Babapoor, Mojtaba Binazadeh, Chin Wei Lai, Raed H. Althomali, Mohammed M. Rahman, Wei-Hung Chiang "Photocatalysts for solar energy conversion: Recent advances and environmental applications" *Renewable and Sustainable Energy Reviews*, 2024.
- 125- Mohammadi, F., Saeid, Z., Behzadi, M., Mahdavi, H., Vahidinia, N. and Babapoor, A., 2024. Investigating the crisis of energy consumption in residential-commercial buildings and presenting a new solution using phase change materials nanocomposites. *Journal of Renewable and New Energy*, 11(2), pp.188-202.
- 126- N. Hamid, Sh. Shaddel Khalifelu, M. Mastani Joybari, Z. Rahimi-Ahar, A. Babapoor, B. Mirzayi, A. Rahbar "Challenges in thermal management of lithium-ion batteries using phase change nanocomposite materials: A review" *Journal of Energy Storage*, 2024.
- 128- Zahra Saeed, Aziz Babapoor, Amir Heidari, "A new look at energy management in dryers using nanocomposite phase change materials," *Journal of Renewable and New Energies*, 1403.
- 129- Seyed Hossein Hashemi, Zahra Besharati, Seyed Abdolrasoul Hashemi, Seyed Ali Hashemi, Aziz Babapoor "Prediction of room temperature in Trombe solar wall systems using machine learning algorithms" *Energy Storage and Saving*, 2024.
- 130- Aziz Babapoor, Roghayyeh Asgharzadeh, Mohammadali Pourshahi "Cu(I) Schiff Base Complex Stabilized on Magnetic Graphene Oxide as a Recoverable Heterogeneous Catalyst for N-arylation of Amines Under Mild Conditions and With High Efficiency" *Chemistry Africa*, 2024.

131- Shiva Shaddel Khalifelu, Naser Hamid, Zohreh Rahimi-Ahar, Nasim Seyedjabedar, Amirreza Oroujzadeh, Aziz Babapoor and Adrian Seyfaee “Application of microencapsulated phase change materials for controlling exothermic reactions” Rev Chem Eng, 2024.

132- Zahra Pouramini, Bitā Ayati and Aziz Babapoor “Performance optimisation of new basket-shaped TiO₂ photoelectrodes in a photocatalytic fuel cell utilising the response surface method: dye elimination and energy generation” INDIAN CHEMICAL ENGINEER, 2024.

133- Milad Fathi, Aziz Babapoor, Zohre rahimi-Ahar and Hadi Basharnavaz “Efficiency evaluation of the redox reaction using Fe(II)-g-C₃N₄ for the removal of hexavalent chromium from water” Scientia Iranica, 2025.

134- Zohre rahimi-Ahar, M. Mastani Joybari, A. Ghareghashi, S. Moradi and Aziz Babapoor “Solar-assisted desalination based on photothermal conversion effect: A review” Renewable and Sustainable Energy Reviews, 2025.

135- Hamid Hassanifar, Ali Khoshbin, Zahra Bolandakhtar, Shaghayegh Rezaei, Aziz Babapour, "Investigating the mass transfer of phase change materials during melting and freezing processes with the aim of energy optimization," Scientific Journal of Renewable and New Energies. Spring 2015.

5. Languages (with MCHE (68/100) language certificate)

Speaking			Writing			Reading			
Excellent	Good	Average	Excellent	Good	Average	Excellent	Good	Average	
		*		*			*		English
		*		*		*			Arabic

6. Familiarity with hardware and software environments

Programming languages: Pascal-Matlab

Application software: Comsol, Excel, Word, Hysys, Spss, Primavera (P3) and ...

Operating systems: MS Windows

7. Research interests

1-Separation processes 2- Energy management (Nano fluids, energy in buildings, smart phase change composites, etc.) 3- Gas engineering 4- Nanotechnology 5- Polymers 6- Upstream and downstream oil

industries, increased recovery from oil and gas reservoirs 7- Environment and biotechnology 8- Optimization of various chemical processes 9- Transport phenomena

8. Honors and awards

- First student in class, school, region and city throughout the entire period of study until diploma (1986-1998)
 - 72nd place in national entrance exam (1998)
 - Completed military service using elite command at the Biochemical Engineering and Environmental Control Research Center, Sharif University of Technology (1998-2006)
 - Obtained domestic study opportunity quota (1993)
 - Received incentive support from the Special Headquarters for Nanotechnology Development for 10 ISI articles
 - Received incentive support from the Special Headquarters for Nanotechnology Development for PhD thesis (1995)
 - Outstanding PhD graduate (1995)
 - Authored and published more than 120 (one hundred and twenty) articles and 20 (twenty) book titles in various fields of chemical engineering, oil and gas
 - Reviewer of more than 140 (one hundred and forty) ISI journals
 - Promoted to associate professor in the shortest time Possible according to the rules (exactly 4 four years) with excellent grades
 - 2 two Highly cited articles in 2019
 - 2 two Hot paper articles and 4 two Highly cited articles in 2020
 - 3 three Highly cited articles in 2021
 - World's Top 2% Scientist's List (World's Top 2% Scientist-2020-2021-2022)
 - 6 six Top paper articles in 2023
 - 3 three Top paper articles in 2024
-

9. Recommenders

- 1- Professor Dr. Ahmad Ramezani Saadatabadi (Professor, Sharif University of Technology)
- 2- Professor Dr. Manouchehr Vosoughi (Professor, Sharif University of Technology)
- 3- Professor Dr. Iran Alamzadeh (Professor, Sharif University of Technology)

- 4- Professor Dr. Reza Rusta-Azad (Professor, Sharif University of Technology)
 - 5- Professor Dr. Mehdi Borqai (Professor, Sharif University of Technology)
 - 6- Professor Dr. Ali-Akbar Seif-Kordi (Professor, Sharif University of Technology)
 - 7- Professor Dr. Gholamreza Karimi (Professor, Shiraz University)
 - 8- Professor Dr. Mohammadreza Rahimpour (Professor, Shiraz University)
 - 9- Professor Dr. Abdolmohammad Alamdari (Professor, Shiraz University)
 - 10- Professor Dr. Dariush Mola (Professor, Shiraz University)
-

Dr. Aziz Babapoor
Professor of Chemical Engineering
Friday, April 18, 2025