

مارال قهرمانی

*تاریخ آخرین به روز رسانی رزومه= آبان ماه ۱۴۰۳

*اطلاعات تماس:

آدرس (ها) ایمیل: maral.ghahramani@modares.ac.ir

Maral.ghahramani@yahoo.com

۰۲۱-۸۲۸۸۳۳۳۹

تلفن:

*زمینه‌های تحقیقاتی:

-توسعه مواد پلیمری برای کاربرد در باتری های لیتیومی

-کنترل مورفولوژی و خودآرایی کopolymerهای قطعه ای

-غشاهای پلیمری (جداسازی گاز و باتری لیتیوم یون)

-طراحی و سنتز کنترل شده (کو)پلیمرها

*تدریس:

طراحی و معماری ماکرومولکول‌ها (دانشگاه تربیت مدرس، ۱۴۰۱-کنون)

مدل سازی مولکولی (دانشگاه تربیت مدرس، ۱۴۰۱-کنون)

مهندسی فرآیندهای پلیمریزاسیون پیشرفته، کارشناسی ارشد (دانشگاه تربیت مدرس، ۱۳۹۸-کنون)

تخریب و پایداری پلیمرها، کارشناسی ارشد (دانشگاه تربیت مدرس، ۱۳۹۹-کنون)

مواد پلیمری پیشرفته، کارشناسی ارشد (دانشگاه تربیت مدرس، ۱۴۰۰-کنون)

طراحی آزمایش، کارشناسی ارشد (دانشگاه تربیت مدرس، ۱۳۹۹)

شیمی عمومی و آزمایشگاه شیمی عمومی، کارشناسی (دانشگاه امیرکبیر، ۱۳۹۸-۱۴۰۰)

انتقال جرم، کارشناسی (دانشگاه آزاد اسلامی، ۱۳۹۴-۱۳۹۵)

پروژه‌ها:

مجری پروژه، "بررسی اثر پیوند دهنده پلیمری خود ترمیم‌شونده بر پایه پلی‌اورتان و جمع‌کننده جریان الیاف کربن بر عملکرد

کاتدهای LiFePO_4 "، بنیاد ملی علم ایران، ۱۴۰۳-کنون

مجری پروژه، "بومی سازی زنجیره ارزش باتری لیتیومی"، "ذخیره سازی انرژی حرارتی: مطالعه تکنولوژی"، سازمان انرژی

های تجدیدپذیر، وزارت نیرو، فرصت مطالعاتی در صنعت، ۱۴۰۲-۱۴۰۳

همکار پروژه، "بازبینی و به روزرسانی نقشه راه ملی باتری های لیتیوم یون"، دانشگاه امیرکبیر-نهاد ریاست جمهوری، ۱۳۹۹-

۱۴۰۱

محقق پسادکتری، "پلیمریزاسیون درجا نانوکامپوزیت های پلیمری و ساخت ژل پلیمر الکترولیت ها با تخلخل بالا برای کاربرد

در باتری های لیتیوم یون"، دانشگاه صنعتی امیرکبیر-صندوق حمایت از پژوهشگران، ۱۳۹۷-۱۳۹۹

همکار پروژه، "کاربرد غشاهای پلیمری در باتری های لیتیومی"، دانشگاه صنعتی امیرکبیر-دانشکده مهندسی پلیمر، ۱۳۹۷-

۱۳۹۹

مقالات (مجلات):

Pooya Gorji, Maral Ghahramani, Mojtaba Haghighi-Yazdi, The Electrochemical Performance of LiFePO₄ Electrodes based on Polyurethane Binder and Carbon Fiber Current Collector for Lithium-Ion Batteries, Journal of Energy Storage, 2024. (IF=8.9, Q1)

Pooya Gorji, Maral Ghahramani, Mojtaba Haghighi-Yazdi, The Effect of Poly(vinylidene difluoride-co-hexafluoropropylene)-g-poly(styrene sulfonate) Binder and Carbon Fiber Current Collector on the Electrochemical Performance of LiFePO₄ Cathode for Lithium-Ion Batteries, ACS Applied Energy Materials, 2024. (IF=5.5, Q1)

Mohammad Bagher Karimi, Fereidoon Mohammadi, Maral Ghahramani, Mehran Javanbakht, Fabrication and Evaluation of Electrospun Nafion Membranes as Gel Polymer Electrolytes for High-Performance Lithium-Ion Batteries, The Journal of Physical Chemistry C, 2023. (IF=3.8, Q1)

Taher Gharib Yousefabad, Maral Ghahramani, Mehran Javanbakht, Grafting of Polystyrene and Poly (sodium styrene sulfonate) on the Surface of Poly (vinylidene fluoride) via Atom Transfer Radical Polymerization: Synthesis and Characterization, Journal of Oil, Gas and Petrochemical Technology, 2023.

Mobina Razani and Maral Ghahramani, Self-Healing Polymer Electrolytes used in Lithium-Ion Batteries, Iran Polymer Technology Research and Development, 2023.

Maral Ghahramani, Mehran Javanbakht, Seifollah Jamalpour, Susan Hamidi, Novel Single-Ion Conducting Gel Polymer Electrolyte with Honeycomb-Like Morphology Prepared Using Brush Copolymer for Lithium-Ion Battery Application, Journal of Electrochemical Society, 2023. (IF=4.316, Q1)

Maral Ghahramani, Susan Hamidi, Mahsa Mohammad, Mehran Javanbakht, Pooya Gorji, The Effect of Sulfonated Copolymer as a Binder on the Electrochemical Performance of LiFePO₄ Cathode for Lithium-Ion Batteries, Journal of Electroanalytical Chemistry, 2023. (IF=4.63, Q1)

Nima Mahmoodi Esfanderani, Mohammad Amin Hooshmand, Maral Ghahramani, Mahdi Abdollahi, A review on Cellulose Nanofiber Production Methods: Sources, Extraction, Preparation and Characterization (in Persian), Green Chemistry and Sustainable Technologies, 2022.

Maral Ghahramani and Mohammad Ali Semsarzadeh, Investigating the Effect of Polyurethane Substrate Morphology on the Gas Permeation Properties of Pol(dimethyl siloxane) Block Copolymer/Polyurethane Layered Membranes, Iranian Journal of Polymer Science and Technology, 2022.

Seifollah Jamalpour, Maral Ghahramani, Seyed Reza Ghaffarian, Mehran Javanbakht, “Improved performance of lithium ion battery by the incorporation of novel synthesized organic-inorganic hybrid nanoparticles SiO₂-poly (methyl methacrylate-co-ureidopyrimidinone) in gel polymer electrolyte based on poly (vinylidene fluoride)”, Polymer, 2021. (IF=4.43)

Seifollah Jamalpour, Maral Ghahramani, Seyed Reza Ghaffarian, Mehran Javanbakht, “The effect of poly(hydroxyl ethyl methacrylate) on the performance of PVDF/P(MMA-co-HEMA) hybrid gel polymer electrolytes for lithium ion battery application”, Polymer, 2020. (IF=4.43)

Mohammad Ali Semsarzadeh and Maral Ghahramani, “The effect of poly(alkyl (meth)acrylate) segments on the thermodynamic properties, morphology and gas permeation properties of poly(alkyl (meth)acrylate)-b-

poly(dimethyl siloxane) triblock copolymer membranes”, Journal of Membrane Science, vol. 594, 117400, 2020. (IF=8.742)

Mohammad Ali Semsarzadeh and Maral Ghahramani, “Surface Energy and Thermal Stability Studies of Poly(dimethyl siloxane)-Poly(alkyl (meth)acrylate) Copolymers”, Polymer-Plastics Technology and Engineering, 2017. (<https://doi.org/10.1080/03602559.2017.1295316>) (IF=1.9)

Mahdi Abdollahi, Mohammad Reza Yousefi, Maral Ghahramani, Heidar Ranjbar, Seyyed Fardin Najafi, “Synthesis of Polybutadiene Nanoparticles via Emulsion Polymerization: Effect of Electrolyte and Initiator Type on the Particle Size and Reaction Kinetics”, Iranian Polymer Journal, vol. 26, pp. 1-10, 2017. (IF=1.707)

Mohammad Ali Semsarzadeh, Maral Ghahramani, “Synthesis and Characterization of Poly (ethyl methacrylate)-b-Poly(dimethyl siloxane)-b-Poly(ethyl methacrylate) Triblock Copolymer: The Effect of Solvent on Morphology”, Journal of Polymer Research, vol. 23, pp. 148-160, 2016. (IF=2.426)

S. S. Hosseini, E. Bringas, N. R. Tan, I. Ortiz, M. Ghahramani, and M. A. Alaei Shahmirzadi, "Recent progress in development of high performance polymeric membranes and materials for metal plating wastewater treatment: A review," Journal of Water Process Engineering, vol. 9, pp. 78-110, 2016. (IF=5.485)

Mohammad Ali Semsarzadeh, Maral Ghahramani, “Synthesis and morphology of polyacrylate-poly(dimethyl siloxane) block copolymers for membrane application”, Journal of Macromolecular Research, vol.10, 2015. (IF=2.047)

Mahdi Abdollahi, Poorya Bigdeli, Mahmood Hemmati, Maral Ghahramani, Mohammad Barari, “Reverse Iodine Transfer Polymerization of Vinyl Acetate and Vinyl Benzoate: Synthesis and Characterization of Homo- and Copolymers”, Polymer International, vol.8, 2015. (IF=2.574)

Mohammad Ali Semsarzadeh, Maral Ghahramani, “Preparation, Characterization and Permeation Behavior of Poly(methyl acrylate)-Poly(dimethyl siloxane)-Poly(methyl acrylate) Block Copolymer /Poly(vinyl acetate) Blend Membranes”, Iranian Journal of Polymer Science and Technology, vol.28, 2015.

مقالات (کنفرانس ها):

Ebtesam Khalafian and Maral Ghahramani, Synthesis and Characterization of Self-healing Polyurethane, ISPST2024, Tabriz, Sep. 2024. (Poster session, selected paper of conference)

Pooyeh Mehrabi, Maral Ghahramani, Ahmadreza Bahramian, Calculation of the Glass Transition Temperature of Plasticized Poly(vinyl chloride) using Molecular Dynamic Method, ISPST2024, Tabriz, Sep. 2024. (Poster session)

Mehrnaz Khosravi Nezhad and Maral Ghahramani, The Effect of Hard-Segment Chemistry on Phase-Separation of Single-Ion Conducting Polyurethanes, ISPST2024, Tabriz, Sep. 2024. (Oral Session)

Pooyeh Mehrabi, Maral Ghahramani, Ahmadreza Bahramian, Synthesis of Poly(vinyl chloride)-g-Poly(butyl acrylate) Plasticizer via Atom Transfer Radical Polymerization Method, ISPST2024, Tabriz, Sep. 2024. (Poster session)

Mobina Razani and Maral Ghahramani, Investigation the Effect of Hard Segment Microstructure on the Electrochemical Performance of Polymer Electrolytes Based on Self-Healing Polyurethane in Lithium-Ion Battery, ISPST2024, Tabriz, Sep. 2024. (Poster session)

Hasan Alkhafaji, Alireza Sharif, Maral Ghahramani, The Effect of Solvent on the Synthesis of α , ω -Functionalized Poly(ethylene glycol) Macroinitiator, ISPST2024, Tabriz, Sep. 2024. (Poster session)

Mehrnaz Khosravi Nezhad and Maral Ghahramani, Investigating Solubility Parameters of Polyurethane Soft Segments through Molecular Dynamics Simulations, ISPST2024, Tabriz, Sep. 2024. (Poster session)

Erfan Hamedian, Maral Ghahramani, Mojtaba Haghighi-Yazdi, Majid Safarabadi, Thermal Characterization of Polymeric Nanocomposites in Microchannels of Lithium-Ion Battery Packs, 1st International and 2nd National Lithium Battery Conference, 2024. (Oral Session)

M. Razani and M. Ghahramani, Investigation of the effect of reversible covalent bond and hydrogen bond on the self-healing ability of poly(urethane urea), 7th National Seminar on Polymer, 2023. (Poster Session, selected poster of the seminar)

Sh. Bahmani, M. Ghahramani, H. Ebrahimi, Synthesis of Poly(vinyl chloride)-g-Poly(hydroxy ethyl acrylate) Brush-Copolymer via Atom Transfer Radical Polymerization, 7th National Seminar on Polymer, 2023. (Oral Session)

Sh. Bahmani, M. Ghahramani, H. Ebrahimi, Synthesis of Poly(vinyl chloride)-g-polycaprolactone via sequence of Living Radical Polymerization and Ring Opening Polymerization, 7th National Seminar on Polymer, 2023. (Poster session)

M. Razani and M. Ghahramani, Electrochemical Performance of PVDF-based Brush Copolymer Binder for Lithium-Ion Battery Application, 8th Annual Clean Energy Conference (ACEC2023), 2023. (Oral Session)

M. Razani, M. Ghahramani, The Effect of Chain Extender on the Chemical Structure and Properties of Thermoplastic Polyurethanes, 2nd International Conference & 6th National Conference on Materials, Metallurgy, Mining, 2023. (Oral Session)

A.Ghezi, Maghsoudi, M. Ghahramani, Investigation the Role of Conductive Polymers in Progress of Lithium-Ion Battery Technology, 12th fuel cell conference of Iran, Tehran, Iran, 2023. (Poster session)

T. Gharib Yousefabad, M. Ghahramani, M. Javanbakht, Grafting of polystyrene and poly(sodium styrene sulfonate) on the surface of poly(vinylidene fluoride) via Atom Transfer Radical Polymerization: Synthesis and Characterization, 4th International Biennial Conference on Oil, Gas, and Petrochemical Engineering, 2022. (Oral Session)

P. Gorji, M. Haghighi-Yazdi, and M. Ghahramani, Composite lithium-ion battery panels to be used as electric and hybrid car bodies, The 8th International Conference on Composites: Characterization, Fabrication, and Application, (CCFA-8), Tehran, Iran, 2022. (Oral Session)

N. Mahmoodi Esfandarani, M. Ghahramani, M. Abdollahi, Preparation of Cellulose Microfibers from Corn Agricultural Waste using Ball-milling Method, 15th international seminar on polymer science and technology, 2022. (Poster session)

P. Gorji, M. Ghahramani, M. Haghighi-Yazdi, M. Javanbakht, Preparation of PVDF-HFP Gel Polymer Electrolytes with Honey Comb-Like Morphology Structure for Lithium-Ion Battery Application, 15th international seminar on polymer science and technology, 2022. (Oral Session)

P. Gorji, M. Ghahramani and M. Haghighi-Yazdi, The effect of Electrolyte Solvent on the Performance of the LiMn_2O_4 Cathode for Lithium-ion Battery Application, 2nd International Conference on Industrial Application of Advanced Materials and Manufacturing, 2022. (Orall Session, selected paper of conference)

N. Mahmoodi Esfandarani, M. Ghahramani, M. Abdollahi, Extraction of Cellulose from Agriculture Waste without using Organic Solvent, The 1st National Conference on Environmental Challenges: Green Industry and Mining, 2022.

T. Gharib Yousefabad, M. Zendedel Haghighi, M. Ghahramani, M. Javanbakht and S. Jamalpour, Investigation and Calculation of the Lithium-Ion Diffusion Coefficient in the Electrode of Lithium-Ion Batteries Composed of Poly(vinylidene fluoride) Gel Polymer Electrolyte, 17th Iranian National Congress of Chemical Engineering, 2021.

M. Ghahramani, M. Zendedel Haghighi, T. Gharib Yousefabad, S. Jamalpour, Investigation of the Effect of Solvent and Poly(ethylene glycol) on the Morphology of Poly(vinylidene fluoride) Membrane, 6th National Seminar on Polymer, 2021.

S. Jamalpour, M. Ghahramani, S. R. Ghaffarian, M. Javanbakht, "Effect of organic-inorganic hybrid nanoparticles for improving the electrochemical performace of PVDF as a gel polymer electrolyte for lithium ion batteries", ISPST2020. (Oral session)

M. A. Semsarzadeh, M. Ghahramani, "Preparation of Layered Membrane of Poly(vinyl acetate) using Polyurethane Support for Gas Separation Application", Presented at 12th International Seminar on Polymer Science and Technology, 2016. (Oral session)

M. A. Semsarzadeh, M. Ghahramani, "Study on Correlation between Morphology and Surface Tension of Poly(dimethyl siloxane) Copolymers for Membrane Application", Presented at 12th International Seminar on Polymer Science and Technology, 2016. (Oral session)

S. Jamalpour, M. Ghahramani, S. A. Alavi, A. H. Haghighi, "Unsaturated Polyester Toughened Epoxy Hybrid Nanocomposites", Presented at 12th International Seminar on Polymer Science and Technology, 2016. (Poster session)

M. A. Semsarzadeh, M. Ghahramani, "THE EFFECT OF SOLVENT ON SELF-ASSEMBLY OF THE PDMS BLOCK COPOLYMER", Presented at Third International Conference on Oil, Gas and Petrochemical Iran, 2015. (Poster session)

M. A. Semsarzadeh, M. Ghahramani, "IMPROVED GAS PERMEATION WITH NEW POLYDIMETHYLSILOXANE BLOCK COPOLYMER MEMBRANES", Presented at Third International Conference on Oil, Gas and Petrochemical Iran, 2015. (Oral session)

M. A. Semsarzadeh, M. Ghahramani, "Synthesis of Poly(dimethylsiloxane) Triblock Copolymer with Poly(methyl acrylate) and Preparation of It's Blend with Polyvinyl acetate for Membrane Application", Presented at the The 8th International Chemical Engineering Congress & Exhibition (IChEC 2014), Kish, Iran 2014. (Oral session)

M.A. Semsarzadeh, M. Ghahramani, "An Investigating on the Importance of Flory-Huggins Binary Interaction Parameters in Membrane Formation", Presented at 11th International Seminar on Polymer Science and Technology, 2014. (Oral session)

M.A. Semsarzadeh, M. Ghahramani., “The Effect of PVAc on the CO₂ Permselectivity of PMA-PDMS-PMA block copolymer/PVAc Blend Membranes’, Presented at 11th International Seminar on Polymer Science and Technology, 2014. (Poster session)

فصل کتاب:

Mobina Razani, Maral Ghahramani, Maryam Karimi, Ali Ghezi, Hexagonal boron nitride in catalytic and photocatalytic applications, Hexagonal Boron Nitride Synthesis, Properties, and Applications, 2024.

Maral Ghahramani, Fariba Mafakheri, Hossein Ebrahimi, Seifollah Jamalpour, Poly(vinyl chloride)/block copolymers, blends, interpenetrating networks, and gels, Book: POLY(VINYL CHLORIDE)-BASED BLENDS, INTERPENETRATING POLYMER NETWORKS (IPNS), AND GELS, Elsevier, 2024.

Pooya Gorji, Mobina Razani, Ahdieh Amjadi, Maral Ghahramani, Polymer-Mediated Functionalized Magnetic Nanosystems for Biomedical Applications, Book Title: FUNCTIONALIZED MAGNETIC NANOSYSTEMS FOR DIAGNOSTIC TOOLS AND DEVICES, Elsevier, 2024.

Maral Ghahramani, Maryam Karimi, Fluoropolymer Nanocomposites for Photocatalytic Applications, Book Title : Advanced Fluoropolymer Nanocomposites: Fabrication, Processing, Characterization and Applications, Elsevier, 2023.

Maral Ghahramani, Pooya Gorji, et. al., Conducting Polymer Nanocomposites for Lithium-Ion batteries: Fabrication, Characterization and Electrochemical Performance, Nanostructured Materials for Energy Storage, Wiley (Accepted 2022).