

Meysam Heydari Gharahcheshmeh

Curriculum Vitae

Assistant Professor
San Diego State University
Department of Mechanical Engineering
Bldg. A, Room 103, 5500 Campanile Drive
San Diego, CA, 92182
E-mail: Mheydari@sdsu.edu
Phone: (619) 594-6067
Fax: (619) 594-3599

Website Link: <https://www.heydari-gharahcheshmeh.com>

Research Background and Interests:

- Texture and Nanostructural Engineering
 - Conducting Polymers, Semiconducting Polymers, Superconductors, and Semiconductors
 - Nano Energy Materials, Flexible Electronic Devices, and Wearable Electronics
 - Surface Science, Thin Film Deposition, Epitaxial growth, and 2D Materials
 - Energy Harvesting and Storage Devices (Photovoltaic, Electrochemical Energy Storage, and Thermoelectric)
 - Condensed Matter Physics, Machine Learning, Bio-functional Polymers and Soft Matters
- ❖ **My research focuses on the following thrusts:**
- Texture and nanostructural engineering of advanced organic/inorganic conductors such as conducting/semiconducting polymers and superconductors.
 - Materials fabrication and manufacturing development based on chemical vapor deposition (CVD) techniques such as oxidative CVD (oCVD), initiated CVD (iCVD), metal organic CVD (MOCVD), as well as a solution-based deposition.
 - Device integration of advanced conductors based on energy demands and biocompatibility characteristics in large-scale production, while using machine learning techniques in material property prediction and design of advanced materials.

Professional Experience:

- **Assistant Professor, San Diego State University** **Aug. 2022-Present**
Department of Mechanical Engineering
 - Teaching “ME 420 Fundamentals of Manufacturing” and “ME-240 Introduction to Materials Engineering” at the University of Mississippi.
 - Involving in the different kinds of services including but not limited to academic, diversity, organization, and mentoring for the department and university based on the demands.

- **Assistant Professor, University of Mississippi** **Aug. 2021-July. 2022**
Department of Mechanical Engineering
 - Teaching “ME 312-Mechanical Behavior of Materials” at the University of Mississippi.
 - Advising two Ph.D. students.
 - Advising thirty-five undergrad students based on their academic progress toward graduation.
 - Involving in the different kinds of services including but not limited to academic, diversity, organization, and mentoring for the department and university based on the demands.

- **Postdoctoral Associate, Massachusetts Institute of Technology (MIT)** **Oct. 2017-July 2021**
Department of Chemical Engineering
Advisor: Prof. Karen K. Gleason
Subject: *Nanostructural engineering of conducting/semiconducting polymers fabricated by oCVD and iCVD techniques for energy device applications and biocompatible flexible electronics*

❖ **Research Accomplishments:**

- Developed the texture and nanostructural engineering method to enhance the optoelectronic characteristics of conducting polymers.
- This method development advances the properties of flexible transparent conductors desired for next-generation lightweight and wearable electronic devices, as published in our recent paper “[Science Advances. 5, eaay0414 \(2019\)](#)”.
- Achieving the world-record of high electrical conductivity of 7520 S/cm in the poly(3,4,-ethylenedioxythiophene) (PEDOT) thin film fabricated by the water-assisted oCVD method, “[Advanced Functional Materials, 2008712 \(2020\)](#)”.
- Developed materials fabrication and manufacturing methods based on oCVD and iCVD techniques.

- Developed device integration of conjugated conducting/semiconducting polymers in a wide range of energy device applications and biocompatible wearable electronics.
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Education:

- **Ph.D. Materials Engineering, University of Houston** **Aug. 2017**
Dissertation Title: *Structural and electromagnetic study of heavily doped Zr-added REBCO superconductors fabricated by roll-to-roll metal organic chemical vapor deposition (MOCVD)*
Advisor: Prof. Venkat Selvamanickam

❖ **Research Accomplishments:**
 - Developed the nanostructural and texture analysis methods for second-generation high-temperature superconductors (2G-HTS) fabricated by advanced roll-to-roll (R2R) MOCVD to enhance the magnetic flux pinning mechanism.
 - Obtained the world-records of the high critical current density of 20 MA/cm² and high pinning force of 1000 GN/m³ at 30 K, 3 T (B||c).
 - These world-records at the operating condition of the offshore wind turbine mentioned and acknowledged in numerous publications by researchers in the superconductivity community.
 - **M.S. Physics, University of Texas at Brownsville** **May. 2013**
Dissertation Title: *Pulse electrodeposition of Zn-Co alloy coatings obtained from an alkaline bath.*
Advisor: Prof. Ahmed Touhami
 - **M.S. Materials Engineering, University of Tehran, IRAN** **Aug. 2009**
Dissertation Title: *Electrochemical studies of zinc-cobalt alloy coatings deposited from alkaline baths containing glycine as a complexing agent*
Advisor: Prof. Mahmoud Heydarzadeh Sohi
 - **B.S. Materials Engineering, University of Tabriz, IRAN** **Aug. 2006**
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Honors & Awards:

- **2018**, Best Ph.D. dissertation award of the engineering college at the University of Houston.
- **2017**, [Winner of the world-award on applied superconductivity for the second year in a row "2017 IEEE Council on Superconductivity Fellowship"](#).
- **2016**, [Winner of the world-award on applied superconductivity "2016 IEEE Council on Superconductivity Fellowship"](#).
- **2016**, [Alexander Shikov award for the best student paper in materials on design and manufacturing of LTS and HTS.](#)
- **2016**, Selected to attend the student program as a future energy leader of the 2016 ARPA-E energy innovation summit.
- **2016**, [Houston Electrical League \(HEL\) scholarship award from the Texas Center for Superconductivity at the University of Houston \(TcSUH\).](#)
- **2016**, ABS scholarship award from the University of Houston.
- **2016**, Winner of the 51st Student Symposium presentation contest of the TcSUH.
- **2016**, [President of the "MRS University Chapter" at the University of Houston.](#)
- **2015**, [Cora Hawley scholarship award from the TcSUH.](#)
- **2015**, Published paper was selected as a highlights of 2015 collection of "Superconductor Science and Technology".
- **2015**, Padula scholarship award from the University of Houston.
- **2015**, Presidential Scholarship Award from the University of Houston.
- **2015**, Selected as a top six Ph.D. students of the Mechanical Engineering Department, University of Houston.
- ❖ **Travel Awards:**
 - **2015 – 2016**, Travel awards from TcSUH for the 2015 and 2016 spring meetings and 2016 ASC.
 - **2015**, Travel award from the Mechanical Engineering Department at the University of Houston for the 2015 MRS spring meeting.

- **2011 – 2013**, Travel awards from the center for gravitational wave astronomy at UTB for the 2013 MRS spring meeting, 2012 NANOSMAT-USA, and 2011 Texas section of APS.

Teaching and Mentoring Experiences:

❖ Teaching Certificates:

- **May 2019**, Obtaining Kaufman Teaching Certificate Program (KTCP) from Massachusetts Institute of Technology (MIT).
Obtained KTCP certificate from MIT after attending a series of workshops related to:
 - Designing a course and constructing a syllabus
 - Planning and facilitating a class session
 - Introduction to research on how people learn
 - Interactive teaching and active learning
 - Constructing effective problem sets and exam questions
 - Teaching Inclusively
- **May 2017**, [Obtaining Future Faculty Program \(FFP\) certificate from the University of Houston](#).
Workshops were related to the professional behavior at the academic society and how to manage a teaching duties.

❖ Mentorship and Advising Experience:

- **Aug. 2018 – Present**, Mentoring three B.S. students at MIT under the Undergraduate Research Opportunities Program (UROP).
- **Sept. 2014 – Aug. 2017**, Mentoring four M.S. students at the University of Houston.
- **Sept. 2016**, Served as a student mentor in 2016 ASC.
- **Apr. 2015 & Apr. 2016**, Served as a mentor in 2015 and 2016 MRS Spring Meetings.

❖ Teaching Experience:

- **Jan. 2023 – May. 2023**, Instructor of “ME 240. Introduction to Materials Engineering” at San Diego State University.
- **Aug. 2022 – Dec. 2022**, Instructor of “ME 420. Fundamental of Manufacturing” at San Diego State University.
- **Jan. 2022 – May. 2022**, Instructor of “ME 312. Mechanical Behavior of Materials” at the University of Mississippi.
- **Aug. 2021 – Dec. 2021**, Instructor of “ME 312. Mechanical Behavior of Materials” at the University of Mississippi.
- **Jan. 2013 – May 2013**, Instructor of “Modern Physic Lab”, at the University of Texas at Brownsville.
- **Aug. 2012 – Dec. 2012**, Instructor of “Collage Physics Lab”, at the University of Texas at Brownsville.
- **Jan. 2012 – May. 2012**, Instructor of “Modern Physic Lab”, at the University of Texas at Brownsville.
- **Aug. 2011 – Dec. 2011**, Instructor of “Collage Physics Lab”, at the University of Texas at Brownsville.
- **Jan. 2013 – May 2013**, Teaching Assistant of “Math Methods”, at the University of Texas at Brownsville.
- **Aug. 2012 – Dec. 2012**, Teaching Assistant of “Thermodynamics”, at the University of Texas at Brownsville.
- **Jan. 2012 – May 2012**, Teaching Assistant of “Modern Physic”, at the University of Texas at Brownsville.
- **Aug. 2011 – Dec. 2011**, Teaching Assistant of “College Physics 2”, at the University of Texas at Brownsville.
- **Jan. 2011 – May 2011**, Teaching Assistant of “Math Methods”, at the University of Texas at Brownsville.
- **Oct. 2007 – Feb. 2008**, Teaching Assistant of “Physical Metallurgy”, at the University of Tehran.
- **Mar. 2004 – Aug. 2007**, Private tutor; teaching high school students for the national university entrance exam in Iran.

Proposal, Invited Talk, Organization, Professional, and Review Services:

❖ Proposal:

- Participating in grant writing and preparing reports for the Eni-MIT Solar Frontier project.

❖ Invited Talk:

- **Jan. 2020**, *University of Texas Rio Grande Valley (UTRGV), Department of Physics and Astronomy*, “[Energy device integration based on conducting polymers and superconductors.](#)”
- **Sep. 2021**, *University of Mississippi, Department of Civil Engineering*, “Chemical Vapor Deposition Method; Aspect, Application, and Device Integration”.

❖ Organization:

- **Jan 2016 – Oct 2018**, Organized the “MRS University Chapter” at the University of Houston for the first time in Jan. 2016 and serving as a president of UH-MRS Chapter.
- **Apr. 2017**, Organized the “1st Student Symposium of UH-MRS Chapter” at the University of Houston.

❖ **Professional Services:**

- **Oct. 2020 – Present**, [Served as a guest editor for the journal of Energies at the MDPI publisher.](#)
- **Aug. 2018 – Present**, Served as an advisory board of chemical engineering Postdoctoral Association (PDA) at MIT.
- **Oct. 2018**, Served as a moderator of bulk superconductor session in 2018 ASC.
- **Sept. 2016**, Served as a student chair of 2016 ASC career lunch.
- **Apr. 2014 – Aug. 2017**, Providing lab tour and demo for Chevron girls day, high school teachers of Houston area, and step summer program hosted by the TcSUH and Mechanical Engineering Department at the University of Houston.

❖ **Review Service:**

- “ACS Applied Polymer Materials”, “Advanced Materials Interfaces”, “Superconductor Science and Technology”, “IEEE-Transaction on Applied Superconductivity”, “Materials Chemistry and Physics”, “Physica C”, “Multidisciplinary Digital Publishing Institute”, “Coating”, “Polymers”, “Molecules”, “Materials”, “Energies”, “Nanomaterials”.

Publications:

- **1 Patent, 1 Book, 1 Book Chapter, 27 Journal Papers, and 18 Conference Presentations**

[Google Scholar](#)

❖ **Patent:**

- P1 K. K. Gleason, F. R. Brushett, C. T. Wan, A. Forner-Cuenca, **M. Heydari Gharahcheshmeh**, Y. A. Gandomi, Ultrathin Conformal oCVD PEDOT Coatings on Carbon Electrodes Enable Improved Performance of Redox Flow Batteries, [US Patent, 202220013787A1, Jan 1, \(2022\).](#)

❖ **Book:**

- B1 K. K. Gleason, **M. Heydari Gharahcheshmeh**, Conjugated Polymers at Nanoscale; Engineering Orientation, Nanostructure, and Properties. [De Gruyter, Technology and Engineering, Aug. 23 \(2021\).](#)

❖ **Book Chapter:**

- b1 **M. Heydari Gharahcheshmeh**, K. Gleason, Conjugated Polymers for Next Generation Applications, [Elsevier Book, Woodhead Publishing, 283-311 \(2022\).](#)

❖ **Journal Papers:**

- J1 **M. Heydari Gharahcheshmeh**, K. K. Gleason, Recent Progress in Conjugated Conducting and Semiconducting Polymers for Energy Devices, [Energies, 15, 3661 \(2022\).](#)
- J2 **M. Heydari Gharahcheshmeh**, M. T. Robinson, E. F. Gleason, K. K. Gleason, Water Assisted Growth: Optimizing the Optoelectronic Properties of Face-on Oriented Poly(3,4-ethylenedioxythiophene) via Water-Assisted oxidative Chemical Vapor Deposition, [Advanced Functional Materials. 31, 2170097 \(2021\).](#)
- J3 M. T. Robinson, J. Tung, **M. Heydari Gharahcheshmeh**, K. K. Gleason, Humidity-Initiated Gas Sensors for Volatile Organic Compounds Sensing, [Advanced Functional Materials. 2101310 \(2021\).](#)
- J4 L. Sun, G. Yuan, L. Gao, J. E. Yang, M. Chhowalla, **M. Heydari Gharahcheshmeh**, K. Gleason, Y. S. Choi, B. H. Hong, Z. Liu, Chemical Vapor Deposition, [Nature Reviews Methods Primers, 1, 5, \(2021\).](#)

- J5 **M. Heydari Gharahcheshmeh**, M. T. Robinson, E. F. Gleason, K. K. Gleason, Optimizing the Optoelectronic Properties of Face-on Oriented Poly(3,4-ethylenedioxythiophene) via Water-Assisted oxidative Chemical Vapor Deposition, [Advanced Functional Materials. 31, 2008712 \(2020\).](#)
- J6 **M. Heydari Gharahcheshmeh**, K. K. Gleason, Texture and nanostructural engineering of conjugated conducting and semiconducting polymers, [Materials Today Advances. 8, 100086 \(2020\).](#)
- J7 **M. Heydari Gharahcheshmeh**, C. T. Wan, Y. A. Gandomi, K. Greco, A. Forner-Cuenca, Y. M. Chiang, F. R. Brushett, K. K. Gleason, Ultrathin Conformal oCVD PEDOT Coatings on Carbon Electrodes Enable Improved Performance of Redox Flow Batteries, [Advanced Materials Interface. 7, 2000855 \(2020\).](#)
- J8 M. M. Tavakoli, **M. Heydari Gharahcheshmeh**, N. Moody, M. G. Bawendi, K. K. Gleason, J. Kong, Efficient, Flexible, and Ultra-Lightweight Inverted PbS Quantum Dots Solar Cells on All-CVD-Growth of Parylene/Graphene/oCVD PEDOT Substrate with High Power-per-Weight, [Advanced Materials Interface. 7, 2000498 \(2020\).](#)
- J9 **M. Heydari Gharahcheshmeh**, M. M. Tavakoli, E. F. Gleason, M. T. Robinson, J. Kong, K. K. Gleason, Tuning, optimization, and perovskite solar cell device integration of ultrathin poly(3,4-ethylene dioxythiophene) films via a single-step all-dry process, [Science Advances. 5, eaay0414 \(2019\).](#)
- J10 **M. Heydari Gharahcheshmeh**, K. Gleason, Device Fabrication Based on oxidative Chemical Vapor Deposition (oCVD) Synthesis of Conducting Polymers and Related Conjugated Organic Materials, [Advanced Materials Interfaces. 6, 1801564 \(2019\).](#)
- J11 **M. Heydari Gharahcheshmeh**, K. Gleason, Hall of Fame Article: Device Fabrication Based on oxidative Chemical Vapor Deposition (oCVD) Synthesis of Conducting Polymers and Related Conjugated Organic Materials, [Advanced Materials Interfaces. 6 \(1\), 1970016 \(2019\).](#)
- J12 **M. Heydari Gharahcheshmeh**, G. Majkic, E. Galstyan, A. Xu, M. Kochat, X-F. Li, V. Selvamanickam, Superconducting characteristics of REBCO coated conductors with different Zr content, [IEEE Transaction on Applied Superconductivity. 29 \(5\), 6601105 \(2019\).](#)
- J13 **M. Heydari Gharahcheshmeh**, G. Majkic, E. Galstyan, A. Xu, Y. Zhang, X-F. Li, V. Selvamanickam, Control of in-field performance of 25 mol.% Zr-added REBCO superconductor tapes, [Physica C. 553, 26–32 \(2018\).](#)
- J14 A. Xu, Y. Zhang, **M. Heydari Gharahcheshmeh**, Y. Yao, E. Galstyan, D. Abraimov, F. Kametani, A. Polyanskii, J. Jaroszynski, V. Griffin, G. Majkic, D. Larbalestier, V. Selvamanickam, $J_c(4.2\text{ K}, 31.2\text{ T})$ beyond 1 kA/mm^2 of a $\sim 3.2\ \mu\text{m}$ thick, 20 mol% Zr-added MOCVD REBCO coated conductor, [Scientific Reports. 7, 6853 \(2017\).](#)
- J15 **M. Heydari Gharahcheshmeh**, E. Galstyan, J. Kukunuru, R. Katta, G. Majkic, X. Li, V. Selvamanickam, MOCVD of Heavily-Doped 25 mol.% Zr-added $(\text{Gd,Y})\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ Coated Conductors, [IEEE Transaction on Applied Superconductivity. 27\(4\), 2660768 \(2017\).](#)
- J16 **M. Heydari Gharahcheshmeh**, E. Galstyan, A. Xu, J. Kukunuru, R. Katta, Y. Zhang, G. Majkic, X. Li, V. Selvamanickam, Superconducting transition width (ΔT_c) requirement to achieve high in-field critical current density at 30K in 25 mol.% Zr-added $(\text{Gd,Y})\text{Ba}_2\text{Cu}_3\text{O}_{7-\delta}$ superconductor tapes, [Superconductor Science and Technology. 30 \(1\), 015016 \(2017\).](#)
- J17 A. Xu, Y. Zhang, M. Heydari Gharahcheshmeh, L. Delgado, N. Khatri, Y. Lue, E. Galstyan, V. Selvamanickam, Relevant Pinning for ab-plane J_c Enhancement of MOCVD REBCO Coated Conductors, [IEEE Transaction on Applied Superconductivity. 27 \(4\), 2648121 \(2017\).](#)
- J18 V. Selvamanickam, R. Mallick, X. Tao, Y. Yao, **M. Heydari Gharahcheshmeh**, A. Xu, Y. Zhang, E. Galstyan, G. Majkic, Improved flux pinning by prefabricated SnO_2 nanowires embedded in epitaxial $\text{YBa}_2\text{Cu}_3\text{O}_x$ superconducting thin film tapes, [Superconductor Science and Technology. 29 \(8\) 085016 \(2016\).](#)
- J19 V. Selvamanickam, **M. Heydari Gharahcheshmeh**, A. Xu, Y. Zhang, E. Galstyan, Requirements to achieve high in-field critical current density at 30 K in heavily-doped $(\text{Gd,Y})\text{Ba}_2\text{Cu}_3\text{O}_x$ superconductor tapes, [Superconductor Science and Technology. 28 \(10\), 104003 \(2015\).](#)

- J20 V. Selvamanickam, **M. Heydari Gharahcheshmeh**, A. Xu, Y. Zhang, E. Galstyan, Critical current density above 15 MA cm⁻² at 30 K, 3 T in 2.2 μm thick heavily-doped (Gd,Y)Ba₂Cu₃O_x superconductor tapes, [Superconductor Science and Technology, 28 \(7\), 072002 \(2015\)](#).
- J21 A. Xu, L. Delgado, **M. Heydari Gharahcheshmeh**, N. Khatri, Y. Liu, V. Selvamanickam, Strong correlation between J_c(T, H||C) and J_c(77 K, 3 T||c) in Zr-added (Gd, Y)BaCuO coated conductors at temperatures from 77 down to 20 K and fields up to 9 T, [Superconductor Science and Technology, 28 \(8\), 082001 \(2015\)](#).
- J22 V. Selvamanickam, **M. Heydari Gharahcheshmeh**, A. Xu, E. Galstyan, L. Delgado, C. Cantoni, High critical currents in heavily doped (Gd,Y)Ba₂Cu₃O₈ superconductor tapes, [Applied Physics Letters, 106 \(3\), 032601 \(2015\)](#).
- J23 E. Galstyan, **M. Heydari Gharahcheshmeh**, L. Delgado, A. Xu, G. Majkic, V. Selvamanickam, Microstructure characteristics of high lift factor MOCVD REBCO coated conductors with high Zr content, [IEEE Transaction on Applied Superconductivity, 25 \(3\), 6604305 \(2015\)](#).
- J24 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Pulse electrodeposition of Zn-Co alloy coatings obtained from an alkaline bath, [Materials Chemistry and Physics, 134 \(2\), 1146-1152 \(2012\)](#).
- J25 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Electrochemical studies of zinc-cobalt alloy coatings deposited from alkaline baths containing glycine as complexing agent, [Journal of Applied Electrochemistry, 40 \(8\), 1563-1570 \(2010\)](#).
- J26 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Effect of Temperature and Co²⁺ Concentration of Bath on Composition of Zn-Co Alloy Coatings, [International Journal of Advanced Design and Manufacturing Technology, 3 \(2\), 33-36 \(2011\)](#).
- J27 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Study of the corrosion behavior of zinc and Zn-Co alloy electrodeposits obtained from alkaline bath using direct current, [Materials Chemistry and Physics, 117 \(2\), 414-421 \(2009\)](#).

❖ **Conference Presentations:**

- C1 **M. Heydari Gharahcheshmeh**, K. Gleason, High Electrical Conductivity and Optoelectronic Performance in PEDOT Thin Films Grown by Water-Assisted oCVD via Nanostructural Engineering, **2021 MRS Spring Meeting**, Virtual Event, 2021.
- C2 **M. Heydari Gharahcheshmeh**, K. Gleason, Device Integration of Ultrathin oCVD PEDOT Films in Perovskite Solar Cell, **2019 MRS Fall Meeting**, Boston, Massachusetts, December 1-6, 2019.
- C3 **M. Heydari Gharahcheshmeh**, M. M. Tavakoli, E. F. Gleason, M. T. Robinson, J. Kong, K. K. Gleason, Tuning the PEDOT Lattice Parameter By Engineering Dopant Level for Efficient and Stable Perovskite Solar Cell Device, **2019 AIChE Annual Meeting**, Orlando, Florida, November 10-15, 2019.
- C4 **M. Heydari Gharahcheshmeh**, Fabrication of Conducting Polymers and Superconductors Using Chemical Vapor Deposition Methods for Energy and Electronic Application Devices, **2019 AIChE Annual Meeting**, Orlando, Florida, November 10-15, 2019.
- C5 **M. Heydari Gharahcheshmeh**, K. Gleason, Electrical Conductivity and Optical Transparency Characteristics of oCVD PEDOT Films Using VOCl₃ Oxidant, **2019 MRS Spring Meeting**, Phoenix, Arizona, April 22-26, 2019.
- C6 **M. Heydari Gharahcheshmeh**, K. Gleason, Using VOCl₃ oxidant in PEDOT synthesis by oxidative chemical vapor deposition (oCVD), **APS 2019**, Boston, Massachusetts, March 4-8, 2019.
- C7 **M. Heydari Gharahcheshmeh**, V. Selvamanickam, Superconducting characteristics of REBCO coated conductors with different Zr content, **ASC 2018**, Seattle, Washington, October 28-Novemebr 2, 2018.
- C8 **M. Heydari Gharahcheshmeh**, E. Galstyan, A. Xu, J. Kukunuru, R. Katta, Y. Zhang, G. Majkic, X. Li, V. Selvamanickam, MOCVD of high Zr-doped HTS coated conductors, **ASC 2016**, Denver, Colorado, September 4-9, 2016.

- C9 **M. Heydari Gharahcheshmeh**, E. Galstyan, A. Xu, Y. Zhang, J. Kukunuru, R. Katta, G. Majkic, X. Li, V. Selvamanickam, The conditions for achieving high self-field critical current densities at 77 K in 25 mol.% Zr-added (Gd,Y) Ba₂Cu₃O_x superconductor tapes, **2016 MRS Spring Meeting**, Phoenix, Arizona, March 28-April 1, 2016.
- C10 **M. Heydari Gharahcheshmeh**, E. Galstyan, A. Xu, V. Selvamanickam, Reel-to-Reel MOCVD of 25 mol.% Zr-added (Gd, Y)Ba₂Cu₃O_{7-δ} superconductor tapes, **2015 MRS Spring Meeting**, San Francisco, California, April 6-10, 2015.
- C11 **M. Heydari Gharahcheshmeh**, A. Touhami, Corrosion study of Zn-Co alloy coatings obtained from an alkaline bath containing glycine by using pulse current, **2013 MRS Spring Meeting**, San Francisco, California, April 1-5, 2013.
- C12 **M. Heydari Gharahcheshmeh**, A. Touhami, Effect of pulse current parameters on the surface morphology and chemical composition of Zn-Co alloy coatings, **NANOSMAT-USA**, Tampa, Florida, March 27-30, 2012.
- C13 **M. Heydari Gharahcheshmeh**, A. Touhami, Surface morphology and phase distribution of Zn and Zn-Co alloy coatings, obtained by direct current, **TMS 2012**, Orlando, Florida, March 11-15, 2012.
- C14 **M. Heydari Gharahcheshmeh**, A. Touhami, Morphology and chemical composition of Zn-Co alloy electrodeposits from alkaline solutions, **Texas Sections of APS**, Texas A&M University-Commerce, October 6-8, 2011.
- C15 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Effect of temperature on morphology and composition of Zn-Co alloy, **9th Iranian Conference on Manufacturing Engineering, ICME**, Birjand, Iran, March 3-5, 2010.
- C16 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Effect of Co²⁺ concentration of bath on composition of Zn-Co alloy coatings, **9th Iranian Conference on Manufacturing Engineering, ICME**, Birjand, Iran, March 3-5, 2010.
- C17 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Effect of current density on morphology and composition of Zn-Co alloy coatings, **12th Iranian Metallurgical Engineers Society Annual Congress**, Tehran, Iran, November 18-19, 2008.
- C18 **M. Heydari Gharahcheshmeh**, M. Heydarzadeh Sohi, Effect of pH and current density on the rate of electrodeposition and cathodic current efficiency of Zn-Co alloy coatings, **12th Iranian Metallurgical Engineers Society Annual congress**, Tehran, Iran, November 18-19, 2008.

Related Accomplishments News:

- **Nov. 2019**, [Clear, conductive coating could protect advanced solar cells, touch screens](#)
 - **July 2017**, [Doctoral Student Wins IEEE Superconductivity Award Second Year In A Row](#)
 - **Apr. 2017**, [UH Materials Research Society Student Chapter Hosts Campus Symposium](#)
 - **Aug. 2016**, [Doctoral Student Wins Fellowship To Investigate Applied Superconductivity](#)
 - **July 2016**, [Two UH Engineering Students Receive Texas Center For Superconductivity Scholarships](#)
 - **Apr. 2016**, [Materials Research Society Establishes UH Chapter](#)
 - **May 2015**, [Texas Center For Superconductivity Announces 2015-2016 Scholarship Recipients](#)
-