

Mohammad Farvizi

Phone: +989358485439

E-mail: mmfarvizi@yahoo.com, mmfarvizi@tabrizu.ac.ir



Current and Previous Positions

- 2024–till current, Associate Professor in Department of Materials Engineering, Faculty of Mechanical Engineering, University of Tabriz, Tabriz, Iran.
- 2020–2023, Associate Professor in Materials and Energy Research Center, Tehran, Iran.
- 2013-2020, Assistant Professor in Materials and Energy Research Center, Tehran, Iran.
- 2019-2023, Director of Industrial Relations and Market Study in Materials and Energy Research Center, Tehran, Iran.
- 2016-2018, Director of Research Affairs and Documentation in Materials and Energy Research Center, Tehran, Iran.
- 2013-2016, Technical Director in Materials and Energy Research Center, Tehran, Iran.

Education

- 2012-2013, Sabbatical course: (One Year), Pohang University of Science and Technology, POSTECH, South Korea.
- Title of the research: High pressure torsion (HPT) of NiTi-based composites.
- Supervisor: Prof. H.S. Kim
- 2007-2013, PhD (Materials Science), Materials and Energy Research Center, Iran.
- PhD Thesis: Synthesis and investigation of wear behavior of NiTi-based nanocomposites.
- Supervisor: Prof. A. Simchi and Prof. T. Ebadzadeh.
- 2004-2006, M.Sc. (Characterization and Selection of Engineering Materials), Sharif University of Technology, Tehran, Iran.
- M.Sc. Thesis: Effects of cold work prior to aging on microstructure of AEREX™350 Superalloy.
- Supervisor: Prof. S. Asgari.
- 2000-2004, B.Sc. (Ceramic Engineering), Tabriz University, Tabriz, Iran.
- B.Sc. Thesis: Ways of improving toughness in Sialons.
- Supervisor: Dr. Hamedani.

Awards & Honors

- Ranked 11th out of 5,000 in the national entrance exam for graduate studies in Materials Science and Engineering, March 2004, Iran.
- Honored as merit student in B.Sc., M.Sc., and PhD.
- Best researcher of Alborz province in 2022 year.
- Best researcher of Materials and Energy Research Center in 2023 year.

Mohammad Farvizi

Fields of interest

- Design of new alloys and compounds such as high entropy alloys and MAX phases
- Tribological and mechanical properties of materials
- High temperature coatings (Thermal barrier and diffusion coatings)
- Ceramic-Metal composites
- Materials characterization and analyzing methods

Editorial and Reviewer Experience

- Associate Editor of Tribology-Materials, Surfaces & Interfaces since 2020.
- Recognized reviewer of more than 20 eminent journals (more than 50 reviews/year).

Teaching Experience

- Lecturer of “Special topics in physical metallurgy” course for PhD students in University of Tabriz
- Lecturer of “Diffusion in solids” course for MS students in University of Tabriz
- Lecturer of “Physical metallurgy” course for BS students in University of Tabriz
- Lecturer of “Crystallography” course for BS students in University of Tabriz
- Lecturer of “Advanced materials characterization methods” course for MS and PhD students in Materials and Energy Research Center (MERC), Iran
- Lecturer of “Spectroscopy and X-Ray” course for PhD students in Materials and Energy Research Center (MERC), Iran
- Lecturer of “Surface Engineering” course for PhD students in Materials and Energy Research Center (MERC), Iran

Computer Skills

- Experienced in the use of materials engineering softwares such as X'Pert (for XRD analysis) and Gatan Digital Micrograph (for HRTEM).
- Experienced in the use of Rietveld Refinement softwares such as MAUD.

English Skills

Section	Structure	Listening	Reading
Score	58	57	59

Toefl (PBT) result (Oct. 2005).

Total score: 580

Other languages:

Turkish (native), Persian (native), Arabic (average), Germany (elementary), Korean (elementary).

Publications

• ISI Papers

- (1) M. Farvizi, S. Asgari, “Effects of Cold Work Prior to Aging on Microstructure of AEREXTM350 Superalloy”, Materials Science & Engineering A, Vol. 480 (2008), 434-438.
- (2) M. Farvizi, T. Ebadzadeh, M.R. Vaezi, A. Simchi, H.S. Kim, “Mechanical-Activated Phase Formation of NiTi in the Presence of Nanoparticles”, NANO, Vol. 8, No. 5 (2013), 1-10.
- (3) M. Farvizi, T. Ebadzadeh, M.R. Vaezi, H.S. Kim, A. Simchi, “Effect of Nano Al₂O₃ Addition on Mechanical properties and Wear behaviour of NiTi Intermetallic”, Materials and Design, Vol. 51 (2013), 375-382.
- (4) E.Y. Yoon, D.J. Lee, B. Park, M.R. Akbarpour, M. Farvizi, H.S. Kim, “Grain Refinement and Tensile Strength of Carbon Nanotube-Reinforced Cu Matrix Nanocomposites Processed by High-Pressure Torsion”, Metals and Materials International, Vol. 19 (5) (2013), 927-932.
- (5) M. Farvizi, T. Ebadzadeh, M.R. Vaezi, E.Y. Yoon, Y.J. Kim, H.S. Kim, A. Simchi, “Microstructural Characterization of HIP Consolidated NiTi–nano Al₂O₃ Composites”, Journal of Alloys and Compounds, Vol. 606 (2014), 21–26.
- (6) M. Farvizi, T. Ebadzadeh, M.R. Vaezi, E.Y. Yoon, Y.J. Kim, H.S. Kim, “Effect of Starting Materials on the Wear Performance of NiTi-Based Composites”, WEAR, Vol. 334 (2015), 35-43.
- (7) M.R. Akbarpour, M. Farvizi, D.J. Lee, H. Rezaei, H.S. Kim “ Effect of High-Pressure Torsion on the Microstructure and Strengthening Mechanisms of Hot-Consolidated Cu–CNT Nanocomposite” Materials Science & Engineering A Vol. 638 (2015), 289-295.
- (8) M. Farvizi, M.R. Akbarpour, E.Y. Yoon, H.S. Kim, “Effect of High-Pressure Torsion on the Microstructure and Wear Behavior of NiTi Alloy”, Metal Mater. Int. Vol. 21, No. 5 (2015), 891-896.
- (9) H. Rajaei, I. Mobasherpour, M. Farvizi, M. Zakeri, “Effect of Mullite Synthesis Methods on the Spark Plasma Sintering Behaviour and Mechanical Properties”, Micro and Nano Letters Vol. 11 (2016), 465-468.
- (10) M. Farvizi, M.R. Akbarpour, D.H. Ahn, H.S. Kim, “Compressive Behavior of NiTi-based Composites Reinforced with Alumina Nanoparticles”, Journal of Alloys and Compounds, Vol. 688 (2016), 803–807.

Mohammad Farvizi

- (11) H. Rajaei, M. Farvizi, I. Mobasherpour, M. Zakeri, “Effect of spark plasma sintering temperature on microstructure and mechanical properties of mullite - WC composites”, Tribology in Industry, Vol. 36 (2016), 552-558.
- (12) M. Farvizi, “Challenges of using elemental nickel and titanium powders for the fabrication of monolithic NiTi parts”, Archives of Metallurgy and Materials, Vol. (62) (2017), 1075-1079.
- (13) M.R. Akbarpour, M. Farvizi, H.S. Kim, “Microstructural and kinetic investigation on the suppression of grain growth in nanocrystalline copper by the dispersion of silicon carbide nanoparticles”, Materials and Design, Vol. 119 (2017), 311-318.
- (14) H. Rajaei, M. Farvizi, I. Mobasherpour, M. Zakeri, “Effect of spark plasma sintering temperature on microstructure and mechanical properties of mullite-WC composites”, International Journal of Refractory Metals and Hard Materials, Vol. 70 (2018), 197-201.
- (15) M. Bahamirian, S.M.M. Hadavi, M.R. Rahimipour, M. Farvizi, A. Keyvani, “Synthesis and Characterization of Yttria-Stabilized Zirconia Nanoparticles Doped with Ytterbium and Gadolinium: ZrO_2 9.5 Y_2O_3 5.6 Yb_2O_3 5.2 Gd_2O_3 ” Metallurgical and Materials Transactions A, Vol. 49 (2018), 2523-2332.
- (16) M. Farvizi, M.K. Javan, M.R. Akbarpour, H.S. Kim, “Fabrication of NiTi and NiTi- nano Al_2O_3 composites by powder metallurgy methods: comparison of hot isostatic pressing and spark plasma sintering techniques” Ceramics International, Vol. 44 (13) (2018), 15981-15988.
- (17) M. Shademani, A. Sedaghat, M.R. Rahimipour, M. Farvizi, “Effect of aging heat treatment on the microstructure and hardness behavior of a serviced ZHS32 superalloy” Micro & Nano Letters, Vol. 14 (2) (2019), 186-190.
- (18) M.R. Akbarpour, S. Alipour, M. Farvizi, H.S. Kim, “Mechanical, tribological and electrical properties of Cu-CNT composites fabricated by flake powder metallurgy method” Archives of Civil and Mechanical Engineering, Vol. 19 (3) (2019), 694-706 .
- (19) M. Bahamirian, S.M.M. Hadavi, M. Farvizi, M.R. Rahimipour, A. Keyvani, “Enhancement of hot corrosion resistance of thermal barrier coatings using nanostructured $\text{Gd}_2\text{Zr}_2\text{O}_7$ coating”, Surface & Coatings Technology, Vol. 360 (2019), 1–12.
- (20) M. Bahamirian, S.M.M. Hadavi, M. Farvizi, M.R. Rahimipour, A. Keyvani, “Phase Stability of ZrO_2 9.5 Y_2O_3 5.6 Yb_2O_3 5.2 Gd_2O_3 Compound at 1100°C and 1300°C for Advanced TBC Applications”, Ceramics International, Vol. 45 (6) (2019), 7344-7350.
- (21) A. Malekan, M. Farvizi, S.E. Mirsalehi, N. Saito, K. Nakashima, “Influence of bonding time on the transient liquid phase bonding behavior of Hastelloy X using Ni-Cr-B-Si-Fe filler alloy”, Materials Science and Engineering: A, Vol. 755 (2019), 37-49.

Mohammad Farvizi

- (22) M. Kahkhaei Javan, A. Azizi Moghaddam, M. Farvizi, A.R. Abbasian, K. Shirvani, S.M.M. Hadavi, M.R. Rahimipour, “Effect of aluminum to alumina particles size ratio on the microstructural aspects of aluminide coatings by LTHA pack cementation”, *Materials Research Express*, Vol. 6 (9) (2019), 096437.
- (23) A. Shamsipoor, M. Farvizi, M. Razavi, A. Keyvani, “Influences of processing parameters on the microstructure and wear performance of Cr_2AlC MAX phase prepared by spark plasma sintering method”, *Journal of Alloys and Compounds*, Vol. 85 (2019), 152345.
- (24) T. Samani, M. Kermani, M. Razavi, M. Farvizi, I. Mobasherpour, “A comparative study on the microstructure, hot corrosion behavior and mechanical properties of duplex and functionally graded nanostructured/conventional YSZ thermal barrier coatings”, *Materials Research Express* Vol. 6 (11) (2019), 115063.
- (25) A. Malekan, M. Farvizi, S.E. Mirsalehi, N. Saito, K. Nakashima, “Effect of bonding temperature on the microstructure and mechanical properties of Hastelloy X superalloy joints bonded with a Ni–Cr–B–Si–Fe interlayer”, *Journal of Manufacturing Processes*, Vol. 47 (2019), 129-140.
- (26) M. Bahamirian, S.M.M. Hadavi, M. Farvizi, A. Keyvani, M.R. Rahimipour, “Thermal Durability of YSZ/Nanostructured $\text{Gd}_2\text{Zr}_2\text{O}_7$ TBC Undergoing Thermal Cycling”, *Oxidation of Metals*, Vol. 92 (5-6) (2019), 401-421.
- (27) M. Ghanbariha, M. Farvizi, T Ebadzadeh, “Microstructural development in nanostructured AlCoCrFeNi-ZrO_2 high-entropy alloy composite prepared with mechanical alloying and spark plasma sintering methods”, *Materials Research Express*, Vol. 6 (12) (2019), 1265b5.
- (28) A. Khorsand, H. Majidian, M. Farvizi, “A new method for preparing AMZ composites: Coating zircon powder by aluminum alkoxide”, *Ceramics International*, Vol. 46 (2) (2020), 2273-2286.
- (29) A. Malekan, M. Farvizi, S.E. Mirsalehi, N. Saito, K. Nakashima, “Holding time influence on creep behavior of transient liquid phase bonded joints of Hastelloy X”, *Materials Science and Engineering: A*, Vol. 772 (2020), 138694.
- (30) A. Khorsand, H. Majidian, M. Farvizi, “Development of AMZ Composites via Mutual Attraction of Particles in Wet Processing”, *International Journal of Applied Ceramic Technology*, Vol. 17 (4) (2020), 1822-1832.

Mohammad Farvizi

- (31) M. Bahamirian, S.M.M. Hadavi, M. Farvizi, A. Keyvani, M.R. Rahimpour, “ZrO₂ 9.5Y₂O₃ 5.6Yb₂O₃ 5.2Gd₂O₃; a promising TBC material with high resistance to hot corrosion”, Journal of Asian Ceramic Societies, Vol. 8 (2020), 898-908.
- (32) A. Shamsipoor, M. Farvizi, M. Razavi, A. Keyvani, B. Mousavi, W. Pan, “High-temperature oxidation behavior in YSZ coated Cr₂AlC and CoNiCrAlY substrates”, Surface and Coatings Technology, Vol. 401 (2020), 126239.
- (33) H. Majidian, L. Nikzad, M. Farvizi, “Improvement of the Thermal Stability of Zircon by Formation of the Solid Solution of Cr in Zircon”, Journal of Asian Ceramic Societies, Vol. 8 (2020), 30-39.
- (34) M. Bahamirian, S.M.M. Hadavi, M. Farvizi, A. Keyvani, M.R. Rahimpour, “Microstructure and Cyclic Oxidation of Ytria-Stabilized Zirconia/Nanostructured ZrO₂ 9.5 Y₂O₃ 5.6 Yb₂O₃ 5.2 Gd₂O₃ Thermal Barrier Coating at 1373 K”, Journal of Materials Engineering and Performance, Vol. 29 (2020), 7080-7093.
- (35) M. Farvizi, M Ghanbariha, A Faraji, “Microstructural Characterization and Wear Performance of NiTi–ZrO₂ Composites”, Metals and Materials International, Vol. 27 (2021), 5407–5424.
- (36) H. Majidian, L. Nikzad, M. Farvizi, “Comparison of MnO₂ and ZnO Additives on Zircon Decomposition and Formation of Solid Solution”, JOM, Vol. 72 (2020), 4042-4053.
- (37) M. Gahreman Derakhshan, L. Nikzad, M. Farvizi, T. Ebadzadeh, “Sol-gel assisted synthesis of TiB₂-B₄C composite powder”, International Journal of Applied Ceramic Technology, Vol. 18 (2021), 32-39.
- (38) A. Shamsipoor, M. Farvizi, M. Razavi, A. Keyvani, B. Mousavi, W. Pan, “Hot corrosion behavior of thermal barrier coating on Cr₂AlC and CoNiCrAlY substrates at 950°C in presence of Na₂SO₄+ V₂O₅ molten salts”, Surfaces and Interfaces, Vol. 21 (2020), 100679.
- (39) A. Shamsipoor, M. Farvizi, M. Razavi, A. Keyvani, B. Mousavi, W. Pan, “Hot corrosion behavior of Cr₂AlC MAX phase and CoNiCrAlY compounds at 950°C in presence of Na₂SO₄+ V₂O₅ molten salts”, Ceramics International, Vol. 47 (2021), 2347-2357.
- (40) M. Bahamirian, S.M.M. Hadavi, M. Farvizi, A. Keyvani, M.R. Rahimpour, “Hot corrosion behavior of ZrO₂ 9.5 Y₂O₃ 5.6 Yb₂O₃ 5.2 Gd₂O₃ TBCs in CMAS: CaO-MgO-Al₂O₃-SiO₂”, Journal of the Australian Ceramic Society, Vol. 57 (2021), 215-224.
- (41) A. Shamsipoor, M. Farvizi, M. Razavi, A. Keyvani, B. Mousavi, W. Pan, “Comparison of the high-temperature oxidation behavior of Cr₂AlC MAX phase and CoNiCrAlY compounds”, Oxidation of Metals, Vol. 95 (2021), 1-21.

Mohammad Farvizi

- (42) S.A. Delbari, M. Shakeri, I. Salahshoori, M. Shahedi Asl, A. Namini, A. Abdolmaleki, M. Sheikhlou, M. Farvizi, ... "Characterization of TiC ceramics with SiC and/or WC additives using electron microscopy and electron probe micro-analysis", Journal of the Taiwan Institute of Chemical Engineers, Vol. 123 (2021), 245-253.
- (43) V. Nguyen, S.A. Delbari, M. Shahedi Asl, Q. Van Le, A. Namini, Z. Ahmadi, M. Farvizi, ... "Combined role of SiC whiskers and graphene nano-platelets on the microstructure of spark plasma sintered ZrB₂ ceramics", Ceramics International, Vol. 47 (2021), 12459-12466.
- (44) V.H. Nguyen, S.A. Delbari, M. Shahedi Asl, Q. Van Le, Z. Ahmadi, M. Farvizi, ... "ZrB₂-SiCw composites with different carbonaceous additives", International Journal of Refractory Metals and Hard Materials, Vol. 95 (2021), 105457.
- (45) Z. Ahmadi, M. Zakeri, M. Farvizi, A. Habibi-Yangjeh, ... "Synergistic influence of SiC and C₃N₄ reinforcements on the characteristics of ZrB₂-based composites", Journal of Asian Ceramic Societies, Vol. 9 (2021), 30-39.
- (46) M.R. Derakhshandeh, M. Farvizi, M. Javaheri, "Effects of high-pressure torsion treatment on the microstructural aspects and electrochemical behaviour of austenitic NiTi shape memory alloy", Journal of Solid State Electrochemistry, Vol. 25 (2021), 279-290.
- (47) M. Shahedi Asl, B. Nayebi, M. Farvizi, ... "Formation of Al-Al₂O₃ core-shell nano-sphere chains during electron beam melting of γ -TiAl ", Intermetallics, Vol. 136 (2021), 107261.
- (48)) H. Majidian, M. Farvizi, L. Nikzad, "Introducing MnO₂ and ZnO additives for the development of Alumina-Mullite-Zirconia composites", JOM, Vol. 73 (2021), 3486-3496.
- (49) M. Ghanbariha, M. Farvizi, T. Ebadzadeh, A. Alizadeh, "Effect of ZrO₂ particles on the nanomechanical properties and wear behavior of AlCoCrFeNi-ZrO₂ high entropy alloy composites", WEAR, Vol. 484 (2021), 204032.
- (50) M. Shahedi Asl, A.S. Namini, S.A. Delbari, Z. Ahmadi, M. Farvizi, D. Kim, ... "An interfacial survey on microstructure of ZrB₂-based ceramics codoped with carbon fibers and SiC whiskers", Materials Chemistry and Physics, Vol. 275 (2022), 125322.
- (51) A. Malekan, S.E. Mirsalehi, M. Farvizi, N. Saito, K. Nakashima, "Microstructural evaluation of Hastelloy-X transient liquid phase bonded joints: Effects of filler metal thickness and holding time", Transactions of Nonferrous Metals Society of China, Vol.32 (2022), 1548-1558.
- (52) E. Gholami, M. Farvizi, A. Habibolahzadeh, "Microstructure and tribological behavior of Ti₂AlN MAX phase synthesized through MA-SPS method", Journal of Materials Engineering and Performance, Vol. 31 (2022), 5050-5062 .
- (53) Z. Ahmadi, M. Shahedi Asl, M. Zakeri, M. Farvizi, "Fabrication of (Zr,Ti)B₂-ZrN-BN composites through reactive spark plasma sintering of ZrB₂ and TiN, Micron, Vol. 154 (2022), 103203.

Mohammad Farvizi

- (54) B. Mousavi, M. Farvizi, M.R. Rahimipour, W. Pan, “Comparison of the hot corrosion behavior of the LZ, CSZ and LZ/CSZ composite thermal barrier coating”, *Surface and Coatings Technology*, Vol. 437 (2022), 128324.
- (55) Z. Ahmadi, M. Shahedi Asl, M. Zakeri, M. Farvizi, “On The Reactive Spark Plasma Sinterability of ZrB_2 -SiC-TiN composite”, *Journal of alloys and compounds*, Vol. 909 (2022), 164611.
- (56) M. Ghanbariha, M. Farvizi, T. Ebadzadeh, A. Alizadeh, H.S. Kim, “AlCoCrFeNi-NiTi High Entropy Alloy Composites: Microstructure and Wear Performance”, *Materials Today Communications*, Vol. 32 (5) (2022), 1548-1558.
- (57) A. Khorsand, H. Majidian, M. Farvizi, “Wear behavior and microstructure of alumina mullite-zirconia composites prepared by a novel method: Coating of zircon powder by aluminum alkoxide”, *Ceramics International*, Vol. 48 (22) (2022), 33594-33603.
- (58) A. Faraji, M. Farvizi, T. Ebadzadeh, H.S. Kim, “Microstructure, wear performance, and mechanical properties of spark plasma-sintered AlCoCrFeNi high-entropy alloy after heat treatment”, *Intermetallics*, Vol. 149 (2022), 107656.
- (59) O. Velayatipour, L. Nikzad, M. Farvizi, “ B_4C reinforced NiTi-based composites: Microstructure and wear performance, *International Journal of Applied Ceramic Technology*, Vol. 20(3) (2023), 1667-1680.
- (60) A. Shamsipoor, M. Farvizi, B. Mousavi, “Mechanical properties of SPS-processed Cr_2AlC MAX phase with different impurity contents” *Emergent Materials*, Vol. 6 (2023), 965-972.
- (61) M. Bahamirian, A. Bastani, S. Hasani, M. Farvizi, A. Seifoddini, “ $A_2Zr_2O_7$ (A= La/Gd/Yb): Grain growth effect on phase stability properties at 1300°C”, *Ceramics International*, Vol. 49 (11) (2023), 16717-16731.
- (62) M. Farvizi, M. Bahamirian, A. Faraji, H.S. Kim, “Influence of ceramic reinforcement characteristics on the microstructure and wear behavior of NiTi matrix composites”, *Materialia*, Vol. 28 (2023), 101726.
- (63) M. Shademani, A. Sedaghat, M. R. Rahimipour, M. Farvizi, “Role of microstructure rejuvenation of ZHS32 superalloy on the characteristics of the applied aluminide coating”, *Emergent Materials*, Vol. 6 (2023), 1299–1307.
- (64) M. Abaei, M.R. Rahimipour, M. Farvizi, M.J. Eshraghi, “Microstructure and corrosion behavior of Al-Cu-Fe quasi-crystalline coated Ti-6Al-4V”, *International Journal of Engineering*, Vol. 36 (10) (2023), 1880-1891.

Mohammad Farvizi

- (65) N. Botshekanan, H. Majidian, M. Farvizi, “Thin TiN coating on NiTi substrate through PVD method: improvement of the wear resistance”, *Tribology-Materials, Surfaces & Interfaces*, Vol. 17 (4) (2023), 324-337.
- (66) Z. Nasr-Esfahani, M. Bahamirian, M. Farvizi, M. Nouri-Khezrabad, “Evaluation of stress concentrations during high-temperature exposure on the lifetime of single and dual-layer ZrO_2 - $8\text{Y}_2\text{O}_3$ / ZrO_2 - $9.5\text{Y}_2\text{O}_3$ - $5.6\text{Yb}_2\text{O}_3$ - $5.2\text{Gd}_2\text{O}_3$ TBCs”, *Emergent Materials*, Vol. 6 (5) (2023), 1611-1621.
- (67) B. Mousavi, M. Farvizi, M.R. Rahimpour, A. Shamsipoor, W. Pan, “Evaluation of high temperature oxidation behavior of LZ, CSZ, and LZ-CSZ composite thermal barrier coatings”, *Ceramics International*, Vol. 49 (24) (2023), 40601-40615.
- (68) B. Mousavi, M. Farvizi, A. Shamsipoor, M.R. Rahimpour, A. Keyvani, “Role of bond coat deposition method on the hot corrosion behavior of CSZ thermal barrier coatings”, *Emerging Materials Research*, Vol. 12 (4) (2023), 325–334.
- (69) H. Majidian, L. Nikzad, S.H. Taleghani, M. Farvizi, M. Razavi, A. Faraji, “Alternative Industrial Chrome-Free Alumina-Based Bricks for Copper Alloy Melting Furnaces”, *Materials Performance and Characterization*, Vol. 12 (1) (2023), 267-286.
- (70) M. Bahamirian, A. Keyvani, R. Irankehah, M. Farvizi, “High-temperature cyclic oxidation of micro-and nano- ZrO_2 -25wt.% CeO_2 -2.5 wt.% Y_2O_3 thermal barrier coatings at 1300°C ”, *Surface and Coatings Technology*, Vol. 474 (2023), 130076.
- (71) M. Farvizi, M. Bahamirian, A. Faraji, H.S. Kim, “Role of Particle Size of Al_2O_3 Reinforcement on the Wear Performance of NiTi-Based Composites”, *Metals and Materials International*, Vol. 30 (2024), 843–856.
- (72) H. Khalaj, E. Shahpouri, Z. Khakpour, M.M. Kalantarian, M. Farvizi, “Evaluation of MXene Ti_3C_2 Charge–Discharge Behaviors as an Electrode Material for Intercalation Batteries”, *Energy Technology*, Vol. 12 (3) (2024), 2301128.
- (73) M. Motie-Fard, M. Bahamirian, M. Farvizi, M. Nouri-Khezrabad, A. Faraji, “Phase stability and sintering resistance of $\text{A}_2\text{Zr}_2\text{O}_7$ with three rare-earth elements at the A-site: ($\text{La}_{0.33}\text{Gd}_{0.33}\text{Yb}_{0.33}$)”, *Journal of the European Ceramic Society*, Vol. 44 (2) (2024), 1168-1178.
- (74) N. Hajilou, M. Javaheri, T. Ebadzadeh, M. Farvizi, “Investigation of the electrochemical behavior of AlCoCrFeNi-ZrO_2 high entropy alloy composites prepared with mechanical alloying and spark plasma sintering”, *Journal of Applied Electrochemistry*, Vol. 54(2) (2024), 457–466.
- (75) M.J. Moaveni, H. Omidvar, M. Farvizi, S.M.H. Mirbagheri, “Effect of Y_2O_3 doping on thermophysical properties and grain growth rate of lanthanum zirconate”, *Ceramics International*, Vol. 50 (15) (2024), 26410-26423.

Mohammad Farvizi

- (76) L. Hemati, M. Farvizi, S.A. Ataie, L. Nikzad, E. Ghasali, A. Faraji, T. Liskiewicz, “Microstructure and mechanical properties of $(\text{Cr}_x\text{Ti}_{1-x})_2\text{AlC}$ 211 MAX phases as composites through spark plasma sintering”, *Ceramics International*, Vol. 50 (16) (2024), 27806-27822.
- (77) M. Ghanbariha, M. Farvizi, S.A. Ataie, A. Alizadeh Samiyan, T. Liskiewicz, H.S. Kim, “Effect of YSZ Particle Size and Content on Microstructure, Mechanical and Tribological Properties of $(\text{CoCrFeNiAl})_{1-x}(\text{YSZ})_x$ High Entropy Alloy Composites”, *Metals and Materials International*, Vol. 30 (2024), 2523-2539.
- (78) H. Bakhtiari, M. Farvizi, M.R. Rahimipour, A. Malekan, “Transient liquid phase (TLP)-bonded Hastelloy x: understanding the influence of bonding temperature on hot corrosion”, *Emergent Materials*, Vol. 7 (6) (2024), 3061-3078.
- (79) M. Sakkaki, Z. Ahmadi, S.M. Arab, M. Farvizi, M. Shahedi Asl, “Influence of g- C_3N_4 on Phase Evolution and Microstructural Modifications in Spark Plasma Sintered TiB_2 -Based Ceramics”, *JOM*, Vol. 76 (2024), 6207-6216.
- (80) M.J. Moaveni, H. Omidvar, M. Farvizi, S.M.H. Mirbagheri, “Investigation of microstructure, mechanical, and wear behavior of lanthanum zirconate, yttrium zirconate, and lanthanum yttrium zirconate”, *Journal of Materials Engineering and Performance*, Vol. 34 (2025), 2989-3007.
- (81) E. Irom, M. Zakeri, M. Razavi, M. Farvizi, “ ZrB_2 -based ultrahigh-temperature ceramic with various SiC particle size: Microstructure, thermodynamical behavior, and mechanical properties”, *International Journal of Applied Ceramic Technology*, Vol. 22 (1) (2025), e14855 .
- (82) H. Bakhtiari, M.R. Rahimipour, M. Farvizi, A. Malekan, “Effect of TLP bonding atmosphere on microstructural and mechanical characteristics of Hastelloy x superalloy joints”, *Welding in the World*, Vol. 69 (2025), 281-297.
- (83) O. Hedayati, M. Farvizi, M.R. Rahimipour, M. Bahamirian, “Phase stability and grain growth in $(\text{La}_{0.25}\text{Gd}_{0.25}\text{Yb}_{0.25}\text{Y}_{0.25})_2\text{Zr}_2\text{O}_7$ high entropy rare earth zirconate”, *Emergent Materials*, Vol. 8 (2025), 635-649.
- (84) A. Shamsipoor, B. Mousavi, M. Razavi, M. Bahamirian, M. Farvizi, “ Cr_2AlC MAX phase: A promising bond coat TBC material with high resistance to high temperature oxidation”, *Ceramics International*, Vol. 51 (5) (2025), 6439-6447.
- (85) B. Behzadi, M. Farvizi, H. Majidian, L. Nikzad, “Synthesis of Zr_2AlC MAX phase via spark plasma sintering (SPS): Influence of starting powders stoichiometry and sintering temperature on mechanical and wear properties”, *Tribology-Materials, Surfaces & Interfaces*, Vol. 19(2) (2025), 155-172.

Mohammad Farvizi

- (86) S. Keshavarz, H. Asgharzadeh, M. Farvizi, “Microstructure, mechanical properties, and wear behavior of Al5083/GNPs nanocomposites prepared by powder metallurgy method”, *Materials Science and Engineering: A*, Vol. 929 (2025), 148120.
- (87) H. Bakhtiari, M. Farvizi, M.R. Rahimipour, A. Malekan, “Hot corrosion mechanism in transient liquid phase bonded HX superalloy: Effect of bonding time”, *Journal of Advanced Joining Processes*, Vol. 11 (2025), 100298.
- (88) N. Botshekanan, H. Majidian, M. Farvizi, A. Faraji, “Mechanical and Wear Resistance of Titanium Carbonitride (TiCN) Coatings on Nickel Titanium (NiTi) Substrate”, *Tribology Transactions*, Vol. 68 (2) (2025), 431-444.
- (89) M.J. Moaveni, H. Omidvar, M. Farvizi, S.M.H. Mirbagheri, “Hot corrosion behavior of Y₂O₃-doped lanthanum zirconate TBCs in Na₂SO₄+V₂O₅ environment”, *Ceramics International*, Vol. 51 (18) (2025), 25078-25093.
- (90) M.E. Payandeh, M. Bahamirian, M. Farvizi, S. Hasani, “Properties of Lanthanum-Gadolinium-Ytterbium zirconate thermal barrier coatings materials”, *Ceramics International*, Vol. 51 (18) (2025), 26134-26145.
- (91) M. Ghanbariha, M. Ketabchi, M. Farvizi, “Investigation of alumina reinforcement effects on microstructure, hardness, and tribological behavior of AlCoCrFeNi high entropy alloy”, *Intermetallics*, Vol. 185 (2025), 108915.
- (92) A. Shams Abadi, M. Farvizi, L. Nikzad, A. Malekan, “Dissimilar TLP bonding of X-45/Hastelloy X superalloys using BNi-2 filler metal: Microstructural evolution and mechanical behaviors”, *Journal of Advanced Joining Processes*, Vol. 12 (2025), 100335.
- (93) M. Abaei, M. Farvizi, M.R. Rahimipour, M.J. Eshraghi, “Deposition of AlCuFe and AlCuFeCr thin films on Ti6Al4V alloy and investigating microstructural and tribological characteristics”, *Results in Surfaces and Interfaces*, Vol. 20 (2025), 100604.
- (94) H. Majidian, L. Nikzad, M. Farvizi, M. Razavi, B. Behzadi, “Reactive Spark Plasma Sintering of Alumina-Mullite-Zirconia Composites”, *Ceramics International*, Vol. 51 (23 (A)) (2025), 38636-38649.
- (95) H. Bakhtiari, M. Farvizi, M.R. Rahimipour, A. Malekan, “Optimization of Holding Time for Stable Spinel-Chromia Oxide Formation in TLP-Bonded Hastelloy X: A Diffusion-Controlled Approach”, *Journal of Materials Research and Technology*, Vol. 39 (2025), 1519-1532.
- (96) H. Bakhtiari, M. Farvizi, M.R. Rahimipour, A. Malekan, “Influence of bonding temperature on interfacial microstructure and high-temperature oxidation behavior of transient liquid phase (TLP) bonded Hastelloy X joints”, *Materials & Design*, Vol. 258 (2025), 114740.

Mohammad Farvizi

(97) Z. Ahmadi, M. Farvizi, A. Faraji, M. Bahamirian, P. Amini, M. Shahedi Asl, “Ti₂AlN MAX phase: An attractive choice for the improvement of mechanical and tribological behavior of ZrB₂”, International Journal of Refractory Metals and Hard Materials, Vol. 134 (2025), 107441.

(98) H. Bakhtiari, M. Farvizi, M.R. Rahimipour, A. Malekan, “Effect of Interlayer Thickness on the Hot Corrosion Mechanism of HX Superalloy/BNi-2 TLP Joints”, Metals and Materials International, Accepted (2025).

Mohammad Farvizi

- ISC Papers (Local Papers)

- (1) M. Shademani, M.R. Rahimpour, A. Sedaghat, M. Farvizi, “Determination of Solution Temperature in an Ex-Service Ni-Based Turbine Blade” Journal of Advanced Materials and Processing, Vol. 4 (2017), 66-72 .
- (2) N. Mansourinejad, M. Farvizi, K. Shirvani, M.R. Rahimpour, M. Razavi, “Effect of NiTi Addition on the Wear Resistance of YSZ Coatings”, Advanced Ceramics Progress (ACERP), Vol. 3 (2017), 32-37.
- (3) M. Naderi, M. Farvizi, K Shirvani, M Rahimpour, “Cyclic oxidation behavior of uncoated and aluminum-rich nickel aluminide coated Rene-80 superalloy”, Advanced Ceramics Progress (ACERP), Vol. 4 (2018), 1-7.
- (4) H. Bakhtiari, F. Mokhtari, M.R. Khanzadeh, M. Farvizi, “Effect of Heat Treatment on the Intermetallic Compounds and Mechanical Properties of Explosive Weld Interface of three Al 5083, Al 1050 and St 1515 Layers”, Journal of Environmental Friendly Materials, Vol. 4 (2020), 9-19.
- (5) N. Mansourinejad, M. Farvizi, M.R. Rahimpour, M. Razavi, M. Bahamirian, “Effect of NiTi Addition on the Hot Corrosion Resistance of YSZ TBC”, Iranian Journal of Surface Science and Engineering, Vol. 44 (2020), 15-26.
- (6) M.R. Rahimpour, M. Abaei, M. Farvizi, M.J. Eshraghi, “Morphological Investigation of Al-Cu-Fe Quasi-Crystalline Thin Film on Ti-6Al-4V Alloy”, International Journal of Iron & Steel Society of Iran, Vol. 21 (1) (2025), 9-14.

- International Conference Papers

- “Effect of intercritical annealing holding time on microstructure and deformation mechanism of dual phase steels”. 16th Annual (International) conference on Mechanical Engineering-ISME2008. Kerman, Iran.
- “Effect of nano Al₂O₃ addition on the formation of NiTi during mechanical alloying”. International conference of Nanoscience and Nanotechnology (ICNN2012), September 2012, Kashan, Iran.
- “Wear behavior of Al₂O₃-NiTi shape memory based composites”. The first international conference and sixth joint conference of Iranian metallurgical engineering society (IMES2012), December 2012, Tehran, Iran.

- Presentations

- Invited speaker of UFGNM2013 conference in Tehran, Iran.
- Invited speaker of ISNNM2016 conference in Budapest, Hungary.

Mohammad Farvizi

References

- Prof. H.S. Kim, Pohang university of science and technology (POSTECH), Korea.
Email: hskim@postech.ac.kr, hyoungseopkim@gmail.com
- Prof. A. Simchi, Fraunhofer Institute IFAM , Germany.
Email: simchi@sharif.edu, arashsimchi@gmail.com
- Prof. M. Bahamirian, Yazd University, Iran.
Email: m.bahamirian@yazd.ac.ir, m.bahamirian@gmail.com

<https://orcid.org/0000-0002-7312-6320>

<https://www.researchgate.net/profile/Mohammad-Farvizi>

Updated : 09/26/2025