Curriculum Vitae



Mohammad Reza Bafandeh

Assistant Professor Department of Metallurgical and Materials Engineering University of Kashan

Birth year: 1982

Email: mr.bafandeh@gmail.com mr.bafandeh@kashanu.ac.ir

Homepage address: https://faculty.kashanu.ac.ir/mrbafandeh/en

Tel: +98 31 55912466

Education:

BSc. (Extractive Metallurgy)-Isfahan University of Technology (2003). MSc. (Materials Selection)- Isfahan University of Technology (2006). PhD. (Materials Science and Engineering)- Isfahan University of Technology (2012)

PhD. Thesis:

Fabrication, Characterization and comparison of properties of sodium potassium niobate-based piezoceramics sintered in conventional and microwave furnace

Research Fields:

- 1. Piezoceramics
- 2. Mechanical Alloying
- 3. Composite Coatings
- 4. Combustion Synthesis
- 5. Electrodeposition

Journal Papers:

1- Ball Milling of Stainless Steel Scrap Chips to Produce Nanocrystalline Powder Journal of Materials Science, 42 (2007) 2844-2848.

2- Phase transitions in nanostructured Fe-Cr-Ni alloys prepared by mechanical alloying Journal of Alloys and Compounds, 454 (2008) 228-232.

3- Effects of SrTiO₃ on dielectric and piezoelectric properties of K0.48Na0.48Li0.04Nb0.96Ta0.04O₃ - based piezoceramics

Materials Science and Engineering B, 178 [4] (2013) 277-281.

4- Comparison of sintering behavior and piezoelectric properties of (K,Na)NbO3based ceramics sintered in conventional and microwave furnace Materials Chemistry and Physics, 143 (2014) 1289-1295.

5- Enhanced electric field induced strain in SrTiO3 modified (K,Na)NbO3-based piezoceramics Journal of Alloys and Compounds, 602 (2014) 285-289.

6- Improvement of piezoelectric and ferroelectric properties in (K,Na)NbO₃-based ceramics via microwave sintering Journal of Electroceramics, 33 [1] (2014) 128-133.

7- Sintering behavior, dielectric and piezoelectric properties of sodium potassium niobate-based ceramics prepared by single step and two-step sintering Ceramics International41(2015)163-170.

8- Dielectric and piezoelectric properties of sodium potassium niobatebased ceramics sintered in microwave furnace Materials Chemistry and Physics 156 (2015) 254-260.

9- Comparison of structural, ferroelectric and strain properties between A-site donor and acceptor doped Bi_{1/2}(Na_{0.82}K_{0.18})_{1/2}TiO₃ ceramics Ceramics International 41(2015) S458–S463.

10- Ergodicity and nonergodicity in La-doped Bi1/2(Na0.82K0.18)1/2TiO3 Relaxors Journal of the Korean Physical Society, 66 [7] (2015) 1077-1081.

11- Characterization of fabricated cobalt-based alloy/nano bioactive glass composites Materials Science and Engineering C 69 (2016) 692-699.

12- Fabrication, characterization and osteoblast response of cobalt-based alloy/ nano bioactive glass composites Journal of Advanced Materials and Processing, 4 [3] (2016) 3-13.

13- Structural and optical properties of Sr-modified bismuth silicate nanostructured films synthesized by sol gel method Journal of Nanostructures, 7 [4] (2017) 258-265.

14- In situ coating of low carbon steel with Ni-Al-Fe powder mixture via mechanical alloying Surface & Coatings Technology 315 (2017) 268-273. 15- The effect of annealing temperature on the structure and optical properties of well-aligned 1D SnO₂ nanowires synthesized using template-assisted deposition CrystEngComm (2018).

16- Poly (Vinyl Alcohol)/Chitosan/Akermanite Nanofibrous Scaffolds Prepared by Electrospinning

Journal of Macromolecular Science, Part B, 2019.

17- Effect of annealing on UV-visible absorption and photoluminescence behavior of liquid phase deposited TiO₂ nanorods

International Journal of Applied Ceramic Technology.

18- UV-visible absorption and photoluminescence characteristics of SnO₂ nano-tube/wire arrays fabricated by LPD method

International Journal of Applied Ceramic Technology, 2018.

19- Structure and dielectric behaviour of Sr-modified Bi₄Si₃O₁₂ thin films prepared via sol gel method

Processing and Application of Ceramics, 2018.

20- Two-step sintering of 0.93Bi0.5Na0.5TiO3-0.07BaTiO3 lead-free piezoelectric material

Ceramics International 47 (2021) 28723–28728.

21- Enhanced electric field induced strain in complex-ion Ga³⁺ and Ta⁵⁺-doped **0.93BNT-0.07BT** piezoceramic

Journal of Electroceramics, 2021.

22- Characterization of 0.74(Bi0.5Na0.5)TiO3-0.26SrTiO3 Lead-Free Piezoceramic Fabricated via Conventional and Microwave Sintering

Journal of Electronic Materials, 2022.

23- Effects of SrTiO₃ Modification on the Piezoelectric and Strain Properties of Lead-Free K_{0.5}Na_{0.5}NbO₃-Based Ceramics

Journal of Electronic Materials, (2022) 51:1490–1497.

Seminar lectures

1- Production of Nanocrystalline Fe Powder 12th International Symposium on Metastable and Nano Materials (ISMANAM), 3-7 July 2005, Paris, France.

2- Comparison between Microwave and Conventional Sintering of Modified Potassium Sodium Niobate Piezoelectric Ceramics International Conference on Advanced Electromaterials (ICAE), 7-10 November 2011, Jeju, Korea.

3- Preparation of KNN-based Piezoelectric Multilayer Actuators Using Microwave Sintering International Conference on Advanced Electromaterials (ICAE), 7-10 November 2011, Jeju, Korea.

4- Improved Piezoelectric Properties in PZT-Based Ceramics by High Energy Milling Treatment The 14th Joint Symposium on Electronic Materials (JSEM), 18-21 August 2011, Korea University, Seoul, Korea.

5- Comparison of Sintering Behavior and Piezoelectric Properties of (K,Na)NbO3based Ceramics Sintered in Conventional and Microwave Furnace International Conference on Advanced Electromaterials (ICAE), 12-15 November 2013, Jeju, Korea.

Supervisor for Master of Science Students

1- Coating of carbon steel with Fe, Al and Ni powder mixture via mechanical alloying

Student: Ali Omidi

2- Invetigation of mechanical behavior and thermal stability of Al-xMg (x<3%) alloys prepared by drawing

Student: Sajad Zareian Baghdadabadi

3- Investigation of deformation degree and annealing te,perature on the mechanical properties and microstructure of OF & ETP copper

Student: Javad Khodadad Dastjerdi

4- Investigation of the effects of rolling and annealing processes on the microstructure and mechanical properties of explosive welded Al-Steel-Al

Student: Seyed Jafar Hosseini