



Mohammad Reza Bafandeh

**Assistant Professor
Department of Metallurgical and Materials
Engineering
University of Kashan**

Birth date: 22 May 1982

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

Tel: +98 3155913403

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
K_{0.48}Na_{0.48}Li_{0.04}Nb_{0.96}Ta_{0.04}O₃ - based piezoceramics
Materials Science and Engineering B, 178 [4] (2013) 277-281.**

- 4- Comparison of sintering behavior and piezoelectric properties of (K,Na)NbO₃-based 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 International 41(2015)163-170.**
- 8- Dielectric and piezoelectric properties of sodium potassium niobate based 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 Bi_{1/2}(Na_{0.82}K_{0.18})_{1/2}TiO₃ 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).**

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)NbO₃-based 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 Omid

2- Investigation 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 temperature 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