Short CV

Dr Morteza Sasani Ghamsari is a senior researcher in the Photonics & Quantum Technologies Research School of Iranian Nuclear Science and Technology Research Institute. His research focused on the nanophotonics including metamaterials, quantum dots and plasmonic nanomaterials. His recent interests lie also on nano-bioimaging, 3D printing, nanostructures for tissue engineering (ZnO, TiO_2,…) and biomaterials including carbon, graphene and diamond quantum dots. He is editorial board and reviewer of different international journals and has collaborated with some local and international academics/researchers on graduation of post-graduate students and research projects. He edited 3 books, published 3 chapter books and over 90 articles in scientific journals as well as in reviewed conference proceedings.

h-index: 18 in Scopus and 20 in Google Scholar

i10-h-index: 36

Recent Publications (2019):

1. **Improved Graphene Oxide Thin Films (Im-GO TFs) with Strong Optical Nonlinearity**
   B Heidari, A Majdabadi, MS **Ghamsari**… - Journal of …, 2019 - ingentaconnect.com
   In this work, improved graphene oxide (Im-GO) was synthesized by modified Hummers' method and Im-GO thin films (TFs) were produced by drop casting technique. The physicochemical, morphological and structural characteristics of the prepared samples were …
2. **Ultra-thin Hafnium doped ZnO films with enhanced optical transparency and electrical conductivity**
   …, M Jafar Tafreshi, M **Sasani Ghamsari** - Materials Research …, 2019 - adsabs.harvard.edu
   In this research, highly transparent and conducting hafnium doped zinc oxide (HZO) thin films were prepared by the simple sol-gel dip coating technique. Controlled doping process and synthesis method were used to improve the optical and electrical properties of HZO thin …
3.

Recent Submissions (2019):

1) S. Solgi, M.J. Tafreshi, **M. Sasani Ghamsari**," A novel route for preparation of α-CaB4O7 compound using ammonium pentaborate", accepted.
2) S. Alamdari, M. Jafar Tafreshi, **M. Sasani Ghamsari**, Flexible gallium doped ZnO/polystyrene nanocomposite for optoelectronic application", Submitted.
3) Sanaz Alamdari, **Morteza Sasani Ghamsari**, Wooje Han, Hyung-Ho Park, Majid Jafar Tafreshi, Mohammad Hosein Majles Ara," Facile preparation of Sambucus ebulus/Zinc oxide nanocomposite with potential for natural-based therapeutic agents", Submitted.
4) Sanaz Alamdari, **Morteza Sasani Ghamsari**, Majid Jafar Tafreshi," Fabrication and Characterization of Gallium doped Zinc Oxide Polymer Composite Scintillator for Detecting Alpha Particles", Submitted.
5) S. Tarkhorani, **M. Sasani Ghamsari**," Novel route for preparation of ST12-Ge nanoparticles", in preparation.
6)

Journal Services:

Editorial Board;

- The Scientific World Journal (Nanotechnology; From 2012 to 2015)
- Frontiers in Materials Science (Thin Solid Films; From 2017 to date)
- The Open Materials Science Journal (From 2017 to date)

Reviewer;

- Journal of Alloy and Compounds,
- ACS Applied Materials & Interfaces
- Journal of American Ceramic Society
- Materials Chemistry and Physics
- Colloids and Surfaces A: Physicochemical and Engineering Aspects
- Materials Research Bulletin
- Applied Surface Science
- Journal of Experimental Nanotechnology

Research Experiences:

❖ ***Recent Industrial Researches:***

- Development a novel colloidal technique for preparation of PbS thin nanofilm.
- Development a novel sol-gel method for preparation of nanocrystals.
- Production of Sapphire, Ruby, Nd:YAG, Nd,Cr:YAG, Cs;YAG, single crystals.

❖ ***Supervisor:***

- ***Recent M. Sc. Thesis (Co-supervisor)***
  - Preparation and characterization of IZO thin films
  - Investigation of the annealing effects on the electro-optical properties of sol-gel derived nanostructured AZO thin film
  - Preparation of sol-gel derived nanostructured thin film of γ-Al_2O_3 and study of annealing effect, pH, and concentration on the its electro-optical properties
  - Preparation & optical characterization of G-C_3N_4 colloidal nanocrystals
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- ***Recent M. Sc. Thesis (Main-supervisor)***
  - Preparation & optical characterization of Ge colloidal nanocrystals.

- ***Recent Ph. D. Thesis (Co-supervisor)***
  - Preparation and characterization of Ga:ZnO nanostructures as photonics materials
  - Growth & characterization of YCB single crystals.
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Last 5 years Publications:

Books;

- **M. Sasani Ghamsari** (Ed.),“ **Quantum-dot Based Light-emitting Diodes** ”, ISBN 978-953-307-913-4, InTech –Publisher, (2017).
- **M. Sasani Ghamsari** (Ed.),“ **State of the Art in Nano-bioimaging”,** ISBN 978-1-78923-294-3, InTech – Publisher, (2018).
- **M. Sasani Ghamsari** (Ed.),“ **Nanocomposits”,** ISBN 978-1-***-***-*, InTech –Publisher, (2019).
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Recent Papers;

1) R. Ashiri, A. Nemati, **M. Sasani Ghamsari**,” Crack-free nanostructured $BaTiO_3$ thin films prepared by sol-gel dip-coating technique”, Ceramics International, 40 (2014) 8613–8619.
2) B. Efafi, **M. Sasani Ghamsari**, M.H. Majles Ara,” Sol-gel derived AZO thin film with narrow dual emission”, J. Luminescence, 154 (2014) 32–35.
3) R. Ashiri, A. Nemati, **M. Sasani Ghamsari**, M.M. Dastgahi,” Nanothickness films, nanostructured films, and nanocrystals of barium titanate obtained directly by a newly developed sol–gel synthesis pathway”, Journal of Materials Science: Materials in Electronics, September 2014,
4) B. Efafi, **M. Sasani Ghamsari**, M.A. Aberoumand, M.H. Majles Ara, A.H. Sasani Ghamsari, H. Hojati Rad,” Al doped ZnO sol-gel derived nanocrystals: Raman spectroscopy and solid solubility limit characterization”, Physics Status Solidi A. 211 (2014) 2426–2430.
5) M.R. Gaeeni, **M. Sasani Ghamsari**, A. Majed Abadi, M.H. Majles Ara, W. Han, H.-H. Park” Colloidal Al_2O_3 nanocrystals with strong UV emission”, Journal of American Ceramic Society, 98 [6] (2015) 1818–1822.
6) A. Majdabadi, M.R. Gaeeni, **M. Sasani Ghamsari**, M.H. Majles-Ara,” Investigation of stability and nonlinear optical properties CdSe colloidal nanocrystals”, Journal of Laser Applications 27, (2015) 022010.
7) S. Alamdari, **M. Sasani Ghamsari**, M.H. Majles Ara, B. Efafi,” Highly concentrated IZO colloidal nanocrystals with blue/orange/red three-colors emission”, Materials Letters 158 (2015) 202–204.
8) **M. Sasani Ghamsari**, A.H. Sasani Ghamsari,” CdS colloidal nanocrystals with narrow green emissions”, J. Nanophoton. 10(2), (2016) 026007.
9) **M. Sasani Ghamsari,** M.R. Gaeeni, W. Han, H.H. Park,” Colloidal TiO_2 nanocrystals with strong Violet-Blue emission”, J. Luminescence 178 (2016) 89–93.
10) **M. Sasani Ghamsari**, A.H. Sasani Ghamsari, W. Han, H.-H. Park,” Highly stable and efficient green luminescent CdS colloidal nanocrystals”, J. Nanophoton. 10(2), (2016) 026017.
11) **M. Sasani Ghamsari,** A. Momeni, W. Han, H.H. Park,” Wavelength-tunable visible to NIR photoluminescence of carbon dots: the role of quantum confinement and surface states”, J. Nanophoton. 10(2), (2016) 026028.
12) S. Tarkhorani, **M. Sasani Ghamsari**,” Colloidal synthesis of germanium nanocrystals”, Nanochem Res 2(2017) 172-178.
13) S. Alamdari, **M. Sasani Ghamsari**, M. Jafar Tafreshi,” Synthesis, Characterization, and Gas Sensing Properties of In-doped ZnO Nanopowders”, Nanochem Res 2 (2017) 198-204.
14) **M. Sasani Ghamsari**, S. Alamdari, W. Han, H.H. Park,” Impact of ZnO nanostructured thin film in UV protection”, Int. J. Nanomedicine 12 (2017) 206-217.
15) S. Alamdari, M. Jafar Tafreshi, **M. Sasani Ghamsari**,” The effect of Indium precursor type on structural, optical and electrical properties of ZnO nanostructured thin films”, Materials Letters 197(2017) 94–97.
16) **M. Sasani Ghamsari**,” Colloidal PbS nanocrystals with high optical nonlinearity”, Opt Quant Electron 49 (2017) 168.
17) **M. Sasani Ghamsari**, M.R. Gaeeni, W. Han, H.-H. Park,” Efficiently blue luminescent HfO_2 colloidal nanocrystals”, Mater. Exp. Accepted.
18) J. Hasani Barbaran, **M. Sasani Ghamsari,** I. Javaheri, B. Baharvand.” Growth and spectral properties of Ce 3: YAG single crystal”, J. Opt. Adv. Mater. 20 (2018) 431-434.

19) B. Heidari, A. Majdabadi, L. Naji, **M. Sasani Ghamsari**, Z. Fakharan, S. Salmani," Thin reduced graphene oxide film with enhanced optical nonlinearity", Optik 156 (2018) 104–111.
20) B. Heidari, A. Majdabadi, L. Naji, **M. Sasani Ghamsari**, Z. Fakharan, S. Salmani," Synergetic effect of Ag/PVP on nonlinear optical characteristic of rGO transparent thin films", Opt Quant Electron 50 (2018) 168.
21) **M. Sasani Ghamsari**, S. Alamdari, D. Razzaghi, M. Arshadi Pirlar," ZnO nanocrystals with narrow-band blue emission", J. Lumin. 205 (2019) 508–518.
22) D. Razzaghi, M. Arshadi Pirlar, **M. Sasani Ghamsari**," Flashlamp-pumped Nd:YAG laser with higher pulse energy using TiO_2 nanofluid as coolant", J. Modern Opt. 66 (2019) 26–32.
23) S. Solgi, M.J. Tafreshi, **M. Sasani Ghamsari**," A facile route for synthesis of highly pure α-CaB4O7 compound", Mater. Res. Express 6 (2019) 026205.
24) S. Alamdari, M. Jafar Tafreshi, **M. Sasani Ghamsari**," Strong yellow-orange emission from aluminium and Indium co-doped ZnO nanostructures with potential for increasing the color gamut of displays", Appl. Phys. A 125 (2019) 165.
25) S. Solgi, M.J. Tafreshi, **M. Sasani Ghamsari**," Novel route for synthesis of α-CaB4O7 compound using ", Mater. Res. Express 6 (2019) 026205.
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