

# Curriculum Vitae

## Sharmin Kharrazi

Assistant Professor,  
Department of Medical Nanotechnology,  
School of Advanced Technologies in Medicine (SATiM),  
Tehran University of Medical Sciences (TUMS),  
Tehran 1417755469 - Iran  
Telephone: +98-21-43052135  
Fax: +98-21-88991117  
E-mail: sh-kharrazi@tums.ac.ir

## Current Research

---

### **Nanotheranostics based on:**

- *Metallic nanoparticles (Au and Ag nanoparticles):*  
drug delivery, photodynamic therapy, imaging contrast media, radiation dose enhancement, hyperthermia, biosensors, SERS
- *Oxide nanoparticles (CoFe<sub>2</sub>O<sub>4</sub>, Gd<sub>2</sub>O<sub>3</sub>, ZnO):*  
imaging contrast media, radiation dose enhancement, hyperthermia, photodynamic therapy, biosensors

## Work Experience

---

### **June 2011 – Present**

Assistant Professor and Vice-Dean of Education, Department of Medical Nanotechnology, School of Advanced Medical Technologies, Tehran University of Medical Sciences, Tehran, Iran.

### **October 2017 – June 2018**

Head, Laboratories of School of Advanced Technologies in Medicine, Tehran University of Medical Sciences, Tehran, Iran

### **November 2013 – June 2015**

Head, Curriculum Planning Unit, Education Development Center, Tehran University of Medical Sciences, Tehran, Iran

### **November 2010 – June 2011**

Scientific Coordinator, Iranian Light Source Facility (ILSF), Institute for Research in Fundamental Sciences (IPM), Tehran, Iran.

### **February 2010 – November 2010**

Part-time Faculty member, Department of Physics, Faculty of Science, Shahid Beheshti University, Tehran, Iran.

### **February 2007- February 2010**

Assistant Professor, Department of Physics, Faculty of Science, Shahid Beheshti University, Tehran, Iran.

### June 2009 – September 2009

Visiting Post-Doctoral Research Associate, International Centre for Materials Science (ICMS), Javaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Jakkur, Bangalore, India, under supervision of **Prof. C. N. R. Rao**.

### May 2006 – February 2007

Post-Doctoral Research Associate, Institute for Nanoscience and Nanotechnology (INST), Sharif University of Technology, Tehran, Iran, under supervision of **Prof. A. Irajizad**.

### September 1997 – May 1999

- Research Assistant, Chemical Physics Laboratory, Department of Physics, Sharif University of Technology, Tehran, Iran.

-Teaching Assistant, Department of Physics, Sharif University of Technology, Tehran, Iran.

## Education

---

### Doctor of Philosophy in Physics (September 2001 - February 2007)

Thesis : *Investigations on TbMnO<sub>3</sub> nanoparticles and Fe/Si multilayers*

Institution : DST Unit on Nanoscience, Department of Physics, University of Pune, India

### Master of Science in Physics (July 1999 - May 2001)

Project: *Investigations of Ge/Si Interfaces*

Institution: Department of Physics, University of Pune, India

GPA: 70.00 % (First class with distinction)

### Bachelor of Science in Physics (September 1993 – September 1997)

Project: *Fabrication and Characterization of Al<sub>2</sub>O<sub>3</sub> Thin Films*

Institution: Sharif University of Technology, Tehran, Iran

GPA: 70.00 % (14.04 / 20)

## Awards and Honors

---

- **Salary Grant**, Iranian Nanotechnology Initiative Council (INIC), May 2006 – February 2007.

- R. K. Bhalla Award, 2005, Indian Physics Association (IPA), Pune Chapter, India; **"The best research student"** award for research students of Department of Physics, University of Pune.

- Award of **Junior Research Fellowship (JRF)** in Science to Foreign Students from Developing Countries, University Grants Commission (UGC), New Delhi, India, Oct. 2002- May 2006.

- **Ranked 4<sup>th</sup>**, among those finishing **M.Sc.** from Department of Physics, University of Pune, Pune, India, in **May 2001**.

- V. Subramaniam 1<sup>st</sup> prize, 2000-2001, Indian Physics Association (IPA), Pune Chapter, India; The **"Best all round personality"** prize for 2<sup>nd</sup> year M. Sc. students of Department of Physics, University of Pune.

## Patents

---

4- Reza Alizadeh, **Sharmin Kharrazi**, Nahid Mashkouri Najafi, "Method for Making SPME Fiber", US Patent, US 8,230,703 B2.

3- Elham Arjmandi, Nahid Mashkouri Najafi, **Sharmin Kharrazi**, "A Chemical Synthesis Route to Stable Colloidal Solutions of Silver Nanoparticles", *Iranian Patent 61781*

2- Sara Vahabzadeh, **Sharmin Kharrazi**, "Synthesis of Ceramic Nanopigments by Using Citrate Gel Method", *Iranian Patent 61696*

1- Reza Alizadeh, Nahid Mashkouri Najafi, **Sharmin Kharrazi**, "3-D Arrays of Metal Oxide Nanostructures for SPME", *Iranian Patent 61668*

## Publications

---

46- Hamid Reza Shamsollahi, **Sharmin Kharrazi**, Behnaz jahanbin, Shahab Rafieian, Mohammad Hadi Dehghani, Masud Yunesian, Development of a new method for isolation of urban air particulates deposited in the human lung tissue, *Chemosphere* 280 (2021) 130585.

45- Ehsan Soheyli, Behnaz Ghaemi, Reza Sahraei, Zahra Sabzevari, **Sharmin Kharrazi**, Amir Amani, Colloidal synthesis of tunably luminescent AgInS-based/ZnS core/shell quantum dots as biocompatible nano-probe for high-contrast fluorescence imaging, *Materials Science and Engineering: C* 111 (2020) 110807.

44- Behnaz Ghaemi, Arfa Moshiri, Inge K. Herrmann, Mohammad Javad Hajipour, Peter Wick, Amir Amani, Sharmin Kharrazi, Supramolecular Insights into Domino Effects of Ag@ZnO-Induced Oxidative Stress in Melanoma Cancer Cells, *ACS Applied Materials & Interfaces* 11 (2019) 46408.

43- Sara Khademi, Saeed Sarkar, Ali Shakeri-Zadeh, Neda Attaran, **Sharmin Kharrazi**, Razieh Solgi, Mohammad Reza Ay, Hosein Azimian, Hossein Ghadiri, Dual-energy CT imaging of nasopharyngeal cancer cells using multifunctional gold nanoparticles, *IET Nanobiotechnology* (2019) doi: 10.1049/iet-nbt.2019.0067.

42- Sara Khademi, Saeed Sarkar, Ali Shakeri-Zadeh, Neda Attaran, **Sharmin Kharrazi**, Mohammad Reza Ay, Hosein Azimian, Hossein Ghadiri, Targeted gold nanoparticles enable molecular CT imaging of head and neck cancer: An in vivo study, *The international journal of biochemistry & cell biology* 114 (2019) 105554.

41- Masoumeh Zangeneh, Hassan Ali Nedaei, Hossein Mozdarani, Aziz Mahmoudzadeh, **Sharmin Kharrazi**, Mahdieh Salimi, The role and mechanisms of zinc oxide nanoparticles in the improvement of the radiosensitivity of lung cancer cells in clinically relevant megavoltage radiation energies in-vitro, *Nanomedicine Journal* 6 (2019) 85.

40- R. Rahimnia, S.M. Rezayat, R. Torabi, H. Soltanghorae, B. Mehravi, A. Amani, **S. Kharrazi**, M. Amanlou, Gold nanoparticle sucrose complexes as potent anti-inflammatory agents, *Genetics and Molecular Research* 17 (2018) gmr18037

- 39-** Yasamin Davatgaran Taghipour, **Sharmin Kharrazi**, Seyed Mohammad Amini, Antibody Conjugated Gold Nanoparticles for Detection of Small Amounts of Antigen Based on Surface Plasmon Resonance (SPR) Spectra, *Nanomedicine Research Journal* 3 (2018) 102.
- 38-** Behnaz Ghaemi, Elnaz Shaabani, Roqya Najafi Taher, Saeedeh Jafari Nodooshan, Amin Sadeghpour, **Sharmin Kharrazi**, Amir Amani, Intracellular ROS Induction by Ag@ZnO Core-Shell Nanoparticles: Frontiers of Permanent Optically Active Holes in Breast Cancer Theranostic, *ACS Applied Materials & Interfaces* 10 (2018) 24370.
- 37-** Behnaz Ghaemi, **Sharmin Kharrazi**, Amir Amani, Ahmad Reza Shahverdi, Process-Dependent Photocatalytic Performance of Quantum Sized ZnO Nanoparticles, *Materials Research Express* 5 (2018) 115027.
- 36-** Ali Akbar Karimi Zarchi, Seyed Mohamad Amini, Ali Salimi, **Sharmin Kharrazi**, Synthesis and characterisation of liposomal doxorubicin with loaded gold nanoparticles – IET Nanobiotechnology 12 (2018) 846.
- 35-** Sara Khademi, Saeed Sarkar, Ali Shakeri-Zadeh, Neda Attaran, **Sharmin Kharrazi**, Mohammad Reza Ay, Hossein Ghadiri, Folic acid-cysteamine modified gold nanoparticle as a nanoprobe for targeted computed tomography imaging of cancer cells – Materials Science and Engineering C 89 (2018) 182.
- 34-** Shayan Amiri, Aliakbar Yousefi-Ahmadipour, Mir-Jamal Hosseini, Arya Haj-Mirzaian, Majid Momeny, Heshmat Hosseini-Chegeni, Tahmineh Mokhtari, **Sharmin Kharrazi**, Gholamreza Hassanzadeh, Seyed Mohammad Amini, Somayeh Jafarinejadi, Mahmoud Ghazi-Khansari, Maternal exposure to silver nanoparticles are associated with behavioral abnormalities in adulthood: Role of mitochondria and innate immunity in developmental toxicity, *NeuroToxicology* 66 (2018) 66.
- 33-** Sara Khademi, Saeed Sarkar, **Sharmin Kharrazi**, Seyed Mohammad Amini, Ali Shakeri-Zadeh, Mohammad Reza Ay, Hossein Ghadiri, Evaluation of size, morphology, concentration, and surface effect of gold nanoparticles on X-ray attenuation in computed tomography, *Physica Medica* 45 (2018) 127.
- 32-** Roqya Najafi-taher, Behnaz Ghaemi, **Sharmin Kharrazi**, Samira Rasoulkoobi, Amir Amani, Promising Antibacterial Effects of Silver Nanoparticle-Loaded Tea Tree Oil Nanoemulsion: a Synergistic Combination Against Resistance Threat, *AAPS Pharmaceutical Science and Technology* 19 (2018) 1133.
- 31-** Seyed Mohammad Amini, **Sharmin Kharrazi**, Seyed Mahdi Rezayat & Kambiz Gilani, Radiofrequency electric field hyperthermia with gold nanostructures: role of particle shape and surface chemistry, *Artificial Cells, Nanomedicine, and Biotechnology* 46 (2018) 1452.
- 30 -** Farnaz Fatemi, Seyed Mohammad Amini, **Sharmin Kharrazi**, Mohammad Javad Rasaei, Mohammad Ali Mazlomi, Majid Asadi-Ghalehni, Masoumeh Rajabibazl, Esmail Sadroddiny, Construction of Genetically Engineered M13K07 Helper Phage for Simultaneous Phage Display of Gold Binding Peptide 1 and Nuclear Matrix Protein 22 ScFv Antibody, *Colloids and Surfaces B: Biointerfaces* 159 (2017) 770.
- 29 –** Alireza Jafari, **Sharmin Kharrazi**, Nader Mosavari, Farahnaz Movahedzadeh, Majid Tebyanian, Saeedeh Jafari, Nodooshan, Mina Bostanshenasi, Ali Majidppour, Tahereh Mosavi, Synthesis of Mixed Metal oxides Nano-Colloidal Particles and Investigation of the Cytotoxicity

Effects on the Human Pulmonary cell lines: A prospective Approach in Anti-Tuberculosis Inhaled Nanoparticles, *Oriental Journal of Chemistry* 33 (2017) 1529.

28- Shima Tavakol, Elham Hoveizi, **Sharmin Kharrazi**, Behnaz Tavakol, Shabnam Karimi, Seyed Mahdi Rezayat Sorkhabadi, Organelles and chromatin fragmentation of human umbilical vein endothelial cell influence by the effects of zeta potential and size of silver nanoparticles in different manners, *Artificial Cells, Nanomedicine, and Biotechnology* 45 (2017) 817.

27- M. Adel, M. Zahmatkeshan, B. Johari, **S. Kharrazi**, M. Mehdizadeh, B. Bolouri, Seyed Mahdi Rezayat, Investigating the effects of electrical stimulation via gold nanoparticles on in vitro neurite outgrowth: Perspective to nerve regeneration, *Microelectronic Engineering* 173 (2017) 1.

26- E. Shaabani, S. M. Amini, **S. Kharrazi**, R. Tajerian, Curcumin coated gold nanoparticles: synthesis, characterization, cytotoxicity, antioxidant activity and its comparison with citrate coated gold nanoparticles, *Nanomedicine Journal* 4 (2017) 115.

25- S. M. Amini, **S. Kharrazi**, M. R. Jaafari, Radio frequency hyperthermia of cancerous cells with gold nanoclusters: an in vitro investigation, *Gold Bulletin* 50 (2017) 43.

24- E. Darabpour, N. Kashef, S. M. Amini, **S. Kharrazi**, G. E. Djavid, Fast and effective photodynamic inactivation of 4-day-old biofilm of methicillin-resistant Staphylococcus aureus using methylene blue-conjugated gold nanoparticles, *Journal of Drug Delivery Science and Technology* 37 (2017) 134.

23- Behnaz Ghaemi, Omid Mashinchian, Tayebah Mousavi, Roya Karimi, **Sharmin Kharrazi**, Amir Amani, Harnessing the cancer radiation therapy by lanthanide-doped zinc oxide-based theranostic nanoparticles, *ACS Applied Materials and Interfaces* 8 (2016) 3123.

22- S. Hendiani, A. Ahya Abdi, P. Mohammadi, **Sh. Kharrazi**, Synthesis of silver nanoparticles and its synergistic effects in combination with imipenem and two biocides against biofilm producing Acinetobacter baumannii, *Nanomedicine Journal* 2 (2015) 291.

21- Mansoor Arvand, Esmaeil Mirzaei, Mohammad Ali Derakhshan, **Sharmin Kharrazi**, Esmaeil Sadroddiny, Mahmoud Babapour, Reza Faridi-Majidi, Fabrication of antibacterial silver nanoparticle-modified chitosan fibers using Eucalyptus extract as a reducing agent, *Journal of Applied Polymer Science* 132 (2015) 42133.

20- Zahra Shakoori, Samaneh Salimian, **Sharmin Kharrazi**, Mahdi Adabi, Reza Saber, Electrochemical DNA biosensor based on gold nanorods for detecting hepatitis B virus, *Analytical and Bioanalytical Chemistry* 407 (2015) 455.

19- S. M. Amini, **S. Kharrazi**, M. Hadizadeh, M. Fateh, R. Saber, Effect of Gold Nanoparticles on Photodynamic Efficiency of 5-Aminolevulinic acid Photosensitizer in Epidermal Carcinoma Cell Line: An In vitro Study, *IET Nanobiotechnology* 7 (2013) 151.

18- R. Saber, Z. Shakoori, S. Sarkar, G. Tavoosidana, **S. Kharrazi**, P. Gill, Spectroscopic and microscopic analyses of rod-shaped gold nanoparticles interacting with single-stranded DNA oligonucleotides, *IET Nanobiotechnology* 7 (2013) 42.

17- Shima Tavakol, Iraj Ragerdi Kashani, Mahmood Azami, Ahad Khoshzaban, Behnaz Tavakol, **Sharmin Kharrazi**, Somayeh Ebrahimi, Seyed Mahdi Rezayat Sorkhabadi, In vitro

- and In vivo Investigations on Bone Regeneration Potential of Laminated Hydroxyapatite/Gelatin Nanocomposite Scaffold along with DBM, *Journal of Nanoparticle Research* 14 (2012) 1265.
- 16- F. Aghazadeh, M. Aghazadeh, **S. Kharrazi**, A Mild Hydrothermal Route to the Synthesis of  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> Nanorods, *Journal of Nanostructure in Chemistry* 2 (2011) 9.
- 15- Laleh Torkian, Peyman Salehi, Minoo Dabiri, **Sharmin Kharrazi**, Synthesis and Catalytic Applications of Sulfonic Acid Group-Functionalized Nano and Micro Silica Structures, *Synthetic Communications* 41 (2011) 2115.
- 14- Reza Alizadeh, Nahid Mashkouri Najafi, **Sharmin Kharrazi**, Arrays of ZnO Nanorods as a New Stationary Phase for Solid Phase Micro Extraction (SPME), *Analytica Chimica Acta* 689 (2011) 117.
- 13- Anita S. Ethiraj, **Sharmin Kharrazi**, Neha Hebalkar, J. Urban, S. R. Sainkar, S. K. Kulkarni, Highly Photostable Dye Entrapped Core-Shell Particles, *Materials Letters* 61 (2007) 4738.
- 12- Rachana Gupta, Mukul Gupta, S. K. Kulkarni, **S. Kharrazi**, A. Gupta and S. M. Chaudhari, Thermal stability of nanometer range Ti/Ni multilayers, *Thin Solid Films* 515 (2006) 2213.
- 11- J. Chimanpure, S. Ashtaputre, S. Marathe, N. Hebalkar, **S. Kharrazi**, Renu Pasricha, S. K. Kulkarni, Synthesis and Characterization of Mercaptoethanol Capped Zinc Oxide Nanoparticles, *Synthesis and Reactivity in Inorganic and Nano-Metal Chemistry* 36 (2006) 65.
- 10- **Sharmin Kharrazi**, Darshan C. Kundaliya, S. W. Gosavi, S. K. Kulkarni, S. B. Ogale, T. Venkatesan, J. Urban, S. Park, S.-W. Cheong, Multiferroic TbMnO<sub>3</sub> Nanoparticles, *Solid State Communications* 138 (2006) 395.
- 9- F. Ratto, A. Locatelli, S. Fontana, **S. Kharrazi**, S. Ashtaputre, S.K. Kulkarni, S. Heun, F. Rosei, Diffusion dynamics during the nucleation and growth of Ge/Si nanostructures on Si(111), *Phys. Rev. Lett.* 96 (2006) 096103 and also selected by *Virtual Journal of Nanoscale Science & Technology* 13 (11) (2006) March 20.
- 8- Fulvio Ratto, Andrea Locatelli, Stefano Fontana, **Sharmin Kharrazi**, Shriwas Ashtaputre, Sulabha K. Kulkarni, Stefan Heun, Federico Rosei, Chemical mapping of individual semiconductor nanostructures, *Small* 2 (2006) 401.
- 7- Anita S. Ethiraj, Neha Hebalkar, **Sharmin Kharrazi**, J. Urban, S. R. Sainkar, S. K. Kulkarni, Photoluminescent Core-Shell Particles of Organic Dye in Silica, *Journal of Luminescence* 114 (2005) 15.
- 6- S. K. Kulkarni, A. S. Ethiraj, **S. Kharrazi**, D. N. Deobagkar, D. D. Deobagkar, Synthesis and spectral properties of DNA capped CdS nanoparticles in aqueous and non-aqueous media, *Biosensors and Bioelectronics* 21 (2005) 95.
- 5- Neha Hebalkar, **Sharmin Kharrazi**, Anita Ethiraj, J. Urban, R. Fink, S. K. Kulkarni, Structural and optical investigations of SiO<sub>2</sub>-CdS core-shell on silica particle, *Journal of Colloids and Interface Science* 278 (2004) 107.
- 4- **S. Kharrazi**, S. Ashtaputre, S. Kulkarni, R. Chaudhary, S. Shinde, S. Ogale, Deposition and Characterization of Fe/Si Multilayers, *Proceedings of the International Workshop on Physics and Technology of Thin Films (IWTF 2003)*, World Scientific, June 2004.

3- Shriwas Ashtaputre, **Sharmin Kharrazi**, S. K. Kulkarni, F. Rosei, Spectromicroscopy using Synchrotron Radiation, *Physics Education* (India) 20 (2003) 67.

2- Meenal Kowshik, Shriwas Ashtaputre, **Sharmin Kharrazi**, W. Vogel, J. Urban, S. K. Kulkarni, K. M. Paknikar, Extra Cellular Synthesis of Silver nanoparticles by a Silver-Tolerant Yeast Strain MKY3, *Nanotechnology* 14 (2003) 95.

1- Shriwas Ashtaputre, **Sharmin Kharrazi**, "X-ray Photoelectron Spectroscopy of Nanostructured Materials", *Physics Education* (India) 19, April-June 2002 (Special Issue on Nanomaterials).

## Talks and Presentations

---

- 8<sup>th</sup> Conference on Nanostructures (ICNS8), November 18-20, 2020, Sharif University of Technology, Tehran, Iran.

77- B. Ghaemi, S.J. Hashemi, **S. Kharrazi**, A. Amani, *"Topical Photodynamic Therapy of Resistant Dermatophytes by Ag@ZnO Nanocomposites: An In-vivo Study"*, Oral Presentation.

76- F. Karimi, I. Yousef, I. Martinez-Rovira, M. H. Ghahremani, **S. Kharrazi**, *"Effect of Curcumin-Au Nanoparticles on SK-N-SH cells: Synchrotron Radiation Based IR Microspectroscopy"*, Poster Presentation.

75- S. Zokaasadi, A. H. Sarmadi, **S. Kharrazi**, M. Kaya, N. Tabatabaei, *"Gold-coated Gadolinium Oxide Nanoparticles as MRI and CT Contrast Agents"*, Poster Presentation.

74- B. Ghaemi, I. K. Herrmann, A. Amani, P. Wick, **S. Kharrazi**, *"Mechanistic Insight into Consequences of ROS Burst by Ag@ZnO NPs in Remanent Melanoma Cancer Cells"*, Poster Presentation.

- 3<sup>rd</sup> Nanomedicine and Nanosafety Conference (NMNS2020), January 25-26, 2020, Tehran University of Medical Sciences, Tehran, Iran.

73- **Sharmin Kharrazi**, *"Synchrotron Radiation Based FTIR Microspectroscopy: A Valuable Tool to Investigate Nanoparticle-Cell Interaction"*, Invited.

72- Behnaz Ghaemi, **Sharmin Kharrazi**, Amir Amani, *"Ag@ZnO Nanocomposite Conquers Resistant Cutaneous Fungal Infections Through Increased ROS generation: Efficient Therapeutic Approach for Onychomycosis"*, Oral Presentation (Selected for **Best Oral Presentation Award**).

71- Behnaz Ghaemi, Amir Amani, **Sharmin Kharrazi**, Inge Herrmann, *"Unprecedented Golgi Fragmentation by Ag@ZnO NPs Inducing Cell Cycle Arrest, Autophagy and Apoptosis in remanent Melanoma Cancer Cells"*, Poster Presentation.

70- Fateme Karimi, Ibraheem Yousef, Imma Martinez-Rovira, Mohammad H. Ghahremani, **Sharmin Kharrazi**, *"Investigations on Antioxidant Effect of Curcumin-Au Nanoparticles on SK-N-SH cells: Synchrotron Radiation Based IR Microspectroscopy"*, Poster Presentation.

69- Behrad Tanbakuchi, **Sharmin Kharrazi**, Mohammad Sadegh Akhoundi, Matin Nikfarjam, *"Comparative assessment of the orthodontic wires friction coated with zinc oxide nanoparticles by the two methods of chemical precipitation and hydrothermal"*, Poster Presentation.

68- Amirhossein Sarmadi, Sara Zokaasadi, **Sharmin Kharrazi**, Nasrollah Tabatabaei, *"Design and synthesis of gold coated gadolinium oxide (Gd<sub>2</sub>O<sub>3</sub>@Au) nanoparticles as a theragnostic agent"*, Poster Presentation.

**67- Parisa Javadi, Sharmin Kharrazi,** Mohammad Ali Derakhshan, Reza Faridi Majidi, *"Green Synthesis of gold nanoparticles using saffron extract and its optimization, characterization, cytotoxicity and antioxidant activity"*, Poster Presentation.

**66- Parisa Javadi, Sharmin Kharrazi,** Mohammad Ali Derakhshan, Fatemeh Asghari, Reza Faridi Majidi, *"Preparation and Characterization of Electrospun Nanofibers Containing Gold Nanoparticles Synthesized by Saffron Extract Aimed for Wound Dressing"*, Poster Presentation.

- The Physics Society of Iran Annual Meeting, December 26, **2019**, Department of Physics, University of Tehran, Tehran, Iran.

**65- Behnaz Ghaemi, Elnaz Shaabani, Roqya Najafi-Taher, Saeedeh Jafari Nodooshan, Amin Sadeghpour, Sharmin Kharrazi,** Amir Amani, *"Intracellular ROS Induction by Ag@ZnO Core-Shell Nanoparticles: Frontiers of Permanent Optically Active Holes in Breast Cancer Theranostic"*, Oral Presentation.

- 4<sup>th</sup> National Conference on Particle Accelerators and Their Applications, December 4-5, **2019**, Faculty of Physics, K. N. Toosi University of Technology, Tehran, Iran.

**64- Fateme Karimi, Mohammad H. Ghahremani, Ibraheem Yousef, Imma M. Rovira, Sharmin Kharrazi,** *" Investigations on Antioxidant Effect of Curumin-Au Nanoparticles on SK-N-SH cells: Synchrotron Radiation Based IR Microspectroscopy"*, Poster Presentation.

- 2<sup>nd</sup> Conference on Nanofibers, November 27-28, **2019**, Tehran University of Medical Sciences, Tehran, Iran.

**63- Parisa Javadi, Sharmin Kharrazi,** Mohammad Ali Derakhshan, Reza Faridi Majidi, *"Preparation and characterication of nanofibers containing gold nanoparticles synthesized by saffron extract and investigation of its antioxidant effect"*, Poster Presentation.

- 2<sup>nd</sup> TPCF Preclinical Imaging Symposium (TPIS2019), May 2, 2019, Tehran Univeristy of Medical Sciences, Tehran, Iran.

**62- Sharmin Kharrazi,** *"Application of Nanoparticles in Preclinical Imaging"*, Invited.

- 11<sup>th</sup> ILSF Users' Meeting, April 29, 2019, Islamic Azad University, Qazvin, Iran.

**61- Sharmin Kharrazi,** *"Antioxidant Effect of Curcumin Coated Gold Nanoparticles in DiabeticModel of Pancreatic Beta Cells: SR Based FTIR Microspectroscopy"*, Oral Presentation.

- 12<sup>th</sup> Iranian Congress of Medical Physics, July 19-20, **2018**, Shahid Baheshti Medical University, Tehran, Iran.

**60- Sara Khademi, Hossein Ghadiri, Saeed Sarkar, Sharmin Kharrazi,** Seyed Mohammad Amini, Ali Shakeri-Zadeh, Mohammad Reza Ay, *"Evaluation of effect of gold nanorods and spherical gold nanoparticles of different sizes on X-ray attenuation in computed tomography"*, Poster Presentation.

**59- Sara Khademi, Hossein Ghadiri, Saeed Sarkar, Ali Shakerizadeh, Neda Attaran, Sharmin Kharrazi,** Mohammad Reza Ay, *"Evaluation of multifunctional targeted gold nanoparticles on X-ray attenuation in nasopharyngeal cancer cells by X- ray imaging"*, Poster Presentation.



- 7<sup>th</sup> Conference on Nanostructures (ICNS7), February 27-March 1, **2018**, Chemistry & Chemical Engineering Research Center of Iran, Tehran, Iran.

**58-** Behnaz Ghaemi, **Sharmin Kharrazi**, Saeedeh Jafari Nodooshan, Roqya Najafi Taher, Inge K. Herrmann, Peter Wick, Amir Amani, *"Intracellular Amplification of ROS with Ag@ZnO Core/Shell Nanoparticle: Frontiers of the Permanent Optically Active Holes in Breast Cancer Treatment"*, Oral Presentation.

**57-** S. M. Amini, **Sh. Kharrazi**, M.R. Jaafari, S.M. Rezayat, *"Synthesis, Characterization and Theranostic Application of Gold Clusters"*, Poster Presentation.

**56-** Sara Khademi, Hossein Ghadiri, Saeed Sarkar, Ali Shakerizadeh, Neda Attaran, **Sharmin Kharrazi**, Mohammad Reza Ay, *"Evaluation of Multifunctional Targeted Gold Nanoparticles on X-Ray Attenuation in Head-and-Neck Cancer Cells by X-Ray Imaging"*, Poster Presentation.

**55-** Sara Khademi, Hossein Ghadiri, Saeed Sarkar, Ali Shakerizadeh, Neda Attaran, **Sharmin Kharrazi**, Mohammad Reza Ay, *"Evaluation of X-ray Attenuation of Multifunctional Gold Nanoparticles Versus Omnipaque by Computed Tomography"*, Poster Presentation.

**54-** Sara Khademi, Hossein Ghadiri, Saeed Sarkar, **Sharmin Kharrazid**, Seyed Mohammad Amini, Ali Shakeri-Za-deh, Mohammad Reza Ay, *"Evaluation of Effect of Spherical Gold Nanoparticles and Gold Nanorods of Different Sizes on X-ray Attenuation in Computed Tomography"*, Oral Presentation.

**53-** Elnaz Shaabani, Sharmin Kharrazi, *"Anti-Oxidant Effect of Curcumin Coated Gold Nanoparticles on Beta-TC-3 Cell Line"*, Poster Presentation.

- 2<sup>nd</sup> Nanomedicine and Nanosafety Conference (NMNS2017), 29-30 November **2017**, Tehran University of Medical Sciences, Tehran, Iran.

**53-** Seyed Mohammad Amini, **Sharmin Kharrazi**, Mahmoud Reza Jaafari, Seyed Mahdi Rezayat, Kambiz Gilani, Rassoul Dinarvand, *"RF-EF stimulus trigger release of doxorubicin from liposomal formulations loaded with gold clusters"*, Oral Presentation.

**52-** Seyed Mohamad Reza Hoseini Najafabadi, **Sharmin Kharrazi**, Elnaz Shaabani, Masood Khosravani, Mahdi Adabi, *"Investigation of cytotoxicity effect of curcumin-gold nanoparticles loaded PVA nanofiber on normal human epidermal keratinocytes"*, Poster Presentation.

**51-** Behnaz Ghaemi, Roqia Najafi Taher, **Sharmin Kharrazi**, Amir Amani, *"Processing Dependency of Photocatalytic Performance of ZnO Nanoparticles: An Insight to biomedical Application"*, Poster Presentation.

**50-** Sara Khademi, Hossein Ghadiri, Saeed Sarkar, Ali Shakerizadeh, Neda Attaran, **Sharmin Kharrazi**, Mohammad Reza Ay, *"Targeted head-and-neck cancer imaging using multifunctional gold nanoparticle by computed tomography"*, Poster Presentation.

**49-** Elnaz Shaabani, **Sharmin Kharrazi**, Seyed Naser Ostad, *"Gold Nanoparticles coated with curcumin protect against adverse effect of oxidative stress in diabetes"*, Poster Presentation.

**48-** Alireza Jafari, **Sharmin Kharrazi**, Saeedeh Jafari-Nodooshan, Farahnaz Movahedzadeh, *"Synthesis of Mixed Nano-Colloidal Particles and Investigation of the Cytotoxicity Effects on the Human Pulmonary cell lines: A prospective Approach in Anti-Tuberculosis Inhaled Nanoparticles"*, Poster Presentation.

**47-** Farnaz Fatemi, Seyed Mohammad Amini, **Sharmin Kharrazi**, Mohammad Javad Rasaei, Mohammad Ali Mazlomi, Majid Asadi-Ghalehni, Masoumeh Rajabibazl, Esmaeil Sadroddiny, *"Construction of genetically engineered M13K07 helper phage for simultaneous phage display of gold binding peptide 1 and nuclear matrix protein 22 ScFv antibody"*, Poster Presentation.

- 5<sup>th</sup> National and 1<sup>st</sup> International Congress on Novel and Innovative Laboratory Technologies, 25-27 October, **2017**, Razi Convention Center, Iran University of Medical Sciences, Tehran, Iran.

46- Sharmin Kharrazi, *"Plasmonics in Diagnosis"*, Invited.

• 2<sup>nd</sup> Middle East/7<sup>th</sup> Iranian Controlled Release Conference (ICRC2017), 21-23 February, **2017**, Kerman University of Medical Sciences, Iran. ([www.crsiran.ir](http://www.crsiran.ir))

45- Seyed Mohammad Amini, **Sharmin Kharrazi**, Mahmoud Reza Jafari, Fatemeh Gheibi, Seyed Mahdi Rezayat, Kambiz Gilani, Rassoul Dinarvand, *"Gold Nanoparticles Loaded Nanoliposomes for RF-EF Modulated Delivery of Anticancer Agent"*, Oral Presentation.

• Asia Nanoforum Conference, 8-11 March, **2015**, Kish Island, Iran.

44- B. Ghaemi, **Sh. Kharrazi**, A. Amani, A. Shahverdi, *"Size-dependent cytotoxic effects of ultra-small ZnO nanoparticles under UV irradiation"*, Poster Presentation.

43- B. Ghaemi, A. Amani, **Sh. Kharrazi**, *"Investigations on the effect of doping of Lanthanides (Gd, Eu) in ZnO nanoparticles on improving the efficiency of radiation therapy of prostate cancer"*, Oral Presentation.

• 5<sup>th</sup> Conference on Nanostructures (ICNS5), March 6-9, **2014**, Kish University, Kish Island, Iran.

42- Shima Tavakol, **Sharmin Kharrazi**, Elham Hoveizi, Roya Karimi, Seyed Mahdi Rezayat Sorkhabadi, *"Investigations on the effect of size and zeta potential of silver nanoparticles on cells and biomolecules"*, Oral Presentation.

41- S. M. Amini, S. Kharrazi, M. Hadizadeh, M. Fateh, R. Saber, *"Investigations on the effect of Gold Nanoparticles' size on Photodynamic Efficiency of 5-Aminolevulinic acid"*, Poster Presentation.

• Iran Nanosafety Congress (INSC2014), 19-20 February **2014**, Tehran, Iran.

40- Tavakol S., **Kharrazi S.**, Hoveizi E., *"Investigations on the Effect of Particle Size and Surface Charge on Interaction of Silver Nanoparticles with Cancerous and Normal Cells and Biomolecules"*, Oral Presentation.

39- Ghaemi B., Amani A., **Kharrazi S.**, Shahverdi A., Mahmoodian M., *"Size and time dependent ROS generation of ZnO nanoparticles under different UV irradiation conditions"*, Oral Presentation.

38- Amini S., **Kharrazi S.**, Hadizadeh M., Fateh M., Saber R., *"Cytotoxic Effect of Gold Nanoparticles on Epidermal Carcinoma Cell Line in Photodynamic Therapy"*, Poster Presentation.

• 4<sup>th</sup> Conference on Nanostructures (ICNS4), March 12-14, **2012**, Kish University, Kish Island, Iran.

37- S. Nemati, S. Kharrazi, *"Investigations on the effect of stabilizing agent on size and stability of colloidal gold nanoparticles based on their optical absorption spectra"*, Oral Presentation.

36- E. Arjmandi Vala, N. Mashkouri Najafi, **Sh. Kharrazi**, *"Investigation the Effects and Residual of Silver Nanoparticles on Environmental Samples"*, Poster Presentation.

35- R. Alizadeh, N. M. Najafi, N. Ashournejad, **S. Kharrazi**, *"Application of metal oxide nanorods in trace analysis of materials in the biological and environmental matrixes"*, Poster Presentation.

34- M. Alavi, **S. Kharrazi**, A. Fathi, *"Magnetic and Structural characterization of CoFe<sub>2</sub>O<sub>4</sub> and CoFe<sub>2</sub>O<sub>4</sub>@SiO<sub>2</sub> nanoparticles"*, Poster Presentation.

- Institute of Nanoscience and Nanotechnology, University of Kashan, December 25, **2011**, Kashan, Iran.

**33- Sharmin Kharrazi**, *"Investigations on the Effect of Shape and Size of Metallic Nanoparticles on Their Optical Properties - Experiments and Computer Simulations"*, Colloquium.

- 9<sup>th</sup> SESAME users' meeting, 12-14 November, **2011**, Amman, Jordan.

**32- H. Farrokhpour, H. Kalhor, S. Kharrazi, H. Khosroabadi**, *"Iranian Light Source Facility"*, Oral Presentation.

**31- H. Farrokhpour, H. Kalhor, S. Kharrazi, H. Khosroabadi**, *"Science at Iranian Light Source Facility"*, Poster Presentation.

- First Iran-Syria Workshop on Nanomaterial Synthesis and Characterization, April 3-5, **2011**, Damascus, Syria.

**30- Sharmin Kharrazi**, *"Chemical Synthesis and Optical Properties of Metallic and Semiconducting Nanoparticles"*, Invited.

- Materials and Energy Research Center (MERC), March 7, **2011**, Karaj, Iran.

**29- Sharmin Kharrazi**, *"Optical Properties of Metallic Nanoparticles"*, Colloquium.

- 10<sup>th</sup> Iranian Conference on Condensed Matter, 26-27 January, **2011**, Shiraz, Iran.

**28- Shahla Nemati, Sharmin Kharrazi**, *"Investigations on the effect of stabilizer and reducing agent's concentration on the size and stability of gold nanoparticles"*, Poster Presentation.

- Department of Physics, Institute for Advanced Studies in Basic Sciences (IASBS), December 19, **2010**, Zanzan, Iran.

**27- Sharmin Kharrazi**, *"Harnessing Nanomaterials"*, Colloquium.

- Workshop on "Introduction to Synchrotron Radiation", Iran Research Organization for Science and Technology (IROST), October 20-21, **2010**, Tehran, Iran.

**26- Sharmin Kharrazi**, *"Applications of Synchrotron Radiation"*, Invited.

- Doctoral School of Science and Technology, Lebanese University, October 12, 2010, Beirut, Lebanon.

**25- Sharmin Kharrazi**, *"Harnessing Nanomaterials"*, Invited.

- Third Conference on Nanostructures (NS2010), March 10-12, **2010**, Kish University, Kish Island, Iran.

**24- Ialeh Torkian, Minoo Dabiri, Sharmin Kharrazi**, *"Synthesis and Catalytic Applications of Sulfuric Acid Functionalized Nano and Micro Silica structures"*, Poster Presentation.

**23-** R. Alizadeh, **S. Kharrazi**, N. M. Najafi, *"ZnO 1-Dimensional Nanostructures as New Stationary Phase for Solid Phase Micro Extraction (SPME)"*, Oral Presentation.

- Workshop on "Applications of Synchrotron Light in Life Sciences and Nanotechnology", Iran Research Organization for Science and Technology (IROST), February 24-25, **2010**, Tehran, Iran.

**22-** Sharmin Kharrazi, *"X-ray Photoelectron Emission Microscopy (XPEEM)"*, Invited.

- 16<sup>th</sup> Iranian Conference on Optics and Photonics (ICOP 2010), January 26-28, **2010**, Yazd, Iran.

**21-** Hoda sadat Lotfipoor, Seyedeh Mehri Hamidi Sangdehi, Mansoreh Shasti, Mohammad Mehdi Tehrani, **Sharmin Kharrazi**, *"Fabrication and Characterization of Barium Hexaferrite Thin Film by Pulsed Laser Deposition"*, Poster Presentation.

- International Conference on Nanotechnology: Science and Application (NanoTech Insight 09), 29 March-02 April, **2009**, Barcelona, Spain.

**20-** Nassim Rahimi, Sharmin Kharrazi, Babak Shokri, *"The Effect of Shape on the Optical Properties of Silver Nanoparticles"*, Oral Presentation.

**19-** Reza Alizadeh, Nahid Mashkouri Najafi, Sharmin Kharrazi, *"SnO<sub>2</sub> Nanorod Arrays as a Novel Stationary Phase for Solid-phase Microextraction (SPME)"*, Poster Presentation.

- 9<sup>th</sup> Condensed Matter Conference of Physical Society of Iran, February 3-4, **2009**, Shahid Chamran University of Ahwaz, Ahwaz, Iran.

**18-** Nassim Rahimi, Reza Alizadeh, **Sharmin Kharrazi**, Babak Shokri, *"Investigations on the Effect of Surfactants on The Shape of Metallic Nanoparticles"*, Oral Presentation.

- 15<sup>th</sup> Iranian Conference on Optics and Photonics (ICOP 2009), January 27-29, **2009**, Isfahan University, Isfahan, Iran.

**17-** Nassim Rahimi, **Sharmin Kharrazi**, Babak Shokri, *"The Effect of Shape on the Optical Properties of Silver Nanoparticles"*, Poster Presentation.

- 14<sup>th</sup> Annual IASBS Meeting on Condensed Matter Physics, May 22-23, **2008**, Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran.

**16-** Sharmin Kharrazi, *"Self-assembled Ge(Si) Islands in Growth of Ge on Si(111): SPELEEM Studies"*, Invited.

- Iran-India Joint Conference on Nanotology (IJC�), April 27-29, **2008**, Imam Hall, Imam Khomeini Hospital, Tehran, Iran.

**15 -** S. Kharrazi, S. Heun, F. Ratto, O. Moutanabbir, A. Locatelli, S. Fontana, F. Rosei, S. K. Kulkarni, *"Chemical Mapping of Ge(Si) Islands in Growth of Ge on Si(111): SPELEEM Studies"*, Poster Presentation.

- Second Conference on Nanostructures (NS2008), March 11-14, **2008**, Kish University, Kish Island, Iran.

**14- Sharmin Kharrazi**, Darshan Kundaliya, S. W. Gosavi, S. K. Kulkarni, T. Venkatesan, S. Park, S. -W. Cheong, Lianfeng Fu, N. Browning, Renu Pasricha, S. B. Ogale, "*Synthesis and Multiferroic Properties of HoMnO<sub>3</sub> Nanorods*", Oral Presentation.

- Advanced Nano Materials (ANM-2007), International Conference on Experimental Condensed Matter Physics, January 8-10, **2007**, Indian Institute of Technology Bombay, Mumbai, India.

**13- S. Kharrazi**, Darshan Kundaliya, S. W. Gosavi, S. K. Kulkarni, S. B. Ogale, T. Venkatesan, S. Park, S. -W. Cheong, J. Urban, "*Nanoparticles of Multiferroic RMnO<sub>3</sub> (R= Tb, Ho)*", Poster Presentation.

- International Conference on Nano-Materials for Electronics (ICNME-2006), November 27-29, **2006**, C-MET, Pune, India.

**12- S. Kharrazi**, Darshan Kundaliya, S. W. Gosavi, S. K. Kulkarni, S. B. Ogale, T. Venkatesan, S. Park, S. -W. Cheong, J. Urban, "*Multiferroic RMnO<sub>3</sub> (R= Tb, Ho) Nanoparticles*", Poster Presentation.

Won "**The Best Poster**" award.

- 2006 MRS Fall Meeting, November 27 - December 1, **2006**, Hynes Convention Center & Sheraton Boston Hotel, Boston, MA, USA.

Symposium M: Quantum Dots - Growth, Behavior, and Applications

**11- Fulvio Ratto**, Andrea Locatelli, Stefano Fontana, **Sharmin Kharrazi**, Shriwas Ashtaputre, Sulabha Kulkarni, Stefan Heun, Federico Rosei, "*Partial Ordering in the Nucleation and Growth of self-organized Ge/Si Nanostructures*", Oral Presentation.

Symposium T: Ferroelectrics and Multiferroics

**10- S. Kharrazi**, S. W. Gosavi, S. K. Kulkarni, Darshan Kundaliya, S. B. Ogale, T. Venkatesan, S. Park, S. -W. Cheong, J. Urban, "*Magnetic and Dielectric Properties of Multiferroic TbMnO<sub>3</sub> Nanoparticles*", Poster Presentation.

Symposium U: Advances in In-Situ Characterization of Film Growth and Interface Processes

**9- Fulvio Ratto**, Andrea Locatelli, Stefano Fontana, **Sharmin Kharrazi**, Shriwas Ashtaputre, Sulabha Kulkarni, Stefan Heun, Federico Rosei, "*Chemical Mapping of Individual Semiconductor Nanostructures*", Oral Presentation.

- Workshop of the INTERREG IIIA SLO-ITA project, October 23-24, **2006**, Trieste, Italy.

**8- S. Heun**, G. Biasiol, G. B. Golinelli, V. Grillo, E. Carlino, L. Sorba, F. Ratto, F. Rosei, **S. Kharrazi**, S. Ashtaputre, S. K. Kulkarni, S. Fontana, A. Locatelli, T. O. Montes, F. Z. Guo, "*Compositional mapping of semiconductor quantum dots by x-ray microscopy*", Oral Presentation.

- XIII International workshop on Oxide Electronics, October 8-11, **2006**, Jolly Hotel, Ischia, Italy.

**7- Darshan C. Kundaliya**, S. B. Ogale, **Sharmin Kharrazi**, S. W. Gosavi, S. K. Kulkarni, S. Park, S. -W. Cheong, J. Urban and T. Venkatesan, "*Magnetic and dielectric properties of multiferroic TbMnO<sub>3</sub> nanoparticles*", Poster Presentation.

- Raman Memorial Conference (RMC), February 25-26, **2005**, Department of Physics, University of Pune, Pune, India.

**6- S. Kharrazi**, S. S. Ashtaputre, S. K. Kulkarni, F. Ratto, F. Rosei, A. Locatelli, S. Fontana, S. Heun, "*Composition of Ge(Si) Islands in the Growth of Ge on Si 111*", Oral Presentation.

**5- S. Kharrazi**, S. Gosavi, S. K. Kulkarni, S. D. Pradhan, "*Synthesis and Characterization of nanocrystalline TbMnO<sub>3</sub>*", Poster Presentation.

Won "**The Best Poster**" award.

- 16<sup>th</sup> AGM of Materials Research Society of India (MRSI), 9-12 February, **2005**, National Chemical Laboratories, Pune India.

**4- Kharrazi S.**, Pradhan S. D., Gosavi S. W., Kulkarni S. K., "*Synthesis and Characterization of Nanocrystalline TbMnO<sub>3</sub>*", Poster presentation.

**3- Ali Ahmad M., Kharrazi S.**, Gosavi S. W., and Kulkarni S. K., "*Synthesis and Characterization of Nanopigment Materials*", Poster presentation.

- MMM 2004, The 9<sup>th</sup> Joint Magnetism and Magnetic Materials (MMM)/Intermag Conference, January 6-11, **2004**, Anaheim Marriott in Anaheim, California, USA.

**2- S. Kharrazi**, S. W. Gosavi, S. K. Kulkarni, D. Kundaliya, S. B. Ogale, J. Urban, "*Synthesis and properties of the nanoparticles of Multiferroic TbMnO<sub>3</sub>*", Oral Presentation.

- International Workshop on Physics and Technology of Thin Films (IWTF 2003), 22 February-6 March, **2003**, Department of Physics, Sharif University of Technology, Tehran, Iran.

**1- S. Kharrazi**, S. Ashtaputre, S. Kulkarni, R. Chaudhary, S. Shinde, S. Ogale, "*Deposition and characterization of Fe/Si multilayers*", Oral presentation.

## Thesis Supervision

---

**31- Supervisor**, "*Preparation and investigation on the effect of Ag@ZnO core/shell nanoparticles on topical treatment of dermatophytosis: An in vivo study*", Thesis for Degree of Doctor of Philosophy in Medical Nanotechnology, **Behnaz Ghaemi**, November 2019.

**30- Supervisor**, "*Preparation and characterization of electrospun nanofibers, containing gold nanoparticles synthesized by saffron extract, and investigation of its anti-oxidant effects as a wound dressing*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Parisa Javadi**, October 2019.

**29- Advisor**, "*Preparation of the metformin loaded nanoliposomes and evaluation of their anticancer effects in metastatic breast cancer models*", Thesis for Degree of Doctor of Philosophy in Medical Nanotechnology, **Roghayeh Vakili-Ghartavol**, October 2019.

**28- Advisor**, "*Comparative Assessment of the effect of chemically coated zinc oxide nanoparticles and nanostructured zinc oxide thin film on friction between orthodontic wires and metallic brackets*", Thesis for doctoral degree in Dentistry, **Matin Nikfarjam Neshtifani**, July 2019.

27- Advisor, *"Anti-inflammatory Effects of Gold Nanoparticles in the Treatment of Carrageenan Induced Inflammation in Rats"*, Thesis for Degree of Doctor of Philosophy in Medical Nanotechnology, **Ramin Rahimnia**, December 2018.

26- Advisor, *"Investigating the presence of diagnostic nanocomplex containing gold nanoparticles conjugated with folic acid in human nasopharyngeal tumoral cells through molecular dual-energy computed tomography"*, Thesis for Degree of Doctor of Philosophy in Medical Physics, **Sara Khademi**, January 2018.

25- Advisor, *"Modelling particle size, drug loading and release of BSA encapsulated into PLGA nanoparticles: A response surface methodology"*, Thesis for Degree of Master of Science in Medical Nanotechnology, **Adebileje Tajudeen Ayodele**, September 2017.

24- Advisor, *"Antibacterial Effects of Combination of Ag & ZnO Colloidal Nano- particles against Virulence H<sub>3</sub>Rv Mycobacterium tuberculosis"*, Thesis for Degree of Doctor of Philosophy in Immunology and Infectious Diseases, **Alireza Jafari**, September 2017.

23- Advisor, *"Construction of M13K07 helper phage displaying gold-binding peptide and its use in packaging phagemid containing immunoglobulin gene"*, Thesis for the Degree of Doctor of Philosophy in Medical Biotechnology, **Farnaz Fatemi**, September 2017.

22- Supervisor, *"Synthesis of gold nanoparticles using curcumin and investigating their antioxidant effect on Beta-TC3 cell line under induction of diabetic condition"*, Thesis for Degree of Master of Science in Medical Nanotechnology, **Elnaz Shaabani**, March 2017.

21- Supervisor, *"Gold nanoparticles loaded nanoliposomes for RF-EF modulated delivery of anticancer agent"*, Thesis for the Degree of Doctor of Philosophy in Medical Nanotechnology, **Seyed Mohammad Amini**, January 2017.

20- Advisor, *"Evaluation of the effect of nanoparticles on improving the efficiency of antibiofilm photodynamic therapy"*, Thesis for the Degree of Doctor of Philosophy in Microbiology, **Esmail Darabpour**, January 2017.

19- Supervisor, *"An in-vitro investigation of surface coating effect of gold nanoparticles and nanorods on cell viability"*, Thesis for Degree of Master of Science in Medical Nanotechnology, **Mozafar Imanizadeh**, October 2016.

18- Supervisor, *"Gold Nanorods (GNRs) Augmented Thermal Effect On Corneal Stroma During Laser Tissue Welding:Ex Vivo Study"*, Thesis for Degree of Master of Science in Medical Nanotechnology, **Deepanjan Ghosh**, April 2016.

17- Supervisor, *"Optimization of Conjugation of gold nanoparticles to IgG antibody for better response in detection of low amounts of antigen based on surface plasmon resonance (SPR) spectra"*, Thesis for Degree of Master of Science in Medical Nanotechnology, **Yasamin Davatgaran Taghipour**, March 2016.

16- Supervisor, *"Evaluation of concentration of NGAL based on surface plasmon resonance of antibody conjugated gold nanoparticles"*, Thesis for Degree of Master of Science in Medical Nanotechnology, **Saeid Moayyedi**, June 2015.

- 15- Supervisor, "*Measurement of Concentration of KIM-1 Biomarker Based on Surface Plasmon Resonance of Antibody Conjugated Gold Nanoparticles for Detection of Kidney Injury*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Marziyeh Gilaki**, May 2015.
- 14- Supervisor, "*Synthesis of Gold and Silver nanoparticles and Investigation of the effect of particle size on SERS signals in interaction of Alkylating Agents with nucleotides*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Simah Mohammadi**, December 2015.
- 13- Supervisor, "*Investigations on the Effect of Doping of Rare-earth Elements (Gd, Eu) in ZnO Nanoparticles on Improving the Efficiency of Radiation Therapy of Prostate Cancer: An In-Vitro Study*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Behnaz Ghaemi**, March 2014.
- 12- Advisor, "*Synthesis of Silver Nanoparticles on Chitosan Nanofibers using Eucalyptus (Camaldulensis) Extract: A Green Chemistry Fabrication in Solid State*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Mansoor Arvand**, March 2013.
- 11- Advisor, "Comparison of Antibiofilm Activity of Nanosilver Particles and some Antimicrobial Agents Against Biofilm producing *Acinetobacter* spp.", Thesis for Degree of Master of Science in Microbiology, **Saghar Hendiani**, February 2013.
- 10- Advisor, "*Preparation of Zinc Oxide Nanoparticles Optimized for Application in Sunscreen Creams*", Thesis for Degree of Master of Science in Nanotechnology, **Mohammad Mahmoudian**, February 2013.
- 9- Advisor, "*The role of gold nanoparticles in efficiency of photodynamic therapy with 5-aminolevulinic acid (5-ALA) on epidermal carcinoma cells in vitro*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Seyed Mohammad Amini**, February 2012.
- 8- Advisor, "*Investigations on Cytotoxicity and Physico-chemical Properties of Gold Nanorods in K562 Cell line*", Thesis for Degree of Master of Science in Medical Nanotechnology, **Samaneh Salimian**, December 2012.
- 7- Advisor, "*Antibacterial effect of silver nanoparticles on multidrug resistance of clinical isolates*", Thesis for Degree of Master of Science in Microbiology, **Mohammad Dolatkhan Baghan**, September 2011.
- 6- Supervisor, "*Synthesis of Au and Ag nanoparticles: Experimental and Computer Simulation Investigations of the Effect of Particle Size and Shape on their Optical Properties*", Thesis for Degree of Master of Science in Physics (Condensed Matter), **Shahla Nemat**, March 2011.
- 5- Supervisor, "*Synthesis and Characterization of Superparamagnetic Cobalt Ferrite  $\text{CoFe}_2\text{O}_4$  nanoparticles*", Thesis for Degree of Master of Science in Physics (Condensed Matter), **Mina Alavi**, March 2011.
- 4- Advisor, "*Investigations on the Effect of Surface Roughness on the Conductivity of Semiconducting Thin Films*", Thesis for Degree of Master of Science in Physics (Condensed Matter), **Fatemeh Iranmanesh**, February 2011.
- 3- Advisor, "*The Effect of Silver Nanoparticles on Germination, Growth, Photosynthetic Pigments and Anti-oxidant response of *Vigna radiata* L. Wilczek and *Carthamus tinctorius**", Thesis for Degree of Master of Science in Microbiology, **Mohammad Dolatkhan Baghan**, September 2011.



*L.seedlings*", Thesis for the Degree of Master of Plant Science in Plant Physiology, **Zabihallah Tchaman**, February 2011.

**2-** Advisor, "*Investigations on Residual of Silver Nanoparticles in Environmental Samples and the Effect of Particle Size on Antibacterial Activity of Silver Nanoperticles*", Thesis for Degree of Master of Science in Analytical Chemistry, **Elham Arjmandi Vala**, August 2010.

**1-** Advisor, "*Chemical Synthesis of Silver Nanoparticles and Experimental and Theoretical Investigations on the dependence of the Optical Properties on the Shape and Size of the Particles*", Thesis for the Degree of Master of Science in Photonics, **Nassim Rahimi**, July 2009.

## Membership in Committees

---

2020	Member, Scientific Committee, 3 <sup>rd</sup> Nanomedicine and Nanosafety Conference, January, 2020, Tehran, Iran.
2019	Member, Scientific Committee, Iran Conference on Nanofibers, 27-28 November, 2019, Tehran, Iran.
2017	Member, Scientific Committee, 2 <sup>nd</sup> Nanomedicine and Nanosafety Conference, 29-30 November, 2017, Tehran, Iran.
2017	Secretary, Executive Committee, 2 <sup>nd</sup> Nanomedicine and Nanosafety Conference, 29-30 November, 2017, Tehran, Iran.
2017	Member, Scientific Committee, International Conference on Nanofibers, 21-22 October, 2017, Tehran, Iran.
2015	Co-Chair, Nanomedicine Conference, Asia Nano Forum Conference, 8-11 March, 2015, Kish Island, Iran.
2014	Coordinator, Asia Nano Camp (ANC2014), 9-15 October, 2014, Tehran, Iran.
2014	Member, Scientific Committee, Iran NanoSafety Conference (INSC 2014), 19-20 February, 2014, Tehran, Iran.
2014	Secretary, Executive Committee, Iran NanoSafety Conference (INSC 2014), 19-20 February, 2014, Tehran, Iran.
2013	Member, Board of Interdisciplinary Sciences, Educational Undersecretary of Ministry of Health, Iran.
2013	Member, Steering Committee, Department of Interdisciplinary Sciences, Tehran University of Medical Sciences, Tehran, Iran.
2013	Member, Scientific Committee, 13 <sup>th</sup> Nanotechnology Graduates Meeting, Tehran University of Medical Sciences, 8-9 May, 2013, Tehran, Iran.
2012	Member, Scientific Committee, 12 <sup>th</sup> Nanotechnology Graduates Meeting, Tehran University of Medical Sciences, 23-24 May, 2012, Tehran, Iran.
2010-2015	Member, Nanotechnology Committee, Khwarizmi International Award (KIA), Iran.
2009-2015	Member, Nanotechnology Committee, Khwarizmi Young Award (KYA), Iran.
2007	Member, Academic Committee, 38 <sup>th</sup> International Physics Olympiad, 13-22 July 2007, Isfahan, Iran.

# Memberships in Scientific Societies

---

Physics Society of Iran (PSI)  
Iranian Nanotechnology Society (INS)  
Iranian Society of Nanomedicine (ISN)

## Teaching

---

Advanced Nanomaterials (PhD)  
Advanced Nanomedicine (PhD)  
Nanomedicine (MSc)  
Nanobiotechnology (MSc)  
Research Methodology (PhD)  
Characterization and Analysis Techniques of Nanostructures (MSc)  
Nanomaterials and Nanostructures (MSc)  
Nanomaterials' Design (PhD)  
Functional Materials (PhD)  
Nanomaterials and Nanostructures (MSc)  
Fabrication Techniques of Nanostructures (MSc)  
Nanobiosensors (MSc)  
Nano-Optics (MSc)  
Fundamentals and Applications of Nanomaterials (MSc)  
Introduction to Nanotechnology (MSc)  
Quantum Physics (MSc)  
Advanced Physics Laboratory (MSc)  
Solid State Physics I&II (BSc)  
Methods of Experimental Physics (BSc)  
Vacuum Techniques (BSc)  
Modern Physics Laboratory (BSc)  
Fundamentals of Physics: Mechanics (BSc)  
General Physics (BSc)