



Mahdi Behboudnia

Scientific Position: Associate Professor of Physics

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ACADEMIC EDUCATIONS:

B. Sc. in Physics (1991) Middle East Technical University, Ankara, Turkey.

M. Sc. in Physics (1993) Middle East Technical University, Ankara, Turkey.

Ph.D. in Physics (2001) Jawaharlal Nehru University, New Delhi, India.

PROFESSIONAL INFORMATION:

Occupation: Teaching and Research

Position/Title: Associate Professor/Dr.

Affiliation: Urmieh University of Technology, Urmia, west Azerbaijan, Islamic Republic of Iran.

Affiliation Web Site: <http://www.uut.ac.ir/>

Specialization: Solid State Physics, Physical Chemistry of solutions, Colloids, Reverse Micelles, Nano-particles and microemulsions.

Instrumental familiarity: Laser Light Scattering (Static and Dynamic), UV-VIS Spectrophotometer, TEM, SEM, EDAX and AFM

LECTURES:

General Physics, Modern Physics, Optics, Laser and its Applications, Spectroscopy, Heat and Thermodynamics, Waves

POSITIONS AND RESPONSIBILITIES HELD:

- Dean of Department of physics, University of Mohaghegh Ardabili, 2000-2002.
 - Assistant Dean of Faculty of Science, University of Mohaghegh Ardabili, 2002-2004.
 - Dean of Faculty of Science, University of Mohaghegh Ardabili, 2004-2007.
 - Dean of Department of Mechanical Engineering, Urmia University of Technology, 2009-2014
 - Dean of Graduate Education office, Urmia University of Technology, 2014
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MEMBERSHIP IN SCIENTIFIC SOCIETIES:

- Member of Iranian Nanotechnology Society.
 - Member of Iranian Society of Crystallography and Mineralogy.
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RESEARCH INTERESTS:

- Study and Synthesis of nano-structures, Solar Cells, Thin Films.
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LIST OF PUBLICATIONS:

1. M. Behboudnia , F.N. Ecevit, R. Aydin , "Ultrasonic Study on Ternary Liquid systems by laser - sound interaction" Lamp Series Report , (1994).

2. M. Behboudnia , F.N. Ecevit, R. Aydin , "Measurement of Ultrasound velocity in some Ternary liquids Using Raman - Nath Diffraction " Tr. j. of physics 19 (1995) 920 – 92.
3. H.B. Bohidar , M. Behboudnia " Characterization of reverse micelles by dynamic light scattering " Colloid and surfaces A 178 (2001) 313-323.
4. H.B. Bohidar, M. Behboudnia "Solubilization of gelatin by water - AOT- Isooctane Reverse Micelles Studied by dynamic laser light scattering" European Polymer Journal 36 (2000) 2463.
5. M. Behboudnia, P. Sen, "Systematics in the nanoparticle band gap of ZnS and Zn(1-x)M(x)S (M= Mn, Fe, Ni) for various dopant concentrations" Physical review B, 63, (2001) 35316.
6. M. Behboudnia, M.H. Majlesara, B. Khanbabaee, "Preparation of ZnS nanorods by ultrasonic waves" Materials Science and Engineering B, 122, (2005) 160-163 (**Science Direct TOP 25 Hottest Articles**).
7. M.H. Majlesara, M.K. Samani, M. Behboudnia "Numerical solution of phase conjugation by diffraction gratings in photorefractive crystals" Nonlinear Optics Applications, edited by Mirosław A. Karpierz, Allan Dawson Boardman, George I. Stegeman, Proc. of SPIE Vol. 5949, 59490G, (2005).
8. M. Behboudnia , B. Khanbabaee, " Conformational study of CdS nanoparticles by ultrasonic waves" Colloids and Surfaces A: Physicochem. Eng. Aspects 290 (2006) 229-232.
9. M. Behboudnia , B. Khanbabaee, "Investigation of nanocrystalline copper sulfide Cu₇S₄ fabricated by ultrasonic radiation technique" Journal of Crystal Growth 304 (2007) 158–162.
10. M. Behboudnia , Y. Azizianekalandaragh , "Synthesis and characterization of CdSe semiconductor nanoparticles by ultrasonic irradiation" Materials Science and Engineering B 138 (2007) 65–68 (**Science Direct TOP 25 Hottest Articles**).
11. Y.A. Kalandaragh, M.B. Muradov, R.K. Memedov, M. Behboudnia, A. Khodayari, "Structural, compositional and optical characterization of water soluble CdS nanoparticles synthesized by ultrasonic irradiation" Optoelectronics and Advanced Materials, 2 (2008) 42-45.
12. M. Behboudnia, A. Habibi-Yangjeh, Y. Jafari-Tarzanag, A. Khodayari, "Preparation and characterization of monodispersed nanocrystalline ZnS in water-rich [EMIM]EtSO₄ ionic liquid using ultrasonic irradiation", Journal of Crystal Growth 310 (2008) 4544-4548.
13. M. Behboudnia, A. Habibi-Yangjeh, Y. Jafari-Tarzanag, A. Khodayari, "Facile and Room Temperature Preparation and Characterization of PbS Nanoparticles in Aqueous [EMIM][EtSO₄] Ionic Liquid Using Ultrasonic Irradiation" Bull. Korean Chem. Soc. (2008), Vol. 29, No. 1 53-56.
14. M. Behboudnia, A. Habibi-Yangjeh, Y. Jafari-Tarzanag, A. Khodayari, "Template free preparation and characterization of CuS nanoparticles in aqueous solutions of

- [EMIM][EtSO₄] as a low cost ionic liquid using ultrasonic irradiation” Journal of Optoelectronics and Advanced Materials, Vol. 11, No. 2, February (2009), 134 – 139.
15. V. Taghvaei, A. Habibi-Yangjeh, M. Behboudnia, “Preparation and characterization of SnO₂ nanoparticles in aqueous solution of [EMIM][EtSO₄] as a low cost ionic liquid using ultrasonic irradiation” Powder Technology, 195 (2009) 63-67 (**Science Direct TOP 25 Hottest Articles**).
 16. M. Barzegar, A. Habibi-Yangjeh, M. Behboudnia, “Template-free preparation and characterization of nanocrystalline ZnO in aqueous solution of [EMIM][EtSO₄] as a low-cost ionic liquid using ultrasonic irradiation and photocatalytic activity” Journal of Physics and Chemistry of Solids, 70 (2009) 1353-1358.
 17. Yashar Azizian-Kalandarag, Ali Khodayari, M. Behboudnia, “Ultrasound-assisted synthesis of ZnO semiconductor nanostructures” Materials Science in Semiconductor Processing 12 (2009) 142-145 (**Science Direct TOP 25 Hottest Articles**).
 18. Vahide Taghvaei, Aziz Habibi-Yangjeh, Mahdi Behboudnia, “Hydrothermal and template-free preparation and characterization of nanocrystalline ZnS in presence of a low-cost ionic liquid and photocatalytic activity” Physica E: Low-dimensional systems and Nanostructures Vol. 42, Issue 7 (2010) 1973 -1978.
 19. Vahide Taghvaei, Aziz Habibi-Yangjeh, M. Behboudnia, “Simple and low temperature preparation and characterization of CdS nanoparticles as high efficient photocatalyst in presence of a low-cost ionic liquid” J. Iran. Chem. Soc. Vol. 7, Suppl. July (2010), 175-186.
 20. M. Barzegar, A. Habibi-Yangjeh, M. Behboudnia, “Ultrasonic-assisted preparation and characterization of CdS nanoparticles in the presence of a halide-free and low-cost ionic liquid and photocatalytic activity” Journal of Physics and Chemistry of Solids, 71 (2010) 1393-1397.
 21. S. Naghiloo, A. Habibi-Yangjeh, M. Behboudnia, “Adsorption and photocatalytic degradation of methylen blue on Zn_{1-x}Cu_xS nanoparticles prepared by a simple green method” Applied Surface Science, 257 (2011) 2361-2366.
 22. A. Habibi-Yangjeh, V. Taghvaei, M. Behboudnia, “Preparation and characterization of copper sulfide nanoparticles in presence of [EMIM][EtSO₄] by a simple refluxing method” 14th Iranian Physical Chemistry Conference, (2011), 1773-1775.
 23. Samira Naghiloo, Aziz Habibi-Yangjeh, Mahdi Behboudnia, “Simple ionic-liquid assisted method for preparation of Cd_{1-x}Zn_xS nanoparticles with improved photocatalytic activity” Int. J. Mater. Res. 12 (2012) 1522-1527

BOOKS AND TRANSLATIONS:

Dynamic Light Scattering with Applications to Chemistry, Biology and Physics by: Bruce J. Bern and Robert Pecora Translated by: M. Behboudnia and Salomeh. Noori.

List of National standard Essay for Institute of Standards and Industrial Research of Iran (ISIRI) available at www.isiri.org

- 1- Optics and optical instruments- Ophthalmic optics- Marking of spectacle frames, ISIRI, National Standard No: 7229, 1st edition Jul. 2004.
- 2- Ophthalmic optics- Spectacle lenses- Fundamental requirements uncut finished lenses, ISIRI, National Standard No: 7230, 1st edition Jul. 2004.
- 3- Ophthalmic optics- Bar code specifications, ISIRI, National Standard No: 7228, 1st edition Jul. 2004.
- 4- Test Sieves and test sieving- Vocabulary, ISIRI, National Standard No: 8199-1, 1st edition Oct. 2005.
- 5- Test Sieves- Technical Requirements and testing part 1: Test sieves of metal wire cloth, ISIRI 5002-1, 1st edition Oct. 2005.
- 6- Test Sieving- Part 1: Methods using test sieves of woven wire cloth and perforated metal plate, ISIRI, National Standard No: 8199-1, 1st edition Oct. 2005.
- 7- Industrial screens and screening- Vocabulary, ISIRI, National Standard No: 8200, 1st edition Oct. 2005.
- 8- Representation of results of particle size analysis- part 1: Graphical representation, ISIRI, National Standard No: 8201-1, 1st edition Oct. 2005.
- 9- Representation of results of particle size analysis- part 2: Calculation of Average particle size/diameters and moments from particle size distributions, ISIRI, National Standard No: 8201-2, 1st edition Oct. 2005.
- 10- Representation of results of particle size analysis- part 4: Characterization of a classification process, ISIRI, National Standard No: 8201-4, 1st edition Oct. 2005.
- 11- Ophthalmic optics-Spectacle frames-Measuring system and terminology, ISIRI, National Standard No: 8712, 1st edition.
- 12- Optics and optical instruments- Reference wavelengths, ISIRI, National Standard No: 8713, 1st edition.
- 13- Optics and optical instruments- Foci meters, ISIRI, National Standard No: 8714, 1st edition.
- 14- Ophthalmic optics- Uncut finished spectacle lenses- Part 1: Specification for single-vision and multi-focal lenses, ISIRI, National Standard No: 8715-1, 1st edition.
- 15- Ophthalmic optics- Uncut finished spectacle lenses- Part 2: specifications for progressive power lenses, ISIRI, National Standard No: 8715-2, 1st edition.
- 16- Ophthalmic optics- Uncut finished spectacle lenses- Part 3: Transmittance specifications and test methods, ISIRI, National Standard No: 8715-3, 1st edition.

17-Ophthalmic optics- Uncut finished spectacle lenses- Part 4: specification and test methods for anti-reflective coatings, ISIRI, National Standard No: 8715-4, 1st edition.

Curriculum Vitae