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###### Curriculum Vitae

###### Elaheh K. Goharshadi, Ph.D.



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# Education

**FERDOWSI UNIVERSITY** Mashhad, Iran

Bachelor of Science in Chemistry February 1989

**SHIRAZ UNIVERSITY** Shiraz, Iran

Master of Science in Chemistry August 1992

Concentration: Physical Chemistry

**SHIRAZ UNIVERSITY** Shiraz, Iran

Doctor of Philosophy in Chemistry September 1995

Concentration: Physical Chemistry

# WORK EXPERience

**FERDOWSI UNIVERSITY** Mashhad, Iran

*Professor of Chemistry*  2006-Present

**FERDOWSI UNIVERSITY** Mashhad, Iran

*Associate Professor of Chemistry*  2002-2006

**FERDOWSI UNIVERSITY** Mashhad, Iran

*Assistant Professor of Chemistry* 1996-2002

**ALZAHRA UNIVERSITY** Tehran, Iran

*Assistant Professor of Chemistry*  1995-1996

**SHIRAZ UNIVERSITY** Shiraz, Iran

*Graduate Teaching Assistant*  1993-1995

# Areas of research interest

Statistical Thermodynamics of Liquids and Gases, Molecular Dynamics Simulation, Green Synthesis and Physicochemical Properties of Nanomaterials, Water and Air Remediation, Self-cleaning Coatings, Smart Windows

# Research projects

1. **E. K. Goharshadi**, Determination of potential energy function and calculation of transport properties of methane at different temperatures and pressures (2001).
2. **E. K. Goharshadi**, M. Safari Yazd, M. Moosavi, and A. Molazemi, Studies on recycling of sealed rechargeable lead-acid VRLA batteries (2003).
3. **E. K. Goharshadi** and M. Moosavi, Extension of a new equation of state to some liquid refrigerant mixtures and prediction of some thermodynamic properties at extended range of temperature and pressure (2006).
4. **E. K. Goharshadi,** Prediction of thermodynamic properties of some liquid polymeric mixtures using a simple equation of state (2006).
5. **E. K. Goharshadi**, ZnO nanofluids: green synthesis, characterization, and antibacterial activity (2007).
6. **E. K. Goharshadi**, [Thermodynamic properties of the mixtures of some ionic liquids with alcohols using a simple equation of state](http://) (2008).
7. **E. K. Goharshadi,** Validity of some regularities of dense fluids for ionic liquids (2009).
8. R. Jalaland **E. K. Goharshadi**, Antibacterial properties of the [imidazolium](http://)-based ionic liquid (2009).
9. **E. K. Goharshadi** and S. Samiee, Preparation and characterization of ceria naoparticles-study of the effect of starting materials (2010).
10. **E. K. Goharshadi** and M. Hadadian, Fabrication, characterization, and measurement of some physochemical properties of Zirconia nanoparticles (2010).
11. **E. K. Goharshadi**, H. Azizi, and M. Karimi, Fabrication, characterization, and measurement of some physochemical properties of Ag and Pd nanoparticles (2011).
12. **E. K. Goharshadi**, R. Mehrkhah, and S. H. Sajjadi, Sonochemical synthesis, characterization, and measurement of some physochemical properties of ZnS nanoparticles (2011).
13. **E. K. Goharshadi** and S. H. Sajjadi, Kinetic and thermodynamic study of removal of RB5 from aqueous solutions by hematite nanoparticles prepared by hydrothermal method (2012). **Iran National Science Foundation (INSF)**
14. **E. K. Goharshadi** andM. B. Moghaddam, Kinetic study of adsorption of Cr (VI) from aqeouse solutions using graphene nanosheets (2013).
15. **E. K. Goharshadi** and S. J. Mahdizadeh, Strudy of thermal conductivity of N-doped graphene via molecular dynamics simulation (2013).
16. **E. K. Goharshadi**,T. Mahvelati, M. Shafaee, and Z. Niazee, Photocatalytic degradation, Azo dye, Zinc sulfide-graphene nanocomposite, kinetic and thermodynamic study (2013).
17. **E. K. Goharshadi**,M. B. Moghaddam, M. Shafaee, and Z. Niazee, Transport properties of nanofluids of graphere quntum dots in distilled water and glycerol (2016).

### TECHNICAL SKILLS

***Experimental Skills:***

CVD, Ultrasound, Rehometer, etc.

***Computer Skills:***

Programming Skills: FORTRAN Software, MOLDY, DL\_POLY, Maple, Mathematica, SigmaPlot, LAMMPS Molecular Dynamics Simulator, etc.

# Teaching Experience

**Undergraduate Level Courses**: General Chemistry I, Physical Chemistry I, Physical Chemistry II, Quantum Chemistry, Molecular Spectroscopy, Chemical Literature

**Graduate Level Courses:** Advanced Physical Chemistry, Statistical Thermodynamics I, Statistical Thermodynamics II, Special Topics in Physical Chemistry, Molecular Dynamics Simulation, Physics and Chemistry of Nanostructured Materials

# Professional training

1. Statistical Thermodynamics of Mixtures, 1st Iranian Physical Chemistry Workshop, Esfahan, Iran (2001).
2. Molecular Dynamics Simulation, Esfahan, Iran (2005).
3. AFM and STM Microscopes, Mashhad (2005).
4. Iran-Korea Nanotechnology Workshop, Tehran (2012).

# Membership in professional organizations

1. Iranian Chemical Society
2. Iranian Nanotechnolgy Centre
3. American Nano Society

# honors and awards

1. Student Excellence Award from Ministry of Culture for being a top student during B.Sc and M.Sc programs
2. Best Teacher Award from Ferdowsi University of Mashhad (2004).
3. Best Researcher of College of Sciences Award from Ferdowsi University of Mashhad (2004).
4. TWAS Research grants (2008).
5. Best Researcher of College of Sciences Award from Ferdowsi University of Mashhad (2009).
6. Best Teacher Award from Ferdowsi University of Mashhad (2010).
7. Distinguished Professor in Physical Chemistry in Iran (2014).
8. Best Teacher Award from Ferdowsi University of Mashhad (2017).

# Master’s Theses supervised

1. Z. Tavangar, Direct Determination of Interaction Potentials of Kr/ N2, Xe/ N2, and He/ SF6 (1998).
2. F. Nazari, Computation of Internal Pressure of Liquids Using a Statistical Mechanical Equation of State (1999).
3. M. Moinossadat, Direct Determination of the Interaction Potentials of He-Ne, He-Ar, He-Kr, and He-Xe from the Extended Principle of Corresponding States (2000).
4. M. Jamal Ahmadi, Direct Determination of Interaction Potentials of Argon, Krypton, and Xenon via the Inversion of Reduced Viscosity Collision Integrals at Zero Pressure (2000).
5. M. Abbaspour, Direct Determination of Interaction Potentials of Helium and Neon via the Inversion of Reduced Viscosity Collision Integrals at Zero Pressure (2002).
6. A. Naserimood, Common Intersection Point Independent of Pressure ‘A New Regularity’ (2002).
7. M. Hesabi, Estimation of Solubility Parameter of Liquids Using Statistical Mechanical Equations of State (2002).
8. F. Moosavi, Pressure-Volume-Temperature and Thermodynamic Properties of Some Refrigerants Using GMA Equation of State (2004).
9. M. Moosavi, Extension of GMA Equation of State to Liquid Mixture Case and Prediction of Their Thermodynamic Properties (2005).
10. M. Abareshi, Production of Volumetric Properties and Excess Properties of Liquid Mixtures Based on GMA Equation of State (2006).

 11. A. R. Berenji, Reproduction and Prediction of the Thermodynamic Properties of Liquid Alkali Metals (2006).

1. H. Kashani, Computation of Some Thermodynamic Properties of Helium Using Molecular Dynamics Simulation (2007).
2. Majid Namayandeh Jorabchi, Computation of some thermodynamic properties of He-Ne, He-Kr, Kr-Ne, and Kr-Xe mixtures using molecular dynamics simulation(2008).
3. R. Meherkhah, Green Synthesis, Characterization, and Measurement of Optical and Photoluminescence Properties of Zinc Sulfide Quantum Dots (2010).
4. S. Samiee, Green Synthesis, Characterization, and Measurement of Optical Properties of Ceria Nanoparticles (2010).
5. H. Sarvari, Removal of Methyl Orange from Aqueous Solutions Using Fe/Ni Bimetallic Nanoparticles Fabricated by Co-Reduction Method: Kinetics and Thermodynamics (2011).
6. M. Hadadian, Effect of Calcination Temperature on Structural, Vibrational, Optical, and Rheological Properties of Zirconia Nanoparticles (2011).
7. T. Mahvelati, Influence of Preparation Methods Microwave, Sol-Gel, and Hydrothermal on Structural, Optical, and Rheological Properties of Lanthania Nanoparticles (2012).
8. M. Matin Fard, Adsorption; Graphene Naonosheets; ZnO-Graphene Nanocompoite; Ni (II) Removal: Thermodynamic Study; Kinetic Study (2013).
9. G. Akhlamadi, Investigation of Grapheme Oxide Nanosheets Dispersion in Water Using Molecular Dynamics Simulation (2015).
10. Z. Niazee, Synthesis of Hierarchical Anatase TiO2 Nanostructures and TiO2/Graphene Quantum Dots Nanocomposite for Photocatalytic Degradtion of RB5 under Visible Light (2016).
11. S. Naderi, Theoretical Investigation of Thermodynamic Properties of 2-Amino-2-methyl-1- propanol as a Chemical Absorbent for CO2 & Experimental Investigation of Chemical Capture of CO2 by glycine salt solution (2017).
12. M. Shafaee, Enhanced visible-light driven photocatalytic activity of TiO2 nanostructures for degradation Rhodamine B & Degradation of Rhodamine B by TiO2/GQDs nanocomposite under visible light (2017).

# DOctoral dissertations supervised

1. A. Morsali, An Accurate Expression for Radial Distribution Function of A Lennard –Jones Fluid & A Molecular Dynamics Study on the role of Attractive and Repulsive Forces in Internal Energy, Internal Pressure, and Structure of Dense Fluids & New Regularities and a New Equation of State for Liquids (2005).
2. M. Abbaspour, Determination of Pair Interaction Potentials of CF4, CO2, CO, NO, N2O, and O2 Via the Inversion of Reduced Viscosity Collision Integrals at Zero Pressure & Molecular Dynamics Simulation of Argon, Krypton, and Xenon Using Two-Body and Three-Body Intermolecular Potentials & Prediction of Surface Tension of HFD-like Fluids Using the Fowler’s Approximation (2006).
3. M. Moosavi, Application of the GMA Equation of State To Some Industrial Fluids & Molecular Dynamics Simulation of Some Thermodynamic Properties of Mixtures of Argon with Neon, Krypton, and Xenon using Two-Body and Three-Body Interaction Potentials & Fabrication, Characterization, and Measurement of Some Physicochemical Properties of Zinc Oxide Nanofluid (2009).
4. M. Abareshi, Study on the Morphology, Crystallinity, and Thermal Stability of Polyethylene Clay Nanocomposites Fabricated Using High Energy Ball Milling Method & Kinetics Study of Non-isothermal Crystallization of Polyethylene-Clay Nanocomposites & Fabrication, Characterization, and Measurement of Some Transport Properties of-Fe2O3 and Fe3O4 Magnetic Nanofluids (2010).
5. H. Azizi-Toupkanloo, Structural, Electrical, and Rheological Properties of Palladium/Silver Bimetallic Nanoparticles Prepared by Conventional and Ultrasonic-assisted Reduction Methods & Comparative Study of Vibrational Assignments, Conformational Analysis, and Intermolecular Hydrogen Bonding Strength of [C2-8 mim] NTF2] Imidazolium-Based Ionic Liquids by Density Functional Theory (2014).
6. S. J. Mahdizadeh, 1. Grand canonical Monte Carlo simulation study of storage and adsorption of green fuels like hydrogen and methane on the nanotubes 2. Molecular dynamics simulation study of some physicochemical properties of graphene like thermal conductivity (2014).
7. S. Samiee, Investigation the kinetics and thermodynamics of an azo dye removal using: 1- Fe/Pd nanoparticles and graphene nanosheets & molecular dynamics simulation of RB5 adsorption on graphene nanosheet (2014).
8. M. Zaree, influence of ceria nanoparticles on the improvement of gel electrophoresis separation and rheological properties of polymeric nanofluids, influence on the separation efficiency of *E. coli* protein and standard DNA samples in gel electrophoresis (2016).
9. Monireh Brati Moghaddam, Synthesis, characterization, and rheological properties of graphene/glycerol

nanofluids & investigation of effective variables on solubility of graphene nanosheets in the glycerol by molecular dynamics simulation (2016).

1. Mahdi Karimi, Preparation, characterization, and the study of photocatalytic properties of WO3 nanoparticles and WO3/g-C3N4 nanocomposite & measurement of transport properties of WO3–glycerol and ethylene glycol nanofluids (2016).
2. M. Hadadian, Transport properties of nanofluids of graphene oxide in distilled water and ethylene glycol

& fabrication and characterization of nitrogen-doped graphene as a dual functional agent in enhancing efficiency of perovskite solar cell: crystal modification and surface passivation (2016).

# Papers

1. A. Boushehri and **E. K. Goharshadi**, Thermal diffusion factor in gas mixtures, *High Temp. & High Press.* **25**, 471- 474 (1993).
2. A. Boushehri and **E. K. Goharshadi**, Direct determination of the interaction potentials of Ar-Xe, Kr-Xe, and Ar-Kr from the extended principal of the corresponding states, *Bull. Chem. Soc. Jpn*. **67**, 2403-2406 (1994).
3. **E. K. Goharshadi** and A. Boushehri, Direct determination of the intermolecular pair potential function of methane from the extended principal of the corresponding states, *Bull. Chem. Soc. Jpn.* **68**, 1859-1861 (1995).
4. A. Boushehri and **E. K. Goharshadi**, Common intersection point independent of temperature for compressed liquid mixtures, *Thermochim. Acta* **269**, 371-379 (1995).
5. **E. K. Goharshadi** and A. Boushehri, Compressibility of molecular liquids and liquid mixtures, *Aust. J. Chem.* **49**, 521-522 (1996).
6. **E. K. Goharshadi** and A. Boushehri, Common intersection point independent of mole fraction: a new regularity, *Int. J. Thermophys.* **18**, 1517-1526 (1997).
7. **E. K. Goharshadi**, Direct determination of the interaction potentials of He-N2, Ne-N2, and Ar-N2 from the extended principal of the corresponding states, *Int. J. Thermophys.* **19**, 227-237 (1998).
8. **E. K. Goharshadi**, Z. MirAfzali, and Z. Tavangar, Direct determination of the interaction potentials of sulphur hexafluride-noble gases from the extended principal of the corresponding states, *J. Phys. Soc. Jpn.* **67**, 4296-4299 (1998).
9. M. Moinssadati and **E. K. Goharshadi**, Direct determination of the interaction potential of He–Ar from the extended principle of corresponding states, *Int. J. Chem*. 10,101-107 (2000)*.*
10. **E. K. Goharshadi**, A. Nemati, A. Mokhberi, and A. Boushehri, Thermal Diffusion factors for binary gas mixtures of He-CO and H2-WF6, *Int. J. Chem*. **11**, 31-33 (2001)*.*
11. **E. K. Goharshadi** and F. Nazari,Computation of internal pressure of liquids using a statistical mechanical equation of state, *Fluid Phase Equilibria* **187-188**, 425-431 (2001).
12. H. Iloukhani, Z. Tavangar, and **E. K. Goharshadi**, Direct determination of the intermolecular potential of Kr-N2, Kr-N2 , and He–SF6 from the extended principle of corresponding states, *Indian J. Chem.* 40A, 185-187 (2001).
13. **E. K. Goharshadi** and M. Moinssadati, The helium-xenon interaction potential, *Bull. Korean Chem. Soc.* **22**(9), 945-947 (2001).
14. **E. K. Goharshadi** and M. Moinssadatii, Direct determination of the He–Kr interaction potential from the extended principle of corresponding states, *Indian J. Chem.* **41A**, 254-258 (2002).
15. **E. K. Goharshadi** and M. Moinssadatii, The interaction potential of helium– neon, *Indian J. Chem*. **41A,** 2500-2502 (2002).
16. **E. K. Goharshadi**, M. Abbaspour, and A. Morsali, Determination of potential energy function of CF4-CF4 via the inversion of reduced viscosity collision integrals at zero pressure, *Ind. Eng. Chem. Res.* 42, 2256-2261 (2003).
17. **E. K. Goharshadi**, M. JamilAlhmadi, and B. Najafi, Determination of potential energy functions of argon, krypton, and xenon via the inversion of reduced viscosity collision integrals at zero pressure, *Can. J. Chem.* 81, 866-871 (2003).
18. **E. K. Goharshadi** and M. Abbaspour, Determination of potential energy function of methane via the inversion of reduced viscosity collision integrals at zero pressure, *Fluid Phase Equilib.* 212, 53-65 (2003).
19. **E. K. Goharshadi** and M. Hesabi, Estimation of solubility parameter using equations of state, *J. Mol. Liq.* **113,** 125-132(2004).
20. **E. K. Goharshadi** and A. Nasrimood, Common intersection point independent of pressure `a new regularity, *J. Mol. Liq.* **113**,133**-**141(2004).
21. **E. K. Goharshadi**and M. Abbaspour, Helium Potential Energy Function, *Indian J. Chem.* **43A**, 1385-1392 (2004).
22. **E. K. Goharshadi**, A. Morsali, and M. Abbaspour, New regularities and an equation of state for liquids, *Fluid Phase Equilib.* **230**, 170-175 (2005).
23. A. Morsali, **E. K. Goharshadi**, G. A. Mansoori, and M. Abbaspour, An accurate expression for radial distribution function of the Lennard-Jones fluid, *Chem. Phys.* 310, 11-15 (2005).
24. **E. K. Goharshadi**, M. Nahali, and M. Baherololoom, Determination of potential energy function of Sf6-Sf6 via the inversion of reduced viscosity collision integrals at zero pressure, *Indian J. Chem.* **44A**, 1333-1338 (2005).
25. **E. K. Goharshadi** and M. Moosavi, Extension of a new equation of state to the liquid mixtures, *Ind.* *Eng. Chem. Res.* **44**, 6973-6980 (2005).
26. **E. K. Goharshadi** and F. Moosavi, Prediction of thermodynamic properties of some hydrofluoroether refrigerants using GMA equation of state, *Fluid Phase Equilib.* **238**, 112-119 (2005).
27. A. Morsali, **E.K. Goharshadi**, and N. Shahtahmasbi, Evaluation of high-frequency elastic moduli and shear relaxation time of the Lennard-Jones fluid using three known analytical expressions for radial distribution function, *Chem Phys.* **322***,* 377-381 (2006).
28. **E. K. Goharshadi** and A. R. Berenji, A new equation of state for predicting the thermodynamic properties of liquid alkali metals, *J. Nucl. Mat.* 348, 40-44 (2006).
29. A. R. Berenjiand **E. K. Goharshadi**,Prediction of thermodynamic properties of polymeric liquids using a new equation of state, *Polymer* **47***,* 4726-4733 (2006).
30. M. Abbaspour, **E. K. Goharshadi**, and J. S. Emampour, Determination of potential energy functions and calculation transport properties of oxygen and nitric oxide via the inversion of reduced viscosity collision integrals at zero pressure*, Chem. Phys.* 326, 620-630 (2006).
31. **E. K. Goharshadi** and M. Moosavi, Density calculation using GMA equation of state considering mixing and combining rules for some liquid mixtures, *Fluid Phase Equilib.* **245**, 109-116 (2006).
32. **E. K. Goharshadi** and M. Moosavi, Application of a new equation of state to the liquid refrigerant mixtures, *Thermochim. Acta* **447,** 64-68 (2006).
33. **E. K. Goharshadi** and M. Abbaspour, Molecular dynamics simulation of argon, krypton, and xenon usingtwo-body and three-body intermolecular potentials, *J. Chem. Theory and Compu*t. **1**, 920-926 (2006).
34. **E. K. Goharshadi** and **M**. Abbaspour, Prediction of surface tension of HFD-like fluids using the Fowler's approximation, *Chem. Phys.* **328,** 379-374 (2006).

35. M. Abbaspour and **E. K. Goharshadi**, Determination of potential energy functions of CO-CO, CO2-CO2, and N2O-N2O and calculation their transport properties, *Chem. Phys.* **330**, 313-325 (2006).

1. **E. K. Goharshadi** and M. Moosavi, Investigation of volumetric properties of some glycol ethers using a simple equation of state, *Int. J. Thermophys.* **27**, 1517-1526 (2006).
2. **E. K. Goharshadi**, A. Morsali,and G. Ali Mansoori, A molecular dynamics study on the role of attractive and repulsive forces in internal energy, internal pressure and structure of dense fluids,*Chem. Phys.* **331**, 332 (2007).
3. **E. K. Goharshadi** and F. Moosavi, Prediction the volumetric and thermodynamic properties of some refrigerants using GMA equation of state, *Int. J. Refrig*. **30**, 377-383 (2007).

39. **E. K. Goharshadi**, M. Moosavi, and M. Abareshi**,** Calculation of thermodynamic properties of lubricant + refrigerant mixtures using GMA equation of state, *Int. J. Thermal Sci.* **46,** 944-952 (2007).

40. M. Nahaly, G. A. Parsafar, and **E. K. Goharshadi**, Investigation of a new mean temperature-dependent potential energy function for methane and its use for the prediction of transport properties, *Mol. Phys.* **105**, 1453–1463 (2007).

41. **E. K. Goharshadi**, M. Abbaspour**,** H. Kashani, and M. Baherololoom, Quantum computation of the properties of helium using two-body and three-body intermolecular potentials: a molecular dynamics study, *Theor. Chem. Acc.* **119,** 355-368 (2008).

42. **E. K. Goharshadi** and M. Moosavi, Prediction the thermodynamic properties of liquid air, *Int. J. Thermophys.* **29,** 656-663 (2008).

43. **E. K. Goharshadi**, Y. Ding, P. Nancarrow, Green synthesis of ZnO nanoparticles in a room-temperature ionic liquid 1-ethyl-3-methylimidazolium bis(trifluoromethylsulfonyl)imide, *J. Phys. & Chem. Solids* **69,** 2057-2060 (2008).

44. **E. K. Goharshadi** and Maryam Abareshi, [Prediction of Volumetric and Thermodynamic Properties of Two Aromatic-Alcohol Mixtures using GMA Equation of State](http://), Fluid Phase Equilib. **268**, 61-67 (2008).

45. **E. K. Goharshadi** and M Moosavi, Thermodynamic Properties of some Ionic Liquids using a Simple Equation of State, *J. Mol. Liq.* **142**, 41-44 (2008).

46. M. Moosavi and **E. K. Goharshadi,** Molecular Dynamic Simulations of some Thermodynamic Properties of Mixtures of Argon with Neon, Krypton, and Xenon using Two-Body and Three-Body Interaction Potentials, *Fluid Phase Equilib.* **274,** 51-58 (2008).

47. **E. K. Goharshadi**, Y. Ding, M. Namayandeh Jorabchi, and P. Nancarrow, [Ultrasound-assisted green synthesis of nanocrystalline ZnO in the ionic liquid [hmim] [NTf2]](http://), *Ultrasonics Sonochemistry* **16,** 120-123 (2009)*.*

48**. E. K.** **Goharshadi,** M. Abbaspour, M. Namayandeh Jorabchi[a](http://#aff1#aff1), and M. Nahali, Computation of some thermodynamic properties of nitrogen using a new intermolecular potential from molecular dynamics simulation,[*Chem. Phys.*](http://) **358**, 185-195 (2009).

49. M. Abareshi, **E. K. Goharshadi**, S. M. Zebarjad, [Thermodynamic properties of the mixtures of some ionic liquids with alcohols using a simple equation of state](http://), *J. Mol. Liq*. **149**, 66-73 (2009).

50. M. Abareshi, S. M. Zebarjad, and **E. K. Goharshadi**, Crystallinity behavior of MDPE-clay nanocomposites fabricated using ball milling method*, J. Composites Mat.* **43**, 2821-2830 (2009).

51. M. Abareshi, S. M. Zebarjad, and **E. K. Goharshadi**, Study on the morphology and granulometry of polyethylene-clay nanocomposite powders, *J. Vinyl & Additive Technol.* **16,** 90-97 (2010).

 52. **E. K. Goharshadi**, M. Imani, R. Rahimi-Zarei, F. Razghandi, M. Abareshi, A. R. Berenji, Prediction of excess thermodynamic functions and activity coefficients of some polymeric liquid mixtures using a new equation of state, *Eur. Polymer J.* **46,** 587-591 (2010).

53. **E. K. Goharshadi** and H. Azizi-Toopkanlu, Validity of some regularities of dense fluids for ionic liquids, *J. Mol. Liq*. **151,** 117-121(2010).

54. M. Abbaspour, **E. K. Goharshadi**, and M. Namayandeh Jorabchi, Computation of some thermodynamic properties of helium-neon and helium-krypton fluid mixtures using molecular dynamics simulation, *Fluid Phase Equilib.* **291**, 117-124 (2010).

55.R. Jalal, **E. K. Goharshadi**, M. Abareshi, M. Moosavi, A. Yousefi, and P. Nancarrow, ZnO nanofluids: green synthesis, characterization, and antibacterial activity, *Mat. Chem. & Phys.* **121,** 198-201 (2010).

56. M. Moosavi, **E. K. Goharshadi**, and Abbas Youssefi, Fabrication, characterization, and measurement of some physicochemical properties of ZnO nanofluids, *Experimental Thermal & Fluid Sci*. **31**, 599-605 (2010).

57. M. Abbaspour and **E. K. Goharshadi**, Computation of some thermodynamics, transport, structural properties, and new equation of state for fluid neon using a new intermolecular potential from molecular dynamics simulation, *Theor. Chem. Acc*. **127**, 573–585 (2010).

58. M. Yeganeh, N. Shahtahmasebi, A. Kompany, **E. K. Goharshadi**, A. Youssefi, and L. Šiller, Volume fraction and temperature variations of the effective thermal conductivity of nanodiamond fluids in deionized water, *Int. J. Heat & Mass Transfe*r **53**, 3186–3192 (2010).

59. M. Abareshi, **E. K. Goharshadi**, S. M. Zebarjad, H. K. Fadafan, A. Youssefi, [Fabrication, characterization and measurement of thermal conductivity of fe3o4 nanofluids](http://), *J. Magnetism & Magnetic Mat.* **322**, 3895-3901 (2010).

# 60. M. Yazdanbakhsh, I. Khosravi, E. K. Goharshadi, A. Youssefi, [Fabrication of nano spinel ZnCr2O4 using sol-gel method and its application on removal of azo dye from aqueous solution](http://), *J. Hazardous Mater.* 184, 684–689 (2010).

# 61. E. K. Goharshadi, S. Samiee, P. Nancarrow, Fabrication of cerium oxide nanoparticles: characterization and optical properties, *J. Colloid & Interf. Sci.* 356,473–480 (2011).

62. **E. K. Goharshadi**, Y. Ding, X. Lai, and P. Nancarrow, Facile and green synthesis of ZnO nanostructures in a room-temperature ionic liquid 1-hexyl-3-methylimidazolium bis (trifluoromethylsulfonyl) imide,***Inorganic Mat.*** 47**, 379–384 (2011).**

63. **E. K. Goharshadi**, M. Abareshi, R. Mehrkhah, S. Samiee, M. Moosavi, A.Youssefi, P. Nancarrow, Preparation, Structural Characterization, Semiconductor and photoluminescent properties of zinc oxide nanoparticles in a phosphonium-based ionic liquid, *Mater. Sci. Semiconductor Processing* **14**, 69–72 (2011).

64. M. Abareshi, S. H. Sajjadi, S. M. Zebarjad, **E. K. Goharshadi**, Fabrication, characterization, and measurement of viscosity of -Fe2O3-glycerol nanofluids, *J. Mol. Liquids* **163**, 27-32 (2011).

65. I. Khosravi, M. Yazdanbakhsh, **E. K. Goharshadi**, A. Youssefi, Preparation of nanospinels NiMnxFe2−xO4 using sol–gel method and their applications on removal of azo dye from aqueous solutions, *Mater. Chem. & Phys*.**130** 1156– 1161 (2011).

66. **E. K. Goharshadi** and M. Hadadian, Effect of calcination temperature on structural, vibrational, optical, and rheological properties of zirconia nanoparticles, *Cermaic Int.* **38**, 1771-1777 (2012).

67. **E. K. Goharshadi** and S. Samiee, Effects of different precursors on size and optical properties of ceria nanoparticles prepared by microwave-assisted method
*Mater. Res. Bull.* **47**, 1089-1095 (2012).

68. **E. K. Goharshadi,** S. H. Sajjadi, R. Mehrkhah, P. Nancarrow, Sonochemical synthesis and measurement of optical properties of zinc sulfide quantum dots, *Chem. Eng. J.* **209**,113–117 (2012).

69. B. Akhlaghinia, H. Ebrahimabadi, **E. K. Goharshadi**, Ceria nanoparticles as an efficient catalyst for oxidation of benzylic C H bonds, J*. Molec. Catal. A: Chemical* **357**, 67– 72 (2012).

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INTERESTS

Walking, watching the nature, and reading scientific papers

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