**This file has been cleaned of potential threats. To view the reconstructed contents, please SCROLL DOWN to next page.**

**If you confirm that the file is coming from a trusted source, you can send the following SHA-256 hash value to your admin for the original file.**

ad1d5c572ff74b625d4da88a17ca6c7d6fd04227b0d7587c0ee214362bfbb3f0

###### Curriculum Vitae

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



**Address:** Department of Chemistry

Ferdowsi University of Mashhad

Mashshad 91779, Iran

**Tel:**  (+9851) 38805558

**Fax:** (+9851) 38796416

**Email:** [gohari@um.ac.ir](http://?)

[e\_goharshadi@yahoo.com](http://?)

[e.goharshadi@googlemail.com](http://?)

# 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).

70. **E. K. Goharshadi,** R. Mehrkhah, P. Nancarrow, Synthesis, characterization, and measurement of structural, optical, and phtotoluminescent properties of zinc sulfide quantum dots, *Mater. Sci. Semiconductor Processing*  **16,** 356-362(2013).

71. **E. K. Goharshadi** and H. Azizi-Toopkanlu, Silver colloid nanoparticles: Ultrasound-assisted synthesis, electrical and rheological properties, *Powder Technol.*  **237**, 97–101 (2013).

72. M. B. Moghaddam, **E. K. Goharshadi**, M. H. Entezari, P. Nancarrow, [Preparation, characterization, and rheological properties of graphene–glycerol nanofluids](http://?), *Chem. Eng. J.* **231**, 365-372 (2013).

73. **E. K. Goharshadi**, M. Hadadian, M. Karimi, H. Azizi-Toupkanloo, [Photocatalytic degradation of reactive black 5 azo dye by zinc sulfide quantum dots prepared by a sonochemical method](http://?) , *Mater Sci. Semiconductor Processing*, **16**, 1109-1116 (2013).

74. **E. K. Goharshadi**, S. J. Mahdizadeh, Natural gas storage on silicon, carbon, and silicon carbide nanotubes: a combined quantum mechanics and grand canonical Monte Carlo simulation study, *J. Nanopart. Res.* **15**, 1393- 1413 (2013).

75. **E. K. Goharshadi**, H. Ahmadzadeh, S. Samiee, and M. Hadadian, Nanofluids for Heat Transfer Enhancement-A Review, *Phys. Chem. Res.***1**, 1-33 (2013).

76. H. Rezvani Nikabadi, N. Shahtahmasebi, M. Rezaee Rokn-Abadi, M. M. Bagheri Mohagheghi, and **E. K. Goharshadi**, Gradual growth of gold nanoseeds on silica for SiO2@gold homogeneous nanocore/shell applications by the chemical reduction method*, Phys. Scr.* **87**, 1-5 (2013).

77. M. K. Otoufi, N. Shahtahmasebebi, A. Kompany, **E. K. Goharshadi**, Gradual growth of gold nanoseeds on silica for silica@gold core-shell nanoparticles and investigation of optical properties*, Int. J. Bio-Inorg. Hybd. Nanomat.* **2**, 477-483 (2013).

78. H. Azizi-Toupkanloo, **E. K. Goharshadi**, and Paul Nancarrow, Structural, electrical, and rheological properties of palladium/silver bimetallic anoparticles prepared by conventional and ultrasonic-assisted reduction methods, *Adv. Powder Technol.* **25,** 801-810 (2014).

79. S .J. Mahdizadeh and **E. K. Goharshadi**, Hydrogen storage on silicon, carbon, and silicon carbide nanotubes: A combined quantum mechanics and grand canonical Monte Carlo simulation study, *Int. J. Hydrogen Energy*, **39**, 1719-1731 (2014).

80. S. Samiee, **E. K. Goharshadi**, P. Nancarrow, Graphene nanosheets as efficient adsorbent for an azo dye removal: Kinetic and thermodynamic studies,  *J. Nanopart. Res.* **16**, 2542-2550 (2014).

81. S. J. Mahdizadeh and **E. K. Goharshadi**, Thermal conductivity and heat transport properties of graphene nanoribbons, *J. Nanopart. Res.* **16**, 2553-2558 (2014).

82. M. Abreshi, S. M. Zebarjad, and **E. K. Goharshadi**, Non-isothermal crystallization kinetics of polyethylene–clay nanocomposites prepared by high-energy ball milling, *Bull. Mater. Sci.* **37**, 1113–1121 (2014).

83. R. Jalal, **E. K. Goharshadi**, S. H. Sajjadi, and P. Nancarrow, Antibacterial activity of short-chained 1-alkyl-3-methylimidazolium bis(trifluoromethylsulfonyl) imide ionic liquids, *Phys. Chem. Res*. **2**, 260-269 (2014).

84. M. Hadadian, **E. K. Goharshadi**, and A. Youssefi, Electrical conductivity, thermal conductivity, and rheological properties of graphene oxide-based nanofluids, *J. Nanopart. Res.* **16**, 2788-2805 (2014).

85. M. K. Otoufi, N. Shahtahmasebi, A. Kompany, **E. K. Goharshadi**, Ali Roghani, Gradual growth of gold nanoseeds on silica for silica@gold core–shell nano applications by two different methods: a comparison on structural properties*, J. Clust. Sci.* **25**, 1307–1317 (2014).

86. S. Rezazadeh, B.  Akhlaghinia, **E. K.**  **Goharshadi,** H. Sarvari, An efficient method for chemoselective reduction of nitro compounds using bimetallic Fe-Ni NPs/H3PW12O40×H2O system, *J.* Chinese Chem. Soc. **61**, 108-1114 (2014).

87. **E. K. Goharshadi**, H. Azizi-Toupkanloo, and M. Karimi, Electrical conductivity of water-based palladium nanofluids, *Microfluid Nanofluid* **18**, 667-672 (2015).

88. H. Shahraki, M. H. Entezari, and **E. K. Goharshadi**, Sono-synthesis of biodiesel from soybean oil by KF/c-Al2O3 as a nano-solid-base catalyst, *Ultrason. Sonochem*. **23,** 266–274 (2015).

89. M. Zarabi, M. H. Entezari, and **E. K. Goharshadi**, Photocatalytic oxidative desulfurization of dibenzothiophene by C/TiO2@MCM-41 nanoparticles under visible light and mild conditions, *RSC Adv.* **5**, 34652–34662 (2015).

90. **E. K. Goharshadi** andM. B. Moghaddam, Adsorption of hexavalent chromium ions from aqueous solution by graphene nanosheets: kinetic and thermodynamic studies*, Int. J. Environ. Sci. Technol.* **12**, 2153-2160 (2015).

91.M. Zarei, H. Ahmadzadeh, and **E. K. Goharshadi**, Embedded ceria nanoparticles in gel improve electrophoretic separation: a preliminary demonstration, *Analyst* **140**, 4434-4444 (2015).

92. M. Zarei, H. Ahmadzadeh, **E. K. Goharshadi**,and A. Farzaneh, Graphitic carbon nitride embedded hydrogels for enhanced gel electrophoresis, *Anal. Chim. Acta* **88**, 245-252 (2015).

93. **E. K. Goharshadi** and S. J. Mahdizadeh,Thermal conductivity and heat transport properties of nitrogen-doped graphene,*J*. Mol. Graph. *Model***. 62**, 74-80 (2015).

94. M. Saliani, R. Jalal, and **E. K. Goharshadi**, Effects of pH and temperature on antibacterial activity of zinc oxide nanofluid against *Escherichia coli* O157: H7 and *Staphylococcus aureus*, *Jundishapur J. Microbiol*. **8**, e17115 (2015).

95. M. Zarei, **Elaheh K. Goharshadi**, H. Ahmadzadeh, and Sara Samiee, Improvement of heat dissipation in agarose gel electrophoresis by metal oxide nanoparticles, *RSC Adv.* **5** (2015) 88655-88665.

96. M. Karimi‑Nazarabad, **E. K. Goharshadi**, M. H. Entezari, P. Nancarrow, Rheological properties of the nanofluids of tungsten oxide nanoparticles in ethylene glycol and glycerol, *Microfluid Nanofluid* **19** (2015) 1191-1202.

## 97. **E. K. Goharshadi**, G. Akhlemadi, [S. J. Mahdizadeh](http://?), Investigation of graphene oxide nanosheets dispersion in water based on solubility parameter: a molecular dynamics simulation study, *RSC Adv*. **5** (2015) 106421-106430.

98.**E. K. Goharshadi**, T. Mahvelati, M. Yazdanbakhsh,Lanthania colloid nanoparticles: Hydrothermal synthesis, structural, and rheological properties, *Phys. Chem. Res.* ***4*** (2016) 143-151.

99. M. Saliani, R. Jalal, **E. K. Goharshadi**, Mechanism of oxidative stress involved in the toxicity of ZnO nanoparticles against eukaryotic cells, *Nanomed. J.* 3 (2016) 1-14.

100. **E. K. Goharshadi**, T. Mahvelati, and M. Yazdanbakhsh, Influence of preparation methods of microwave, sol-gel, and hydrothermal on structural and optical properties of lanthania nanoparticles, *J. IRAN Chem. Soc.* **13**, 65-72 (2016).

101. M. Abreshi, S. M. Zebarjad, and **E. K. Goharshadi**, Effect of milling time and clay content on the thermal stability of polyethylene-clay nanocomposite, *J. Vinyl & Additive Technol.* **22**,285-292(2016).

102. S. J. Mahdizadeh, **E. K. Goharshadi**, and G. Akhlamadi, Thermo-mechanical properties of boron nitride nanoribbons: A molecular dynamics simulation study, *J*. Mol. Graph. *Model***.** **68**, 1-13 (2016).

103. M. B. Moghaddam, **E. K. Goharshadi**, F. Moosavi, Structural and transport properties and solubility parameter of graphene/glycerol nanofluids: A molecular dynamics simulation study, *J. Mol. Liq.*  **222**, 82-87 (2016).

104. M. B. Moghaddam, **E. K. Goharshadi**, and F, Moosavi, Glycerol revisited molecular dynamic simulations of structural, dynamical, and thermodynamic properties, *J. IRAN Chem. Soc.* **1**, 1-7 (2016).

105. M. Abareshi, S. M. Zebarjad, **E. K. Goharshadi**, Effect of milling time and clay content on the thermal

stability of polyethylene-clay nanocomposite, *J. Vinyl Addit. Techn.* **22**, 285-295 (2016).

106. M. Karimi-Nazarabad, **E. K. Goharshadi**, A. Youssefi, Particle shape effects on transport properties of tungsten oxide nanofluids *J. Mol. Liq .***223**, 228-235 (2016).

|  |  |
| --- | --- |
| 107. S. Samiee, **E. K. Goharshadi**, P. Nancarrow, Successful degradation of Reactive Black 5 by engineered Fe/Pd nanoparticles: Mechanism and kinetics aspects, *J. Taiwan Inst. Chem. Eng*. **67**, 406–417 (2016).  108. M. Hadadian, J.-P. Correa-Baena, **E. K. Goharshadi**, A. Ummadisingu, J.-Y. Seo, J. Luo, S. Gholipour, S. M. Zakeeruddin, M. Saliba, A. Abate, M. Grätzel, and A. Hagfeldt, Enhancing efficiency of perovskite solar cells via n-doped graphene: crystal modification and surface passivation, *Adv. Mater.* **28**, 8681-8686 (2016).  109. A. Farzaneh, N. Saghatoleslami, **E. K. Goharshadi**, H. Gharibi, and H. Ahmadzadeh, 3-D mesoporous nitrogen-doped reduced graphene oxide as an efficient metal-free electrocatalyst for oxygen reduction reaction in alkaline fuel cells: Role of and lone pair electrons, *Electrochim. Acta* **222**, 608-618 (2016).  110. M. Karimi-Nazarabad and **E. K. Goharshadi**, Highly efficient photocatalytic and photoelectrocatalytic activity of solar light driven WO3/g-C3N4 nanocomposite, *Sol. Energ. Mat. Sol. Cells* **160** 484–493 (2017).  111. T. Mahvelati-Shamsabadi and **E.K. Goharshadi**, Photostability and visible-light-driven photoactivity enhancement of hierarchical ZnS nanoparticles: The role of embedment of stable defect sites on the catalyst surface with the assistant of ultrasonic waves*, Ultrasonics Sonochem*. **34**, 78–89 (2017).  112. S. Naderi, **E. K. Goharshadi**, and H. Ahmadzadeh, Application of GMA equation of state to study thermodynamic properties of 2-amino-2-methyl-1-propanol as an efficient absorbent for CO2, *Phys. Chem. Res*. **5**, 317-328 (2017).  113. M. B. Moghaddam, **E. K. Goharshadi**, and F. Moosavi, Glycerol revisited molecular dynamic simulations of structural, dynamical, and thermodynamic properties, *J. IRAN Chem. Soc.* 14, 1-7 (2017).  114. S. H. Sajjadiand **E. K. Goharshadi**, Highly monodispersed hematite cubes for removal of water-soluble dyes, *J. Environ. Chem. Eng.* **5**, 1096-1106 (2017).  115. M. Moghayedi, **E. K. Goharshadi**, K. Ghazvini d, H. Ahmadzadeh, R. Ludwig, M. Namayandeh-Jorabchi, Improving antibacterial activity of phosphomolybdic acid using graphene, *Mater. Chem. Phys.***188**,58-67 (2017).  116. M. Moghayedi, H. Ahmadzadeh,K. Ghazvini, **E. K. Goharshadi**,Neglected antibacterial activity of ethylene glycol as a common solvent, *Microbial Pathogenesis* **107**, 457-461 (2017).  116. S. Mohajer, M. Chamsaz, **E. K. Goharshadi**, and S. Samiee, Nanometer-sized cerium oxide particles for solid phase extraction of trace amounts of mercury in real samples prior to cold vapor atomic adsorption  Spectrometry, *Separation Science & Technol.* **52**, 1652–1659 (2017).  117. **E. K. Goharshadi**, Z. Niyazi, M. Shafaee, M. B. Moghaddam, R. Ludwig, M. Namayandeh-Jorabchi, Transport properties of graphene quantum dots in glycerol and distilled water*, J. Molec. Liq*. **241**, 831–838 (2017).  118. M. Moghayedi, **E. K. Goharshad**i, K. Ghazvini, H. Ahmadzadeh, L. Ranjbaran, R. Masoudi, R. Ludwig,  Kinetics and mechanism of antibacterial activity and cytotoxicity of Ag-RGO nanocomposite, *Colloids and Surfaces B: Biointerfaces* 159, 366–374 (2017).  119. Z. M. [Milani, R.](http://?) [Jalal,](http://?)  **E. K. Goharshad**i, Carbodiimide for covalent α-Amylase immobilization onto magnetic nanoparticles, [*Int. J. Nanoscience*](http://?) **16**,  1750015 (2017). |  |

**Patents**

1. **E. K. Goharshadi** and A. Boushehri, Synthesis of diamond thin films using hot filament method, I. R. Patent (patent no. 25410) (1996).
2. **E. K. Goharshadi**, A.Farzaneh, N. Saghatoleslami, and H. Ahmadzadeh, Production of nanoporous graphitic carbon nitride from oxy amino triazines (wastes of melamine production process), Patent (patent no. 1395500001400030-2035) (2016).

# Books

1. Lida Fotouhi and E. K. Goharshadi, How Can We Use Chemical Literature, Ferdowsi University Press (2001).
2. Translation of Reaction Kinetics by M.J. Pilling, Oxford University Press (1995), Translated by S. Khaleghi, E. K. Goharshadi and, L. Fotouhi, University Press Center, Iran (2003).
3. R. Jallah, E. K. Goharshadi, V. Noubakht, and R. Daneshtalab, Indicators (Principles, Kinds, and Applictions), Tamrin Publisher (2006).
4. E. K. Goharshadi and M. Moosavi, Statistical Mechanics, Ferdowsi University Press (2008).
5. E. K. Goharshadi, M. Moosavi, and F. Moosavi, Principles of Molecular Dynamics Simulation, Ferdowsi University Press (2008).
6. Translation of Molecular Spectroscopy by John M. Brown, Oxford Chemistry Primers (1998). Translated by M. Razavizadeh, E. K. Goharshadi, and H. Azizi--Toupkanloo, Sina Teb Institute (2015).
7. E. K. Goharshadi and H. Azizi-Toupkanloo, Electrical and Rheological Properties of Metallic Nanoparticles: With Emphasis on Bimetallic Nanoparticles, Omniscriptum Gmbh & Company Kg., 112 pp (2015).

# PROCEEDINGS

1. A. Boushehri and **E. K. Goharshadi**, Thermal diffusion factor in gas mixtures, 13th European Conference on Thermophysical Properties, Lisbon, Portugal, Aug 30-Sept 03 (1993).
2. A. Boushehri and **E. K. Goharshadi**, Common compressibility point of lennard-jones liquid mixtures, 1st International Chemical and Chemical Engineering Conference, Iran (1993).
3. A. Boushehri and **E. K. Goharshadi**, Common Intersection Point Independent of Temperature for Compressed Liquid Mixtures, 6th European Symposium on Thermal Analysis and Calorimetry, Grado, Italy 11-16 Sept. (1994).
4. **E. K. Goharshadi** and A. Boushehri, Common intersection point of bulk modulus and pressure dependence of excess molar volume of compressed liquid mixtures, 2nd Congress of Physical Chemistry, Isfahan, Iran (1995).
5. **E. K. Goharshadi** and A. Boushehri, Common intersection point independent of mole fraction, a new regularity, 3rd Congress of Physical Chemistry, Mashhad, Iran (1997).
6. **E. K. Goharshadi** and Z. Mirafzali, Direct determination of interaction potentials of Kr/ SF6 and Xe/ SF6, 3rd Congress of Physical Chemistry, Mashhad, Iran (1997).
7. **E. K. Goharshadi** and A. Boushehri, Compressibility of liquids and liquid mixtures, 2nd International and 12th National Congress of Chemical & Chemical Engineering Chemistry, Kerman, Iran (1998).
8. **E. K. Goharshadi**, Direct determination of interaction potentials of Ar/N2, Ne/N2, and He/ N2, 2nd International and 12th National Congress of Chemical & Chemical Engineering Chemistry, Kerman, Iran (1998).
9. **E. K. Goharshadi** and F. Nazari, Computation of internal Pressure of Liquids, 1 st Physical-Chemical Conference Held by the Iranian Universities’ Faculty, Shiraz, Iran (1999).
10. **E. K. Goharshadi** and Z. Tavangar, Direct Determination of Interaction Potentials of Kr/ N2, Xe/ N2, and He/ SF6, 4th Congress of Physical Chemistry, Kish, Iran (2001).
11. **E. K. Goharshadi**, M. Jamilahmadi, and B. Najafi, Direct determination of interaction potentials of argon, krypton, and xenon via the inversion of reduced viscosity collision integrals at zero pressure, 4th Congress of Physical Chemistry, Kish , Iran (2001).
12. **E. K. Goharshadi**, M. Jamilahmadi, and B. Najafi, Direct Determination of Interaction Potentials of Argon, Krypton, and Xenon, 14th Candian Conference on Theoretical Chemistry, Ottawa, Canada (2001).
13. **E. K. Goharshadi** and A. Naserimood, A common intersection point independent of pressure, 17th IUPAC Conference on Chemical Thermodynamics (ICCT), Rostock, Germany (2002).
14. **E. K. Goharshadi** and M. Hesabi, Prediction of solubility parameter of liquids using statistical mechanical equations of state, 17th IUPAC Conference on Chemical Thermodynamics (ICCT), Rostock, Germany (2002).
15. **E. K. Goharshadi** and M. Abbaspour, Direct determination of interaction potential of methane via the inversion of reduced viscosity collision integrals at zero pressure, 16th European Conference on Thermophysical Properties (ECTP), London, UK (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, 39th IUPAC Congress and the 86th Conference of the Canadian Society for Chemistry, Ottawa, Canada (2003).
17. **E. K. Goharshadi**, M. Abbaspour, and A. Morsali**,** Determination of potential energy functions and calculation transport properties of oxygen and nitric oxide, 18th IUPAC Conference on Chemical Thermodynamics (ICCT), Beijing, China (2004).
18. **E. K. Goharshadi** and A. Morsali**,** New regularities and an equation of state for liquids, 18th IUPAC Conference on Chemical Thermodynamics (ICCT), Beijing, China (2004).
19. **E. K. Goharshadi** and F. Moosavi, Prediction of thermodynamic properties of some hydrofluoroether refrigerants using GMA equation of state, 18th IUPAC Conference on Chemical Thermodynamics (ICCT), Beijing, China (2004).
20. **E. K. Goharshadi**, M. Nahali, and M. Baherololoom, Potential energy function and transport properties of sulphur hexafluoride, 18th IUPAC Conference on Chemical Thermodynamics (ICCT), Beijing, China (2004).
21. **E. K. Goharshadi** and M. Moosavi, Extention of a new equation of state to the liquid mixtures, 40th IUPAC Congress, Beijing, China (2005).
22. **E. K. Goharshadi** and A. R. Berenji, Application of new equation of state in prediction of the thermodynamic properties of liquid alkali metals, 40th IUPAC Congress, Beijing, China (2005).
23. M. Abbaspour and **E. K. Goharshadi**, Molecular dynamics simulation of the phase behavior of argon using two-body and three-body intermolecular potentials, 40th IUPAC Congress, Beijing, China (2005).
24. **E. K. Goharshadi** and M. Moosavi, Extension of a new equation of state to the liquid mixtures, 40th IUPAC Congress, Beijing, China (2005).
25. A. Morsal, **E. K. Goharshadi**, and N. Shahtahmasbi, Evaluation of high-frequency elastic modulus of the lennard-jones fluid using analytical expressions for radial distribution function, 40th IUPAC Congress, Beijing, China (2005).
26. A. Morsali, **E. K. Goharshadi**, G. A. Mansoori, and M. Abbaspour, An accurate expression for radial distribution function of the Lennard-Jones fluid, 7th IranianPhysical Chemistry Seminar, Isfahan, Iran (2005).
27. **E. K. Goharshadi** and M. Moosavi, Prediction of thermodynamic properties of liquid air, 41th IUPAC Congress, Italy, Torino (2007).
28. M. Moosaviand **E. K. Goharshadi**, Molecular dynamics simulation of the binary mixtures of argon-neon, argon-krypton, and argon-xenon using two-body and three-body, 41th IUPAC Congress, Italy, Torino (2007).
29. M. Namayandeh and **E. K. Goharshadi**, Effect of three-body interactions on the vapor-liquid phase equilibria of binary fluid mixtures of helium and neon, 41th IUPAC Congress, Italy, Torino (2007).
30. H. Kashani and **E. K. Goharshadi**, Molecular dynamics simulation of helium using two-body and three-body intermolecular potentials, 41th IUPAC Congress, Italy, Torino (2007).
31. **E. K. Goharshadi,** M. Abareshi, and R. Jalal, Prediction of excess thermodynamic functions of some liquid mixtures using a new equation of state, 41th IUPAC Congress, Italy, Torino (2007).
32. **E. K. Goharshadi,** Y. Ding, and P. Nancarrow, Synthesis of ZnO Nanostructure in an Ionic Liquid, 41th IUPAC Congress, Italy, Torino (2007).
33. **E. K. Goharshadi**, New Attractive Progress Research in Nanotechnology, 11th Iranian Physical Chemistry Seminar, Ardabil, Iran (2008).
34. M. Namayandeh, **E. K. Goharshadi**, and M. Abbaspour, Computation of Some Thermodynamic Properties of He-Kr Mixture using Molecular Dynamics Simulation, 11th Iranian Physical Chemistry Seminar, Ardabil, Iran (2008).
35. M. Moosaviand **E. K. Goharshadi**, Thermodynamic Properties of Some Ionic Liquids using a Simple Equation of State, 11th Iranian Physical Chemistry Seminar, Ardabil, Iran (2008).

36. **E. K. Goharshadi**, M. Abareshi, A. Berenj, M. Imani, F. Razghandi, and R. Rahimi-Zarei, Prediction of excess thermodynamic functions and activity coefficients of some polymeric liquid mixtures using a simple equation of state**,** 12th Iranian Physical Chemistry Seminar, Sanandaj, Iran (2009).

37. M. Moosavi,**E. K. Goharshadi**, and A. Yousefi, Fabrication, characterization, and measurement of some physicochemical properties of Zno nanofluid, 12th Iranian Physical Chemistry Seminar, Sanandaj, Iran (2009).

38. R. Jallal,**E. K. Goharshadi**,M. Moosavi, M. Abareshi, and A. Yousefi,Antibacterial activity of nanofluids of zinc oxide nanoparticles, 12th Iranian Physical Chemistry Seminar, Sanandaj, Iran (2009).

39. **E. K. Goharshadi**, M. Abareshi, and P. Nancarrow, Preparation and structural characterization of phosphonium–functional ionic liquid Zno nanoparticles, 5th IUPAC International Symposium on Novel Materials and Synthesis & 19th International Symposium on Fine Chemistry and Functional Polymers, Shanghi, China (2009).

40.M. Abareshi1, **E. K. Goharshadi**, S. M. Zebarjad, A. Youssefi, and H. Khandan Fadafan,Measurement of thermal conductivity of Fe3O4 nanofluids, 5th IUPAC International Symposium on Novel Materials and Synthesis &19th International Symposium on Fine Chemistry and Functional Polymers, Shanghi, China (2009).

41. **E. K. Goharshadi,** R. Mehrkhah, P. Nancarrow, Green synthesis and structural characterization of zinc sulfide nanoparticles, Kuwait Conference of Chemistry Kuwait, March 6 – 9 (2010).

42. H. Azizi Toopkanlu and **E. K. Goharshadi**, Validity of some regularities of dense fluids for ionic liquids, 13th Iranian Physical Chemistry Seminar, April 12-15 (2010).

43. E. K. Goharshadi, Mohsen Abbaspour, Majid Namayandeh Jorabchi, and Masoud Nahali, Computation of some thermodynamic properties of nitrogen using a new intermolecular potential frommolecular dynamics simulation, 13th Iranian Physical Chemistry Seminar, April 12-15 (2010).

44. M. Abareshia, S. M. Zebarjad, and E. K. Goharshadi, Effect of milling time and clay content on the thermal stability of polyethylene-clay nanocomposite, 13th Iranian Physical Chemistry Seminar, April 12-15 (2010).

45. E. K. Goharshadi, S. H. Sajjadi, M. Abareshi, and S.M. Zebarjad, Fabrication, characterization, and measurement of some transport properties of α-Fe2O3 and Fe3O4 magnetic nanofluids, 14th Iranian Physical Chemistry Conference, Kish, February 25-28 (2011).

46. R. Jalal, **E. K. Goharshadi**, S. H. Sajjadi, F. Eshkil, Antibacterial activity of quaternaryimidazolium salts, 14th Iranian Physical Chemistry Conference, Kish, February 25-28 (2011).

47.M. Hadadian and **E. K. Goharshadi**, Fabrication, Characterization, and measurement of optical properties of zirconia nanoparticles, 14th Iranian Physical Chemistry Conference, Kish, February 25-28 (2011).

48. **E. K. Goharshadi**, M. Abareshi, R. Mehrkhah, S. Samiee, M. Moosavi, A. Youssefi, and Paul Nancarrow, Green synthesis, structural characterization, and optical properties of zinc oxide nanoparticles, 14th Iranian Physical Chemistry Conference, Kish, February 25-28 (2011).

49. **E. K. Goharshadi**, Physcis and Chemistry of Nanostructures, 15th Iranian Chemistry Congress, Hamadan, September 4-6 (2011).

50. **E. K. Goharshadi**,H. Sarvari, S. Samiee, and N. Ashraf, Kinetics and thermodynamics study of removal of dye pollutants from aqueous solutions using bimetallic nanoparticles fabricated by co-reduction method, 5th National Seminar of Chemistry and Environment, December 21-23 (2011).

51. H. Azizi - Toupkanlooa, M. Hadadian, **E. K. Goharshadi**, Sonochemical synthesis of Zinc sulfide quantum dots and their photocatalytic activity for dye removal, 5th National Seminar of Chemistry and Environment, December 21-23 (2011).

52. **E. K. Goharshadi** and H. Azizi-Toupkanloo, rheological properties of silver nanofluids fabricated by sonochemical method, 13th European Society of Sonochemistry Meeting, Ukrine (Lviv) July 1-5 (2012).

53. M. Hadadian, **E. K. Goharshadi**, Optical and structural properties of ZnS quantum dots bfabricated by sonochemical method, 15th Iranian Physical Chemistry Conference, Tehran, September 3-6 (2012).

54. **E. K. Goharshadi** and H. Azizi-Toupkanloo, Structural properties of silver\palladium bimetallic nanoparticles fabricated by ultrasound method, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, September 8 – 10 (2012).

55. M. B. Moghadam and **E. K. Goharshadi**, Preparation and characterization of graphene nanosheets, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, September 8 – 10 (2012).

56. M. K. Atoofi, N. Shahtahmasebi, **E. K. Goharshadi**, Synthesize and characterization of silica@gold core-shell nanoparticles based on two different methods, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, September 8 – 10 (2012).

57. S. J. Mahdizadeh and **E. K. Goharshadi**, Natural gas storage on single walled carbon and boron nitride nanotube arrays, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, September 8 – 10 (2012).

58. T. Mahvelati, **E. K. Goharshadi**, M. Yazdanbakhsh, Synthesis, characterization, and optical properties of lanthania nanoparticles, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, September 8 – 10 (2012).

59. M. Yeganeh, N. Shahtahmasebi, A. Kompany, **E. K. Goharshadi**, A. Youssefi, L. Šiller, Measurements of thermal conductivity of nanodiamond fluids in engine oil, International Congress on Nanoscience & Nanotechnology (ICNN2012), Kashan, September 8 – 10 (2012).

60. S. Kiana,M. Yazdanbakhsh, **E. K. Goharshadi**, M. Jamialahmadi, A. Farhadipour, Theoretical investigations of trinuclear oxo-centered basic formate iron (III) complex, 14th Iranian Inorganic Chemistry Conference, Tehran, August 25-26 (2012).

61. M. Karimi and **E. K. Goharshadi**, Rheological properties of fabricated tungsten oxide nanoparticle dispersed in ethylene glycol, 15th Iranian Inorganic Chemistry Conference Yazd, September 7-9 (2013).

62. **E. K. Goharshadi** and Sara Samiee, Graphene nanosheets as an efficient adsorbent for an azo dye removal, 6th Iranian National Seminar of Chemistry and the Environment, October 29-30, Tabriz (2013).

63. Sara Samiee and **E. K. Goharshadi**, Fast and efficient azo dye removal using engineered Fe/Pd bimetallic nanoparticles: Kinetics and thermodynamics studies, 16 th Iranian Physical Chemistry Conference, October 29-31, Babolsar (2013).

64**. E. K. Goharshadi**, M. MatinFard, H. Ahmadzadeh, M. Hadadian, Adsorption of Ni (ii) from aqueous solutions using graphene nanosheets and graphene-zinc oxide nanocomposite: thermodynamic and kinetic studies, 3rd ScienceOne Conference on Environmental Sciences, Dubai, January 21-23 (2014).

65. **E. K. Goharshadi**, Future direction of physical chemistry in Iran, 17th Iranian Chemistry Congress, Rafsanjan, September 1-3 (2014).

66. G. Akhlemadi, S. J. Mahdizadeh, and **E. K. Goharshadi**, Investigation of graphene oxide nanosheets dispersion in water using molecular dynamics simulation, 17th Iranian Chemistry Congress, Rafsanjan, September 1-3 (2014).

67. M. Hadadian,**E. K. Goharshadi**, and Abbas Youssefi, Effect of calcination temperature on the structural and optical properties of zirconia nanoparticles, 10th Congress of the Iranian Ceramic Society & 1st  International Conference on Advanced Ceramics, Karaj, May 4-6 (2015).

68. G. Akhlemadi, S. J. Mahdizadeh, and **E. K. Goharshadi**, Structural and thermodynamic properties of graphene oxide nanosheets: a molecular dynamics simulation study, Second National Conference on Nano Science and Technology, Tehran, May 20-21 (2015).

69. Monireh B. Moghaddam, **E. K. Goharshadi**, Fatemeh Moosavi, Solubility parameter of graphene: a md simulation study, 18th Iranian Chemistry Congress, Semnan, Aug 30-Sept 1(2015).

70. Sayyed Hashem Sajjadi, **E. K. Goharshadi**, Highly monodispersed hematite cubes for water remediation, 18th Iranian Physical Chemistry Conference, Kish, March 5-8 (2016).

71. S. Naderi, **E.K. Goharshadi**, H. Ahmadzadeh, Thermodynamic properties of CO2 and 2-amino-2-methyl-1-propanol, an efficient absorbent for CO2, using GMA equation of state, 18th Iranian Physical Chemistry Conference, Kish, March 5-8 (2016).

72. T. Mahvelati, Z. Niazee, M. Shafaee, **E. K. Goharshadi**, Improving photocatalytic activity of ZnS nanoparticles for degradation of an azo dye under sunlight via synergistic effect of graphene nanosheets, 6th International Conference on Nanostructures (ICNS6), Kish Island, March 7-10 (2016).

73. T. Mahvelati and **E. K. Goharshadi**, Improving photocatalytic activity of ZnS nanoparticles for degradation of an azo dye under sunlight via synergistic effect of graphene nanosheets, 6th International Conference on Nanostructures (ICNS6), Kish Island, March 7-10 (2016).

74. M. Shafaee, Z. Niyazi, **E. K. Goharshadi**, Enhanced visible-light-driven photocatalytic activity of hierarchical anatase TiO2 nanostructures, 19th Iranian Physical Chemistry Conference, Rasht, September 15-16 (2016).

75. **E. K. Goharshadi**, M. Hadadian, M. B. Moghaddam, Transport properties of nanofluids containing graphene-based nanomaterials, 3rd World Congress and Expo on Nanotechnology, Singapore, November 7-9 (2016).

76. M. Hadadian, **E. K. Goharshadi**, J.-P. Correa-Baena, and A. Hagfeldt, Enhancing efficiency of perovskite solar cells via n-doped graphene, 6th Conference on Nanostructured Solar Cells, Sharif University of Technology, December 22 (2016).

INTERESTS

Walking, watching the nature, and reading scientific papers

REFERENCES

1. Professor G. Ali Mansoori, [Chemical Engineering Department](http://?), College of University of Illinois at Chicago, USA

**Email:** [mansoori@uic.edu](http://?)

2. Professor G. Abas Parsafar, Chemistry Department, Sharif University of Technology,

Tehran, Iran

**Email:** parsafar@sharif.edu