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| Curriculum Vitae | Name **Ezat** Surname **Keshavarzi**  Date of Birth 6th September, 1970 Place of Birth Fasa, Iran  Nationality Iranian Sex Female  Marital Status married Number of Children ---1---- |
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|  | |  |  | | --- | --- | | Education | **B.Sc. (Chemistry),**  Isfahan University, Isfahan, Iran  1989- 1993    **M.Sc. (Physical Chemistry, Statistical Thermosynamics)** Shiraz University ,Shiraz, Iran  1994 - 1996  MSc. Thesis Title “***Equation of state for liquid mixtures, a new correlation for heat of vaporization from surface tension”*** Shiraz university,1996  **Ph. D (Physical Chemistry, Statistical Thermodynamics),** Isfahan university of Technology , Isfahan, Iran  1996 -2000  Ph. D Thesis Title “***The Role of Intermolecular Forces in the Structure and Thermodynamic Properties of Fluid***s” IUT, 2000 |      |  |  | | --- | --- | | work experiences | 2000 - 2002 Mazandaran University Babolsar, Iran  **Assistant Professor**  2002-2005 Isfahan university of Technology Isfahan, Iran  **Assistant Professor**  2005-2011 Isfahan university of Technology Isfahan, Iran  **Associate Professor**  2011-present Isfahan university of Technology Isfahan, Iran  **Professor** | |  |  | |
| Research of  Interest | Statistical Thermodynamics of In-homogenous fluids  Classical Density Functional Theory  Electric Double Layer Super Capacitors  Confined Fluids  Phase Transition  Pressure tensor  Interfacial Properties, Adsorption of Confined Fluid in Nanopores  Nano-thermodynamics  Thermodynamics of small systems  Molecular Building bulks  Nanoclusters  Nanofluids  Thermal conductivity, Viscosity, and Rheological Properties of Nano-Fluid  Statitistical thermodynamics of bulk fluids  Radial Distribution Function  Direct Correlation Function  Small K Structure of Factor  Equation of state  Intermolecular Force |
| Conference | 1- E- Keshavarzi, G. A. Parsafar, and B. Najafi “ *Developing a new model for the prediction of solubility of binary mixtures using LIR equation of states*” The fourth national congress of Iranian Chemical Engineering, Tehran, **1998**  2- E- Keshavarzi, G. A. Parsafar, and B. Najafi “ *Prediction of attractive branch of effective potential using Joule- Thomson inversion Curve*” Thirteenth Iranian Chemistry & Chemical Engineering Congress, Tehran, Iran, **1999**  3- E. Keshavarzi, A. A. Rostami, F Tabarinia, “*Hard Like equation of state”4th physical chem. Ceminar, Kish Iran,* ***2000***  4- E. Keshavarzi, A. A. Rostami, Z Ghazvini, “Prediction of the effective pair potential parameters via p-v- T data”*4th physical chem. Ceminar, Kish Iran,* ***2000***  5-H. Nikoofard, E. Keshavarzi, A.A. Rostami, “ The correlation length and the small-k behavior of S(k) in the critical region” 6*th physical chem*. *Ceminar, Urmia, iran,****2002.***  6- M. Vahedpour, M. Bamdad, E. Keshavarzi, B. Najafi “Prediction of the shear modulus using the analytical expression for the first shell of radial distribution function” 6*th physical chem*. *Ceminar, Urmia, iran,****2002.***  7-E. Keshavarzi, F. Joorkesh “ Derivation of the analytical expression for radial distribution function*”* 6*th physical chem*. *Ceminar, Urmia, iran,****2002.***  8- M. Bamdad, M. Vahedpour, B. Najafi E. Keshavarzi, “Prediction of the viscosity of fluids using the shear modulus” 6*th physical chem*. *Ceminar, Urmia, iran,****2002.***  9- E. Keshavarzi, A. A. Rostami, Z. Ghazvini “state dependency of the Effective pair potential via p-V-T data” *17th Iupac Conference on chemical thermodynamics, Rostock, Germany,* **2002***.*    10-E. Keshavarzi , M. Kamalvand "Prediction of the small k behavior of the structure of factor for Rb and Cs vi a new model.., 18*h Iupac Conference on chemical thermodynamics, Beijing, China,* **2002***.*  11-M. Bamdad,1 S. Alavi,2 B. Najafi,1 and E. Keshavarzi1"Radial Distribution Function of Lennard-Jones via Molecular Dynamic Simulation"7th *Phys. Chem.. Seminar, IUT, Isfahan, Iran****,* 2005.**    12-E. Jazan and E. Keshavarzi "Solid-Liquid Phase Transition of nanoclusters "7th *Phys. Chem.. Seminar, IUT, Isfahan, Iran,* **2005**.  13-H.pezeshki1 *,* E.Keshavarzi"Adamantane nanocluster( 13 *A* ) melting point & its stable structure by molecular dynamics simulation "7th *Phys. Chem.. Seminar, IUT, Isfahan, Iran****,* 2005**.  َ14- R. Sohrabi, E. Keshavarzi, "A Generalized method to derive the EOS for confined fluids in nanopores"7th *Phys. Chem. Seminar, IUT, Isfahan, Iran****,* 2005**.    15- E. Keshavarzi & E, Jazan "Size dependence of the nanoclusters melting point" 9th *Irainian Phys. Chemistry seminar Guilan university Rasht Iran*. **2006**.  16- E. Keshavarzi & F. Heidari nabi "Statistical Mechanics of Confined Fluids" 9th *Irainian Phys. Chem. seminar Guilan university, Rasht, Iran*, **2006**.  17- E. Keshavarzi and M. Kamalvand “Density Profile of Hard Sphere Fluid Confined Within Slit-Like Pores and Fluids Density” 1st *Conference of Nanotechnology in Environments, IUT,Iran,* **2007**.  18- E. Keshavarzi & F. Heidari nabi “The Equation of State of Confined Fluids in Nanopores” 1st *Conference of Nanotechnology in Environments, IUT,Iran,* **2007**.  19- M. Kamalvand, E. Keshavarz, "Application of Density Functional Theory to the structure of hard sphere fluid around different hard and soft spheres", 11th Iranian Physical Chemistry Seminar ,Mohaghegh Ardabili Uni., Ardabil,, July 21-24, **2008**  20- M. Kamalvand, E. Keshavarzi" The entropy of fluids confined within nano-pores by density functional theory" 11th Iranian Physical Chemistry Seminar, , Mohaghegh Ardabili Uni., Ardabil. July 21-24, **2008**  21- S. F Rastegar ,E. Keshavarzi, and Y. ghayeb “Removal of Nickle from water and waste water using nano zero valent Iron(NZVI)" 2 nd Int. Cong. On nano tech. & nanosci. Tabriz, Iran ,28-30 october**,2008**  22-M. Sabzezari and E. Keshavarzi “ Nanoclusters in Tsallis Non-extensive statistical mechanics”, 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  23- F. Hosseinzade and T. Keshavarzi, “ Investigating the rectilinear law and critical exponent for confined fluids”, 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  24-M. Kamalvand and E. Keshavarzi, “ fluid- fluid phase transition in hard-sphere fluids confined in a nanoslit”, 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  25- Y. Shoja, E. Keshavarzi and Y. ghayeb, “ Viscosity and rheological properties of nanofluids (TiO2/PG) , 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  26- E. Keshavarzi, Y. Ghayeb and S. F. Rouhani, “ The magnetic properties of Fe3O4 nanoparticles with different coats and hydrodynamic diameters”, 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  27- Z. Hooshyar, E. Keshavarzi and Y. Ghayeb, “ Nano zero-valent iron in removed of Nickel and Cobalt from wastewater”, 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  28- E. Keshavarzi, Y. ghayeb and S. Parvizi, “ Investigation of the thermal conductivity, viscosity and mending effect of Cu, CuO and TiO2 nanoparticles in the engine base oil”, 12th Iranian physical chemistry seminar, university of Kurdistan, July 20-23, **2009**.  29- S. gharanghian, Y. Ghayeb and E. Keshavarzi, “ the imbibition of liquids in microtubes”, 13th Iranian physical chemistry seminar, shiraz university of technology, **2010**  **MSc. Thesis**  **29. S**eyed Mohsen saeidi “Efficiency of SPM model in prediction of electrical double layer and electrolyte properties in charged spherical nanopores compared to RPM model “ (2020)  28- Parisa Aghajani" a study of the structure and selective adsorption of binary hard sphere mixtures inside and outside of nano pipet using CDFT," (2018)  27- Azam Cherghi"The effect of the external potential. On the structure and layering phase transition off parallel hard cylinder fluids in nano slit pores and its structure near the wall via DFT" (2016)  26-Abdol Karim Matroodi “Investigation of the density Profile of hard sphere rods in nanometer and one dimensional box: ADFT and DDFT study “(2014)  25- Marzieh Khani “Prediction of structure of factor for CO2 fluid confined in aerogel nano pores in low-angle region” (2013)  Prediction of structure of factor for CO2 fluid confined in aerogel nano pores in low-angle region  24-Malieh Pezeshki “ investigation of the ideal gas hard sphere and Lennard Jones fluids in the forth version of Tsallis statistical mechanics” (2012)  23-Sedigheh Rabiei “Investigation of Common Compressibility and Bulk Modulus Regularities, Tait- Murnaghan Equation and Pressure-Temperature Isochores for Confined Fluids in Nanoslit and The Regularity between Viscosity and Surface Tension in Nanofluids” (2011)  22-Abbas Helmi “Energy Fluctuations in Tsallis Statistical Mechanics” 2011  21-Samira Dadi “rheological behavior of nanofluids containing MWCNTs in binary mixture of EG and PG”, 2010  20-Sara Gharangian“ The imbibitions of some electrolyte and non electrolytes fluids into Glassy micro and nano channels” 2010  19-Yossof Zeraat Kish “ modification copper nanopowder synthesis and synthesis copper and copper oxide nanopowder via disproportionation method” (2009)  18-Fatemeh Hossainzadeh “ Investigation of some laws in bulk systems for confined fluids ( the law of rectilinear diameters, critical exponent and calculation the direct correlation function) (2009)  17- Zohreh Kamseda Arani “ Thermal conductivity of nanofluid of multi walled carbon nanotubes in water” (2009)  16-Fereshteh Roohani “The investigation of coating effect on the magnetic properties of nano particles” (2009)  15-Yalda Shojae  14- Sabereh Parvizi “ Investigation of the thermal conductivity, viscosity and mending effect of Cu, CuO and TiO2 nanoparticles in the engine base oil” (2009)  13-Zari Hooshyar “The Effect of the Co2+ Concentration and Sonication Time on Removal of Ni2+ from Waste Water by Zero Valent iron” (2008)  12-Sommyeh faal Rastegar “Removal of Nickel from Water Using Nanotechnology (Surface Adsorption and Osmosis)” (2008)  11-Sara Az'hari “Thermal Conductivity of Nanofluid Mixtures” (2008)  10-Najmeh Fani “ Molecular Dynamics Simulation of One Body Distribution Function of Lennard-Jones Fluid Confined in Open Slit Nanoporees” (2008)  9-Faride Sedafgat “ Normal Pressure Tensor of Nanoslit” (2008)  8-Fatemeh Heidari nabi “The Equation of State of Confined Fluids in Nanopores”(2007)  7-Hamid Mosadeghi “Synthesis of Copper Nanoparticles via Disproportional Method and its Dispersion” (2007)  6-Elham Jazan " Thermodynamics properties at the Phase transition of nanoclusters" (2005)  5-Rezvan Sohrabi "Equation of state for confined fluids in nanopores" (2005)  4-Mohammad Kamalvand "Prediction of the small k behavior of S(k) for alkali metals via a new model for the DCF and evaluation of some effective pair potential via that"(2003)  3-Fatemeh Jorkesh “A new analytical expression for RDF of SW fluid”(2002)  2-Zohreh Ghazvini “The state dependence of the effective pair potential parameters”(2001)  Guy  **PhD Thesis**  10. Mahsa abareghi “Investigation of electrical double layer supercapacitors and selective ions adsorption in charged spherical cavities of porous electrodes by density functional theory” (2020)  9. Razieh Rabiei “ Structure and adsorption of electrolyte in the nanopipet pore, Interfacial tension, pressure and related regularities for hard spherical and Lenard-Jones fluids in the nanopores with spherical symmetry using density functional theory” (2019)  8.- Fatemeh Namdari " The fluid structure effect on surface properties around cylindrical wall, investigation of some well-known regularities for confined fluid in nano slit pores (2017)  7-Abbas Helmi ‘Investigation of the Structure and Thermodynamic Properties of Confined Fluids in Nanospherical pores and Pore between two homocentric spheres: a DFT Study” (2014)  6-Fatemeh Heidari Nabi “Prediction of Normal and Lateral Components of Pressure Tensor and Dynamic Properties of Confined Fluids in Nanoslit via Virial Theorem and DFT” (2012)  5-Mozhgan Sabzehzari “A theoretical study about systems which composed of harmonic oscillators in the framework of Tsallis statistical mechanics and Applying it in order to survey of the non-extensive behavior of nanoclusters and molecular dynamic simulation for Adamantane nanoclusters” (2011)  4- Ameneh Taghizadeh “studing the structure and surface properties of fluids around cylindrical and spherical nanoparticles in nanofluids and investigation of population inversion phenomenon for binary LJ mixture confined in nanoslit pores: A DFT study.” (2011)  3-Mohammad Kamalvand " the structure and thermodynamic properties of confined fluids within nanoslits and nanotubes (A density functional theory study)” (2010)  2- Morteza Vahedpoor" Caculation of the shear and bulk Viscosity relaxation time for soft sphere and L. J fluids"(2005)  1-Hossain Nikoofard "Presentation of a new model for the direct correlation function and prediction of the small k behaviour of S(k) and also correlation length in the critical region via thatvia that"(2003)  **Workshop**  1- Nano-Thermodynamics , nanoclusters and confined fluids, Workshop ,IUT, Isfahan, Iran.Spring 1387 (2008)  **Books**  1**-**E. keshavarzi**,** Statistical thermodynamics of macroscopic and nanoconfined fluids " **2011** |

LIST OF PUBLICATIONS

***Journal papers***

# 43. Ezat Keshavarzi, Mahsa abareghi, *The effect of electro-neutrality violation inside a charged spherical cavity on the capacitance curve shape in DFT approach and interpretation of mean electrostatic potential,* **J. Mol. Liquids** , **,** 318, 114271. **2020** DOI: [10.1016/j.molliq.2020.114271](https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1016%2Fj.molliq.2020.114271)

42. Mahsa Abareghi, Ezat Keshavarzi, *Ion selectivity by charged spherical cavities and investigation of intersection point for average cavity density versus electric potential (a DFT study),* **J. Mol. Liquids** **,** 302, 112283. **2020** [https://doi.org/10.1016/j.molliq. 2019.112283](https://doi.org/10.1016/j.molliq.%202019.112283)

# 40 Razieh Rabiei Dehnavi and Ezat Keshavarzi, *Effects of bispherical nanopore concavo-convex walls on fluid structure, tangential and normal pressure components, and the validity of well-established bulk regularities; a DFT approach*, **Chem. Phys.** [530](https://www.sciencedirect.com/science/journal/03010104/530/supp/C), 110612, **2020** <https://doi.org/10.1016/j.chemphys.2019.110612>

## 41. [Ezat. Keshavarzi](https://www.sciencedirect.com/science/article/pii/S001346861930948X#!), [Mahsa Abareghi](https://www.sciencedirect.com/science/article/pii/S001346861930948X#!), and [Abbas Helmi](https://www.sciencedirect.com/science/article/pii/S001346861930948X#!), *Curvature dependence of the camel-bell curve transition on the capacitance curve of spherical electric double-layer in porous electrodes: Density Functional Theory*, [**Electrochimica Acta**](https://www.sciencedirect.com/science/journal/00134686)**,** [313](https://www.sciencedirect.com/science/journal/00134686/313/supp/C),  303-310, **2019**.

39. Ezat Keshavarzi, Razieh Rabiei Dehnavi,  *Normal and tangential components of pressure tensor in spherical cavities; an investigation of certain well-known bulk fluid regularities*, ***Microfluidics and Nanofluidics*** **,** *23*(4) **2019**<https://doi.org/10.1007/s10404-019-2217-y>

38- Razieh Rabiei Dehnavi, Ezat Keshavarzi, *Nanopipet and truncated cone pores; influence of the cone size and density on fluid structure and adsorption: DFT approach*, **J. Mol. Liquids,**  227,856-864, **2019**.

37 -Saideh Fallah-Joshaqani,, Nasser Hamdami ,Ezat Keshavarzi , Javad Keramat , Mohsen Dalvi, *Evaluation of the static electric field effects on freezing parameters of some food systems*,**Int. J. Refrigeration** 99, 30–36, **2019**.

36. Ezat Keshavarzi, Razieh Rabiei Dehnavi, Mahnaz Rahim, *Effects of fluid structure on wall pressure, interfacial tension, and surface adsorption at a spherical guest particle*, **J. Mol. Liquids** 250, 236–243, **2018**.

35. Ezat Keshavarzi, Fatemeh Namdari, *Effects of the confinement on wall pressure, interfacial tension, and excess adsorption at the nanocylindrical wall*, **J. Mol. Liquids** , 223, 182–191, **2016.**

34- E. Keshavarzi, F. namdari, S. Rabiei Jidani, *Investigation of some well-known regularities for L.J confined fluid in nanoslit pores*, **Chem. Phys**. 468:15-24, **2016**.

33. R. Sadeghi, M. Haghshenasfard , S.Gh. Etemad , and E. Keshavarzi, T*heoretical investigation of nanoparticles aggregation effect on Water-alumina laminar convective heat transfer,* ***Int. Com. Heat & Mass Trans.*** 72. 57–63, **2016**.

33- E. Keshavarzi, and A. Helmi, *The Effects of Inserting a Tiny Sphere in the Center of a*

*nanospherical Pore on the Structure, Adsorption, and Capillary Condensation of a Confined Fluid (A DFT Study)*, **J. Phys. Chem. B**, 119(8): 3517-3526, **2015**

32- R. Sadeghi, S. GR. Etemad, E. Keshavarzi,and M. Haghshenas, *Investigation of alumina nanofluid stability by UV-vis spectrum*, **Microfluidics and nanofluidics**,18:1023-1030, **2015**

31- E. Keshavarzi, and A. Helmi , *Investigation of Linear Relationship between Interfacial Tension and Excess Adsorption of Confined Fluids in Nanospherical Pores,* **J. Mol. Liquids,**  198:246-254, **2014**

30- E. Keshavarzi, and A. Helmi, Population Inversion, *Selective Adsorption, and Demixing of Lennard-Jones Fluids in Nanospherical Pores,* **J. Phys. Chem. B**, 118, 4582−4589, **2014**

29-A. Helmi and E. Keshavarzi, *The role of concavo-convex wall of a nanopore on the denstiy profile, adsorption, solvation force,and capillary condensation of confined fluids:* A DFT study, **Chem. Phys.** 433, 67–75, **2014**

28- F. Heidari, G.A. Mansoori and E. Keshavarzi, *Lateral pressure tensor of confined fluids in nanoslit pores*. **Micro and Nanosystems**, 3, 311-318, **2011.**

27- A. Taghizadeh and E. Keshavarzi, *Population inversion of binary LJ mixtures in nanoslit pores (A density functional theory study)*, **J. Phys. Chem. B**, 115, 3551-3559, **2011**

26- E. Keshavarzi and A. Taghizadeh, *Curvature dependency of fluid-nanoparticle interfacial tension and a new linear regularity between excess adsorption and interfacial tension*, **J. Phys. Chem. Japan**, 80, 044605, **2011**

25- E. Keshavarzi and A. Taghizadeh, *How wall cuevature affects the structure of fluid around a cylindrical nanoparticle: A DFT approach.* **J. Phys. Chem. B**. 114, 10126-10132, **2010**

24-E. Keshavarzi, M. Sabzehzari and M. Eliasi, *Quantum vibrational partition function in the non-extensive Tsallis framework*. **Physica A**, 389, 2733-2738, **2010.**

23- F. Heidari, T. Keshavarzi and G.A. Mansoori, *Attractive energy contribution to nanoconfined fluids behavior: the normal pressure tensor*. **Microfluidics & Nanofluidics**, 10, 899-906, **2010**

22-M. Kamalvand and E. Keshavarzi, Geometry and energy effects on the structure of hard sphere fluids. J. Iran. Chem. Soc. 7, no. 1, 2010

21- T. Keshavarzi, F. Sedaghat and G. A. Mansoori , Behavior of confined fluids in nanoslit pores: the normal pressure tensor. Microfluid NAnofluid, 8, 97-104, 2010.

20- E. Keshavarzi and M. Kamalvand, Energy effects on the structure and thermodynamic properties of nanoconfined fluids ( A density functional theory study), J. Phys. Chem. B, 113, 5493-5499, 2009.

19-M. Kamalvand**,** E. Keshavarzi, G. a. mansoori, Behavior of the Confined Hard Sphere Fluid Within Nanoslits:A Fundamental Measure Density Functional Theory Study, [International Journal of Nanoscience](https://www.researchgate.net/journal/0219-581X_International_Journal_of_Nanoscience)  **7**, no.4& 5, 2008.

18- M. Vahedpour, S. Alavi B. Najafi E. Keshavarzi, Relaxation time for bulk viscosity of soft-sphere and LJ fluids. Scientia Iranica, 14, no. 2, 126-132, 2007

17**-** M. Bamdad, S. Alavi, B. Najafi, E. Keshavarzi**,** A new expression for radial distribution function and infinite shear modulus of L.J fluid" Chemical physics **325**, 554-562 , 2006.

16-E. Keshavarzi, R. Sohrabi and G.A. Mansoori "An Analytic Model for Nano Confined Fluids Phase-Transition (Applications for Confined Fluids in Nanotube and Nanoslit)**"** Journal of Computational and Theoretical Nanoscience,**3**, 1–8, 2006

15-F. Hashemi, E. Keshavarzi, P. Maleki. Calculation of the sencond virial coefficient of nonspherical molecules in binary mixtures Ind. J. Chem. Vol. **44** ,2005

14-M. Bamdad, S. Alavi, B. Najafi, E. Keshavarzi, "Investigation of the Density Dependence of the Shear Relaxation Time of Dense Fluids" Can. J. Chem. , **83,** P.236, 2004

13- E. Keshavarzi, M. Vahedpour, S. Alavi B. Najafi " High frequency shear modulus and relaxation time of soft sphere and L.J fluids" Int. J. Thermophys**. 25**,2004

12- E. Keshavarzi, F. S. Hashemi , Z. Ghazvini "The state dependence of the effective pair potential parameters" Polish J. Chem. **78**(2004)

11- E. Keshavarzi , M. Kamalvand " prediction of the small k behavior of S(k) for Rb and Cs via a new model for the DCF and evaluation of some repoted effective pair potential.,*J. Phys. Chem.B*,**108**(2004),11073-11079.

10- E. Keshvarzi, H. Nikoofard, A. A. Rostami" Prediction of the correlation length in the critical region via a new model for the DCF". J. phys. Soc. Jpn., **73**(2004)374-379.

9- E. Keshvarzi, H. Nikoofard, A. A. Rostami “ *Prediction of low-k behavior of S(K) via a new model for the DCF in Sub and Supercritical regions”, J. Phys. soc. Jpn,****72,****(2003)*1983-1987

8- E. Keshavarzi, A. A. Rostami, F. Tabarinia “*Hard-Like Equation of state”,J.Phys.soc. Jpn,****72,****(2003),1689-1697.*

7-E. Keshavarzi and G. A. Parsafar “*The Direct correlation function and its interpretation via the Linear Isotherm Regularity”,J. Phys. Soc. Jpn,* ***70 (7)(****2001),1101-1107*

6-G. A. Parsafar and E. Keshavarzi *“Solubility prediction using statistical mechanics*” *Bull. Chem. Soc. Jpn* ***73(****2000),2445-2452*

5- *Bull. Chem. Soc. Jpn*, ***12,*** *(2000),109* –116

4-E. Keshavarzi and G. A. Parsafar *“Prdiction of the metal non-metal transition using the Linear Isotherm Regularity” J. Phys. Chem. B,* ***103,*** *(1999), 6584-6589*

3-E. Keshavarzi, G. A. Parsafar, and B. Najafi " *Prediction of the Inversion Curve and the Maximum Value of the Joule- Thomson Coefficient for Some Refrigerants,*" *International Journal of Thermophysics”,* ***20( 2****), (1999), 651-661*

2- E. Keshavarzi, G. A. Parsafar, and B. Najafi " *Prediction of the Attractive Branch of the Effective Pair Potential by Using the Joule- Thomson Inversion Curve*" *International Journal of Thermophysics*, ***20****, No 2, (1999), 643-650*

1- A. Boushehri , F. Hashemi and E. Keshavarzi: “Prediction of hydrocarbon and CFC liquid mixtures densities”" Fluid Phase equilbria ***129****, (1997), p 61-67*

**Current projects**

1. Application of DFT for **Electric Double Layer Super Capacitors** (PhD Thesis).
2. Application of DFT Ionic Liquids and Polymer systems (Mc.S thesis)