Curriculum Vitae

Name Mohsen Oftadeh

Present Occupation Associate Prof.
Nationality Iranian
Correspondence Address Mohsen Oftadeh
Chemistry Department,
College of Science,
Payame Noor University, Isfahan,
I. R. Iran, PO Box: ٨١٣٩٥-٦٧١
Fax: +٩٨٣١١٣٥٢١٨٠٢

E-mail Address **m_oftadeh@pnu.ac.ir**
mmmoft@gmail.com
Phone No. ٩٨-٣١١-٣٦٥٩٥١٣

Educational Qualification

Degree	University	Year
B.Sc. (Pure Chemistry)	Isfehan University (Isfehan, Iran)	١٩٩٠
M.Sc. (Physical Chemistry)	Isfahan University (Isfahan, Iran)	١٩٩٣
Ph.D. (Quantum Chemistry)	Shiraz University (Shiraz, Iran)	١٩٩٨

Teaching Experience (١٩٩٩-٢٠١٢)

Taught the following graduate and undergraduate courses:

General Chemistry, Physical Chemistry, Physical Chemistry Lab., Advanced Physical Chemistry, Quantum Chemistry, Molecular Spectroscopy, Organic Physical Chemistry, Computer Programming, Mathematical Methods in Physical Chemistry.

Research Experience

Quantum Calculations, Explosives, Propellants.

The Title of the MSC Dissertation (١٩٩٣)

The Investigation of the High Pressures on the Displacement of the Radial Distribution of The Hydrogen Atom in Ground State

The Title of the PhD Dissertation (١٩٩٨)

First and Second Analytical Derivatives of Molecular Integrals for Calculations of Energy Using Spherical Gaussian & Application of Simplified PV-RR Procedure for $H_٢$ and LiH Molecules & Lone Pair Description in FSGO Method for Some Cyclic Carbenes.

List of the Publications (١٩٩٧-٢٠١١)

١. A. H. Pakyari and **M. Oftadeh**, "First Derivative of Molecular Integrals for Electronic Energy Using Spherical Gauusian Type Orbitals", *J. Molecular Structure (THEOCHEM)*, ٣٨٩,(١٩٩٧).

٢. A. H. Pakyari and **M. Oftadeh**, "Analytical Second Derivatives of Molecular Integrals Obtained by Spherical Gauusian Orbital", *J. Molecular Structure (THEOCHEM)*, ٤٣٠, (١٩٩٨).

٣. M. H. Keshavarz and **M. Oftadeh**, "A New Correlation for Predicting the C-J Pressure of CHNO Explosive", *High Temperature-High Pressure*, ٣٤, ٤٩٥ (٢٠٠٢).

٤. M. H. Keshavarz and **M. Oftadeh**, "Two New Correlations for Predicting Detonation Power of CHNO Explosives", *Bull. Korean Chem. Soc.*, ٢٤(١), ١٩ (٢٠٠٣).

٥. M. H. Keshavarz and **M. Oftadeh**, "New Estimated Method for Heat of Formation of CHNO Explosives in Solid State", *High Temperature-High Pressure*, ٤٦ (٢٠٠٤).

٦. M. H. Keshavarz and **M. Oftadeh**, "Simple Method of Predicting Detonation Pressure of CHNO Mixed Explosives", *Indian J. Eng. Mater. Sci.* , ١٠ (٢٠٠٣)

٧. M. H. Keshavarz and **M. Oftadeh**, "Performance Study of Energetic Compound ٢,٤,٦-Trinitro-١,٣,٥-Triazine", *Asian J. Chem.* ,١٧(٢) (٢٠٠٥)

٨. M. H. Keshavarz and M. Oftadeh, "Performance Study of ١,١-Dimethyl-٢-Cyanoethylhydrazine as Liquid Propellant", Theory and Practice of Energetic Materials, ٥ (٢٠٠٣).

٩. M. H. Keshavarz and **M. Oftadeh**, "New Method for Predicting of C-J Detonation Velocity of CHNO Explosives at Any Loading Density", *Theory and Practice of Energetic Materials*, ٥ (٢٠٠٣).

١٠. M. Salavati Niasari, S. Abdolmohammadi and **M. Oftadeh**, "Host (Nanopores of Zeolite-Y)/Guest (Co(II)-Azamacrocycllic Complexes) Nanocomposite Materials: Synthesis,

Characterization and Catalytic Epoxidation of Styrene with Molecular Oxygen", *J. Coord. Chem.*, ٦١(١٧), ٢٨٣٧, ٢٠٠٨.

١١. A. Semnani, H. R. Pouretedal, M. F. keshavarz, A. R. Firooz and **M. Oftadeh**, "Interaction Between ١, ٣, ٥-Trithiane and Iodine Monobrobide in Halomethane Solutions", *Heterocyclic Commu.*, ١٤(٣), ٢٠٦, ٢٠٠٨.

١٢. **M. Oftadeh**, M. Salavati Niasari and F. Davar, "Synthesis of ZnO Nanoparticles and Their Optical Properties", *Int. J. Nanoparticles*, ٢, ٣٠٧, ٢٠٠٩.

١٣. **M. Oftadeh**, M. Salavati Niasari and F. Davar, "Sized-Controlled ZnO Nanoparticles, Synthesis and Morphology", *Int. J. Nanoscience*, ٣, ٢٧٧,٢٠٠٩.

١٤. A. Semnani, A.R. Firooz, H.R. Pouretdal, M.H. Keshavarz and **M. Oftadeh**, " Complex Formation Between Some Thiacrownethers and ١,٣,٥-Trithian with Bromine in Gas Phase and Carbon Tetrachloride Solution", *Chemistry*, ١٩, ٨٠, ٢٠١٠.

١٥. **Mohsen Oftadeh**, Masoud Hamadanian Khozani, Mahshid Radhoosh, Mohammad Hossein Keshavarz, DFT molecular orbital calculations of initial step in decomposition pathways of TNAZ and some of its derivatives with –F, –CN and –OCH٣ groups, Computational and Theoretical Chemistry ٩٦٤ (٢٠١١) ٢٦٢–٢٦٨.

١٦. **M. Oftadeh**, S. Naseh, M. Hamadanian, Electronic properties and dipole polarizability of thiophene and thiophenol derivatives via density functional theory, Computational and Theoretical Chemistry ٩٦٦ (٢٠١١) ٢٠-٢٥.

١٧. **Mohsen Oftadeh**, Nafice Makkei, Mahnaz Khosravi Farsani, Investigation of adsorption process and thermodynamics of cochineal dye on wool, Journal of Materials Science and Engineering B, USA, ١ (٢٠١١) ٣٨٨-٣٩٣.

١٨. **M. Oftadeh**, A. Aghtar, M. Nasr Esfahani, , Masoud Salavati-Niasarid, N. Mir, Fabrication of highly efficient dye-sensitized solar cell and $CO_٢$ reduction photocatalyst using $TiO_٢$ nanoparticles prepared by spin coating assisted sol-gel method, Journal of Iranian Chemical Society, xx (٢٠١١) xxx-xxxx. In Press.

١٩. **Mohsen Oftadeh**, Leila Tavakolizadeh, Investigation of optoelectronic properties of N٣ dye-sensitized $TiO_٢$ nanocrystals by hybrid methods: ONIOM (QM/MM) calculations, International Nano Letters, ٢(١) (٢٠١١) ٥-٩.

٢٠. Nosrat Madadi Mahani, **Mohsen Oftadeh**, Kinetic and thermodynamic study of activated Carbon from pistachio shell by thermogravimetric method, Journal of Materials Science and Engineering A, USA, ١ (٢٠١١) ٨٨٧-٨٩١.

Conference Papers (٢٠٠١- ٢٠١١)

١. M. H. Keshavarz and **M. Oftadeh**, "Performance of ٢, ٤-Dinitroimidazole as a Insensative Energetic Material", ٢٨th International Pyrothechnics Seminar, Australia, ٤٢١-٤٢٣ (٢٠٠١).

٢. M. H. Keshavarz and **M. Oftadeh**, "A New Correlation for Predicting Detonation Properties of Explosives", ٢٨th International Pyrothechnics Seminar, Australia, ٤١٧-٤٢٠ (٢٠٠١).

٣. M. H. Keshavarz and **M. Oftadeh**, "Detonation Properties of ٢, ٤, ٦-Trinitro-١,٣,٥-Triazine (TNTA) as a High-Energy Density Explosive", ٤th Physical Chemistry Seminar, Booshehr, Iran, March ٢٠٠١.

٤. M. H. Keshavarz and **M. Oftadeh**, "Behavior of Hydroxyethylhydrazine as Liquid Propellant and Composition Detonation Products of ٢٤-DNI with BKW-EOS", ٥th Physical Chemistry Seminar, Tehran, Iran, Feb., ٢٠٠٢.

٥. M. H. Keshavarz and **M. Oftadeh**, "Study of Performance of ٢٤-DNI as a Solid Oxidizer in Rocket Propellant", ٥th Physical Chemistry Seminar, Tehran, Iran, Feb., ٢٠٠٢.

٦. **M. Oftadeh** and M. H. Keshavarz, "The Synthesis of Fullerene C٦٠ by Simple Arc Method", ٥th Physical Chemistry Seminar, Tehran, Iran, Feb., ٢٠٠٢.

٧. M. H. Keshavarz and **M. Oftadeh**, "Study of P_{cj} Correlation Aided by PM٣ Procedure for Condenced CHNO Explosives", ٣٠th ASPEP Conference, France ٢٠٠٣.

٨. M. H. Keshavarz and **M. Oftadeh**, "Study of the Performance of ١-Methyl-١-cyanoethylhydrazine as a Liquid Mono- and Bipropellant", ٣٠th ASPEP Conference, France ٢٠٠٣.

٩. M. H. Keshavarz and **M. Oftadeh "**Performance Study of ١,١-dimethyl-٢-cyanoethylhydrazine as Liquid Propellant", ٨th AISPEP Conference, China, ٢٠٠٣.

١٠. M. H. Keshavarz and **M. Oftadeh**, "New Method for Predicting od CJ Detonation Velocity of CHNO Explosives at any Loading Density" , ٨th AISPEP Conference, China, ٢٠٠٣.

١١. M. H. Keshavarz and **M. Oftadeh**, "Theoritical Study of K-٦ as High Performance Explosive and Oxidizer", ٨th AISPEP Conference, China, ٢٠٠٣.

١٢. M. Oftadeh, "The Investigation of the propellant performance of Some of the Nitroquanidine, Azol Derivatives and Nitroamides Compounds as Gas Generators", ١١th Asian Chemical Congress, Korea, ٢٠٠٥.

١٣. M. Hamadanian and **M. Ofatdeh**, "Investigation of Explosive Performance of mono-, Bi- and Tri-cyclic Nitramines by ab-intio Computational Methods", MCC ٢٠٠٦ , Croatia, ٢٠٠٦.

١٤. **M. Oftadeh** and M. Hamadanian**,** "The Investigation of the Deflagration Pathway of CHNOF Explosives of Mono and Di Cyclic nitramine Compounds by Ab initio and semiemperical calculations", ٤١st IUPAC World Chemistry Congress, Turin, Italy, Aug. ٢٠٠٧.

١٥. M. Hamadanian and **M. Oftadeh,** "The Investigation of the Deflagration Pathway of CHNOF Explosives of tri-Cyclic Nitramine Compounds by Ab Initio and Semiemperical Calculations", ٤١st IUPAC World Chemistry Congress, Turin, Italy, Aug. ٢٠٠٧.

١٦. **M. Oftadeh** and M. Salavati niasari, "Synthesis, Characterization and Catalytic Oxidation by Host (Nanocage of Zeolite-Y)/Guest (Metal Complexes of ١٢-Membered Thio Macrocyclic Schiff-base Ligand) Nano Composite Materials", IXth Netherlands' Catalysis and Chemistry Conference, Noordwijkerhout, Netherlands, March ٢٠٠٨.

١٧. **M. Oftadeh**, N. Makkei and M. Khosravi Farsani, "An Adsorption and Thermodynamic Study of Cochineal Dyeing on Wool", PACCON٢٠٠٩, Phistanulok, Thailand, Jan. ٢٠٠٩.

١٨. **M. Oftadeh**, M Salavati Niasari and F. Davar, "Nanodimensional microreactors encapsulation of ١٥- and ١٦-membered macrocyclic Schiff-base copper(II) complex nanoparticles: catalytic oxidation", XIth Natherlands Catalysis ans Chemistry Conference, Netherlands, March ٢٠١٠.

١٩. **M. Oftadeh** and M. Moghadari, " Donor-acceptor in the charge transfer molecular complexes of $C_4S_4H_8$ and $C_7S_7H_{12}$ with dihalogenes: DFT method", Fourth Humboldt Conference on Computational Chemistry, Bulgaria, July ٢٠١٠.

٢٠. **M. Oftadeh** and L. Tavakolizadeh, "Investigation of optical properties of sensitisized TiO_2 nanoparticles by N_3 with ONIOM method", ٣rd International Congress on Nanoscience and Nanotechnolohy (ICNN٢٠١٠), Shiraz, Iran, Nov ٢٠١٠.

Recent Research Projects Completed (٢٠٠٠- ٢٠١١)

١. **M. Oftadeh** and M. H. Keshavarz, "Synthesis and Evaluation of The Explosive and Propellant Performance of High Energetic ٢,٤-dimethyimidazol", Malek Ashtar University, Shahinshar, Isfahan (٢٠٠٠).

٢. M. H. Keshavarz and **M. Oftadeh**, "Synthesis and Evaluation of Many Low Volatile Hydrazine Derivatives for Using in Missiles with Liquid Fuels", Malek Ashtar University, Shahinshar, Isfahan (٢٠٠٠).

٣. **M. Oftadeh** and M. K. Keshavarz, "Investigation of Explosive Performance of Dense Fluid by Using Equation of State", Payame Noor University, Isfahan (٢٠٠٤).

٤. **M. Oftadeh** and M. Hashmi Talkhoncheh, "Laburatory Synthesis of Diallylester" Isfahan Payame Noor University, Isfahan (٢٠٠٥).

٥. **M. Oftadeh** and M. Hamadanian, "Investigation of The Degradation Pathways for Many Mono, Di and Tri Cyclic Compounds of CHNOF Explosives by Ab Initio and Semiepmerical Methods", Payame Noor University, Isfahan (٢٠٠٧).

٦. **M. Ofatdeh** and M. Salavati Niasari, "Host/Guest Nanocomposite Materials (HGNM): Synthesis, Characterization and Catalytic Activity", Payame Noor University, Isfahan (٢٠١٠).

٧. **M. Ofatdeh**, "AM١ Study of Acidities of Fulleropyrrolindines in Gas and Solution Phases", Payame Noor University, Isfahan (٢٠١٠).

٨. **M. Oftadeh, "**Theoretical Study and Investigation of the Adsorption of N٣ Dye and Its Derivatives on the TiO_2 Nanoparticles as an Electrode using in DSSC by DFT Method", Payame Noor University, Isfahan (٢٠١١).

Recent Books

١- **M. Oftadeh** and M. Hamadanian, "*General Chemistry in Laburatory*", Samaghalam Publications (٢٠٠٦).

٢- **M. Oftadeh**, "*English for Chemistry Students*", Payame Noor University Publications (٢٠٠٦)

٣- **M. Oftadeh,** "Physical Chemistry I", translated of "Physical Chemistry" by R. G. Mortimer, ٣rd edition, Elsevier publications, in Persian (٢٠١٠).