

CURRICULUM VITAE

**Prof. Dr. Maryam Ranjbar** 

Chemical Technologies Department

Iranian Research Organization for Science and Technology (IROST)

Mobile: +989122189023 and +491628378933

E-mail: marandjbar@irost.ir, maryam.ranjbar@iac.uni-stuttgart.de

marandjbar@gmail.com, Web: maryam-ranjbar.com

https://scholar.google.com/citations?hl=en&user=29eMFUkAAAAJ&view\_op=list\_works&sortby=pubd

ate

ORCID.org/ 0000-0003-3445-613X <u>Scopus Author ID 7003490042</u> <u>Researcher ID J-3703-2016</u>

H index: 22 Citations: 1580

#### **EDUCATION**

Ph.D. Inorganic Chemistry, Kharazmi University (Teacher Training University), Tehran, Iran: Thesis Title: Preparation and characterization of a novel self-assembling system containing pyridine ring and its complexes with metal ions; and synthesis of two macrocyclic ligands derived from pyridine: total avarage: 16.38/20

M.Sc. Inorganic Chemistry, Tehran University, Tehran, Iran: <u>Thesis Title: Synthesis and Characterization of amido complexes of Cu(I) and Ni(II) metal ions</u>: total avarage: 16.23/20

B.Sc. Chemistry, Arak University, Arak, Iran: total avarage: 16.15/20

### **ACADEMIC POSITIONS**

2004 to date: Professor at Iranian Research Organization for Science and Technology

2017 To date: Gest Professor at University of Stuttgart

2022 to date: Associate Editor and Director-in-Charge for Journal of "Hydrogen, Fuel Cell and

**Energy Storage**"

2023- to date: Vice President of the "Iranian Hydrogen and Fuel Cell Association"

### **EXECUTIVE EXPERIENCE**

2022: Scientific Editor of 3<sup>ed</sup> Iranian Catalyst Conference (ICC2022) 17-18 May 2022. IROST, Tehran, Iran

### **RECENT RESEARCH PROJECTS**

- 1. Electrochemical production of Methanol by CO<sub>2</sub> reduction under efficient catalyst at ambient condition, (Post Doc research Funded by INSF, 4030470, **2025**, IROST, Iehran, Iran).
- 2. Solid state proton conductors based on barium containing Perovskites and their application as supercapacitors, Hydrogen production and Hydrogen purification, Collaboration with Prof. Berthold Racshe research team, **2025**, Stuttgart Uni and IROST.
- 3. Catalytic hydrolysis of hydroborate compounds to provide hydrogen for solid oxide fuel cells, INSF, 4015293., **2023**,IROST, Tehran, Iran.
- 4. Hydrogen Storage in Solid Hydrogen Carriers. IROST-Stuttgart University (Prof. Dr. Thomas Schleid), **2021-2023.**
- 5. Cobalt, Nickel, Cadmium and Zinc recovery from waste by leaching and solvent extraction in pilot plant scale, **2022**, IROST, Tehran, Iand and, Rah Abrisham Co.
- 6. Strongly affected photocatalytic CO<sub>2</sub> reduction by adsorbed CO<sub>2</sub> on the surface of Cr-substituted Ba<sub>2</sub>In<sub>2</sub>O<sub>5</sub>·(H<sub>2</sub>O)<sub>x</sub>, **2020**, Stuttgart (Prof. Dr. Anke Weidenkaff)
- 7. Fabrication of perovskite type solar cells based on ammonium lead halides, **2017**, IROST Tehran Iran.
- 8. Fabrication of proton exchange catalytic membrane for low temperature solid oxide fuel cells, INSF, 93033140, **2016**, IROT Tehran, Iran
- 9. Anodic electro catalysis for low temperature solid oxide fuel cells, Iranian National Science Foundation, INSF, 90006825, **2014**, IROT Tehran, Iran
- 10. Evaluation of materials and instruments for localization of solid oxide fuel cells 89/27, **2011** from SANA, IROST Tehran, Iran.
- 11. Preparation of lanthanum strontium manganite as cathode electrode for solid oxide fuel cells, 10102907, **2014**, from Presidential Technology Council, IROST Tehran, Iran.
- 12. Preparation and characterization of ruthenium complex of 2, 2'-bipyridine 4, 4'-dicarboxylic acid as dye for dye sensitized solar cells 101029028, **2014**, from Presidential Technology Council, IROST Tehran, Iran.

## **Book**

1. Solid Oxide Fuel Cell, Maryam Ranjbar, Majid Abdollahi, IROST, 256 pages, Iede Negar Publisher, 1395 (2016), Shabac: 978-600-94621-9-3.

### **JOINT RESEARCH PROJECTS**

- 1. Investigating and Designing Optimal Bauxite Homogenization Methods for Iranian Alumina Complex: Technical and Economic Analysis, (Dr Razieh Habibpour), 2025, Alumina Jajarm Co. and IROST, Tehran, Iran.
- 2. Hydrogen Production from Methylal (Dimethoxymethane) produced by methanol by heterogeneous nano catalysts, 2016, IROST Tehran, Iran (Prof. Ali Eliassi).
- 3. Phenol degradation from waste water by catalytic ozonation, 2016, IROST, Tehran, Iran (Prof. Soheila Shokrollarzadeh)
- 4. Synthesis of nano-sized gamma alumina for dimethyl ether (DME) production, 2011, IROST Tehran, Iran (Prof. Ali Eliassi).

5. Synthesis of catalysts for Hydrogen production from methanol for Fuel Cells application, 2010, IROST Tehran, Iran (Prof. Ali Eliassi).

## **PROFESSIONAL EXPERIENCES AND SKILLS**

- 1- Synthesis of different kinds of electrocatalytic membranes with morphology control used for Solid Oxide Fuel Cells, Solid Oxide Electrolyzers and gas separation Membranes.
- 2- Electrochemical Production of Hydrogen, Syngas and Methanol.
- 3- Production of Metal Organic frame works and Catalysts for different application

#### **INVITED SPEECHES**

- 1. Parisa Akbarian, Maryam Ranjbar, Mehdi Kheirmand, **Methanol to Blue Hydrogen**: Economical and Efficient Catalytic Pathways, The 6th Iranian Methanol Seminar, 8 Feb **2025**, Tehran, Iran.
- 2. Maryam Ranjbar, **Hydrogen Production by Solid Oxid Electrolysers**, Iranian Conference of Compressed Gas, 28 April **2025**, Tehran, Iran.
- 3. M. Ranjbar, Emerging technologies of **Hydrogen production and storage** for fuel cell applications, 28-29 Aug. **2022**, 6<sup>th</sup> Applied Chemistry Conference, Malayer, Iran.
- 4. Maryam Ranjbar Ömer Çelik, Synthesis and characterization of Cu(II) and Pb(II) supra molecules: new precursors for CuO and PbO nanoparticles, 4th National Crystallographic Meeting with International Participation, 17-19 May, 2014, Diyarbakir, Turkey.
- 5. Maryam Ranjbar, Regulatory and Institutional Support Mechanisms/Framework and Critical Gaps in Testing, Standardization and Certification of Nanomaterials and Nanoproducts, Expert Group Meeting (EGM) on Testing, Standardization and Certification of Nanomaterials and Nanoproducts, 23 Jun 2014, Manila, Philipin.
- 6. M. Ranjbar, M. Nabitabar, Sonochemical Synthesis of Gadolinium Doped Ceria by New Precursors for Low and Intermediate Temperature Solid Oxide Fuel Cells, 15-17 Sept. 2014. Lisbon, Portugal.

### **PUBLICATIONS (2023-2001)**

- 1- Parisa Akbarian, Maryam Ranjbar, Mehdi Khairmand, Niloufar Naseri Jahromi, Arya Abdollahi, Harnessing Renewable Carbon Dioxide and Hydrogen: A Path to Sustainable Methanol Production, Petroleum Research, 2025, 35, 10-14.
- 2- Ashraf Sadat Shahvelayati; Shabnam Alibakhshi; Maryam Ranjbar, **Zeolitic-imidazolate**Framework Synthesized with the Mechanochemical Method: Impressive Removal of
  Nine Reactive Dyes of Wastewaters, Chem Rev Lett 8 (2025) 112-127.
- 3- Amir Khosravi, Razieh Habibpour, Maryam Ranjbar, **Enhanced adsorption and removal of Cd(II) from aqueous solution by amino-functionalized ZIF-8,** Scientific Reports, **(2024)** 14:10736.
- 4- Lucas W. Zimmermann, Rouzbeh Aghaei Hakkak, Maryam Ranjbar, Thomas Schleid, **Crystal structures and thermal analyses of three new high-energy hydrazinium hydro-closoborates**, International Journal of Hydrogen Energy, Volume 49, Part A, 2 January **2024**, Pages 1469-1477, https://doi.org/10.1016/j.ijhydene.**2023**.10.078
- 5- A. Khosravi, M. Ranjbar, R. Habibpour, Synthesis, characterization, and application of ZIF-8 for removal of Cd, Ni, and Pb ions from aqueous solutions: Optimization of the process by Response Surface Methodology (RSM) based on Central Composite Design (CCD) technique, Journal of Metals, Materials and Minerals, 33 (2023) 88-102.
- 6- S. Ghamari, M. Ranjbar, **Preparation, characterization, and the study of the electrochemical behavior of Y-doped Bariumcerate powders by new precursors**, Iranian Journal of Hydrogen & Fuel Cell 10 (**2023**) 1-10.
- 7- S. Alibakhshi, A. S. Shahvelayati, M. Ranjbar, S. Sheshmani, S. Souzangarzadeh, **Efficient** removal of Violet-5r and Red 141 reactive dyes by ultrasound assisted synthesized **ZIF-8**, Int. J. New. Chem., **2023**, Vol. 10, Issue 1, pp. 122-137.,
- 8- M. Bayat; M. Ranjbar; S. Shokrollahzadeh, Synthesizing Fe<sub>3</sub>O<sub>4</sub>, Mn<sub>3</sub>O<sub>4</sub> and Mn<sub>3</sub>O<sub>4</sub>/Fe<sub>3</sub>O<sub>4</sub> nanocatalysts using the sol-gel method as new precursors for the degradation of

- **phenol by catalytic ozonation,** Journal of Particle Science and Technology, 8, **2022**, 39-51, 10.22104/JPST.2022.5798.1214.
- 9- S. Ghamari Arbati; M. Ranjbar; A. Babaei, **Nickel oxide-gadolinium doped ceria synthesized by new methods as anodes material for solid oxide fuel cells**, Iranian Journal of Hydrogen and Fuel Cell, **2022**, 9, 133-147. 10.22104/IJHFC.2022.5797.1242.
- 10- S. Alibakhshi, A. S. Shahvelayati, S. Sheshmani, M. Ranjbar, S. Souzangarzadeh, **Design**, synthesis, and characterization of a novel **Zn(II)-2-phenyl benzimidazole framework** for the removal of organic dyes, Sci Rep. **2022**; 12: 12431, 10.1038/s41598-022-16753-8.
- 11- M. Seifpanah Sowmehsaraee, M. Ranjbar, M. Abedi, **Fabrication of lead Iodide perovskite** solar cells by incorporating Cr-substituted and pristine Ba<sub>2</sub>In<sub>2</sub>O<sub>5</sub>·(H<sub>2</sub>O)<sub>x</sub> as additives, Proq. Color Colorants Coat. **2022**, in press. DOI: 10.30509/PCCC.2022.166906.1137.
- 12- M. Seifpanah Sowmehsaraee1, M. Ranjbar, M. Abedi, **Investigating the effect of nano-structured magnetic particles lanthanum strontium manganite on perovskite solar cells**, Journal of Solar Energy Research, 7 (**2022**) 945-956.
- 13- M. Seifpanah Sowmehsaraee, M. Abedi, M. Ranjbar, **Incorporating MOF-235 in lead iodide perovskite solar cell and investigating its efficiency and stability**, J Mater Sci: Mater Electron, Journal of Materials Science: Materials in Electronics volume 32, pages15143–15150 **(2021)**.
- 14- M. Seifpanah Sowmehsaraee1, M. Ranjbar, M. Abedi, F. Rouhani, A. Morsali, The Effect of Zn (II) Containing Metal Organic Frameworks on Perovskite Solar Cells, Prog. Color Colorants Coat. 14 (2021), 259-267.
- 15- Elham Kouhestanian, Sayed Ahmad Mozaffari, Maryam Ranjbar, Hossein Salar Amoli, **Enhancing** the electron transfer process of TiO2-based DSSC using DC magnetron sputtered ZnO as an efficient alternative for blocking layer, Organic Electronics, Available online 13 August 2020, 105915, https://doi.org/10.1016/j.orgel.2020.105915.
- 16- Ghamari S., Ranjbar M., Effect of optimization on microstructures and performance of NiO-GDC anodes for solid oxide fuel cells, *International Journal of Advances in Science Engineering and Technology* 8 (2020) 1-7.
- 17- E. Kouhestanian, M. Ranjbar, A. Mozaffari, H. Salar amoli, Investigation of thickness effects on the performance of ZnO-based DSSC, *Progress Color, Colorant and Coatings*, 14 (2021) 101-112.
- 18- Rouzbeh Aghaie Hakkak, Maryam Ranjbar, Sara Mirzaie, **Ultrasonic synthesis of Zn(II)methionine nanostructures: as precursor for ZnO nanoparticles and in vitro study**, *Journal of Particle Science and Technology*, 5 (2019) 109-116.
- 19- M. Seifpanah, M. Abedi, M. Ranjbar, **Incorporating MOF-235 in lead iodide perovskite solar cell and investigating its efficiency and stability**, *Material Science- Electronics*, **2021**, https://doi.org/10.1007/s10854-021-06064-5
- 20- Y.Songhak, S. Nikoee, M. Ranjbar, D. Ziegenbalg, M. Widenmeyer, A. Weidenkaff, **Strongly affected photocatalytic CO<sub>2</sub> reduction by adsorbed CO<sub>2</sub> on the surface of Crsubstituted Ba<sub>2</sub>In<sub>2</sub>O<sub>5</sub>·(H<sub>2</sub>O)<sub>x</sub>, Solid State Sciences, 105 (2020) 106212-https://doi.org/10.1016/j.solidstatesciences.2020.106212**
- 21- E. Maleki, M Ranjbar ,S. A. Kahani, **Investigating the effect of the delay time of dripping** antisolvent on morphology and structure of the perovskite layer and its application in the hole-transport material free perovskite solar cell, *Progress Color, Colorant and Coatings*, 14 (2021) 47-54.
- 22- S. A. Kahani, E. Maleki, M. Ranjbar, **Investigating the effect of polythiocyanogen on morphology and stability of the perovskite layer and its application in the hole-transport material free perovskite solar cell**, Journal of Photochemistry and Photobiology A: Chemistry, 389 (2019) 112218-112224, <a href="https://doi.org/10.1016/j.jphotochem.2019.112218">https://doi.org/10.1016/j.jphotochem.2019.112218</a>.
- 23- S. Ghamari Arbati, M. Ranjbar, A. Babaei, **Fabrication of NiO-GDC anode from new precursor for IT-SOFCs by modifying the surface structure with a novel sol-gel process**, *Fuel Cells*, 2020 Submitted.
- 24- S. Ghamari Arbati, M. Ranjbar, **Investigation of catalytic activity of modified morphology NiO/GDC synthesized by sol-gel method as SOFC anode materials**, *Journal of Macromolecular Science Part A-Pure and Applied Chemistry*, (2020) Submitted.

- 25- M. Seifpanah Sowmehesaraee, M. Ranjbar, Mohammad Abedi, **Fabrication of Lead Iodide Perovskite Solar Cells by Incorporating Zirconium, Indium and Zinc Metal-Organic Frameworks**, Solar Energy, 2021.
- 26- S. Shokrollahzadeh, M. Abassi, M. Ranjbar, A new nano-ZnO/perlite as an efficient catalyst for catalytic ozonation of azo dye, *Environ. Eng. Res.* 24 (2019) 513-520.
- 27- S. Mortazavinik, M. Yousefi, M. Ranjbar, P. Aberoomand Azar, M. Hossaini Sadr, **Synthesis**, characterization and investigation of magnetic and microwave absorbing properties of polyaniline /SrFe<sub>11.1</sub>(ZrZn<sub>0.5</sub>Co<sub>0.5</sub>)<sub>0.45</sub>O<sub>19</sub>/MWCNTs nanocomposite, JACR-1801-1433 (R1), Pazhooheshhaye Karbordi Dar Shimi, (2019) 149-155. (In Persian language).
- 28- M. Ranjbar, M. Yousefi, R. Nouzari, S. Sheshmani, Synthesis, Characterization and Crystal Structure of Cadmium(II) Nano Coordination Compound: A Precursor to Produce Nano-Sized Cadmium Oxide and Cadmium Iodide, Journal of Applied Chemistry 13 (2019) 89-101.
- 29- MR Jamei, M. Ranjbar, A. Eliassi, **Introduction to catalysts for conversion of methanol to methylal** *New Processes (Farayand e No)*, **60** (1396-2017) **28-44** (In Persian language).
- 30- M Bayat, M Ranjbar, S Shokrollahzadeh, **Synthesis and characterization of Mn<sub>3</sub>O<sub>4</sub> nano catalysts for degradation of phenol by catalytic ozonation**, *Journal of Iranian Chemical Engineering (Nashrie Mohandesi Shimi Iran)*, *2* (2019) 13-20. (In Persian language).
- 31- A Parsaee, A Eliassi, M Ranjbar, E. Kashi, Preparation of Cu-Zn-Ce-Al Spinel Catalyst for Hydrogen Production in Micro-Chanel Reactor and Considering the Geometrical Effectys of Micro-Chanels on Velocity Distribution, *Journal of Applied Chemistry*, 12 (2018) 71-81.
- 32- S. Ghamaria, M. Nabitabara, M. Ranjbar, **Study the properties of gadolinium doped ceria nano-powders synthesized via sol-gel method with new precursors**" Iranian Journal of Science and Technology, Transactions A: Science, <a href="https://doi.org/10.1007/s40995-017-0270-5">https://doi.org/10.1007/s40995-017-0270-5</a>. Iran J Sci Technol Trans Sci (2018) 42:1969-1976.
- 33- A. Dehghani, M. Ranjbar, A. Eliassi, **Modification of Cu/Zn/Al<sub>2</sub>O<sub>3</sub> catalyst by activated carbon based metal organic frameworks as precursor for hydrogen production,** *J. Inorg. Organomet. Polym.* 28 (2018) 585-593. https://link.springer.com/article/10.1007%2Fs10904-017-0678-6.
- 34- A. Dehghani, M. Ranjbar, A. Eliassi, **Novel Porous Iron Molybdate Catalysts for Synthesis of Dimethoxymethane from Methanol: Metal Organic Frameworks as Precursors,** *Nanochemistry Research* 3 (2018) 50-61.
- 35- S. Ghamari, M. Ranjbar, M. Nabitabar, **Preparation and characterization of nanopowder nickel oxide/gadolinium-doped ceria via the sol-gel method by NiLH2 precursor**, *J Sol-Gel Sci Technol* 81 (2017) 236–246.
- 36- M. Yousefi and M. Ranjbar, Ultrasound and Microwave-Assisted Co-precipitation Synthesis of La<sub>0.75</sub>Sr<sub>0.25</sub>MnO<sub>3</sub> Perovskite Nanoparticles from a New Lanthanum(III) Coordination Polymer Precursor, J. Inorg. Organomet. Polym. 27 (2017) 633-640.
- 37- MR. Jamei, M. Ranjbar, A. Eliassi, Sonochemical Synthesis of Vanadium Complex Nano-Particles: A New Precursor for Preparation and Evaluation of V<sub>2</sub>O<sub>5</sub>/Al<sub>2</sub>O<sub>3</sub> Nano-Catalyst in Selective Oxidation of Methanol to Methylal, *Journal of Iranian Chemical Society* 14 (2017) 2627–2635.
- 38- M Ranjbar, M. Yousefi, Facile Preparation of Zirconia Nanostructures by New Method: Nano-Scale Zirconium(IV) Coordination Supramolecular Compound as Precursor, *Iran. J. Sci. Technol. Trans. Sci.* (2018),42, 577-587, doi:10.1007/s40995-016-0069-9.
- 39- M Ranjbar, M Yousefi, N Shahsavan, M Yousefi, L Erikson, Sonochemical synthesis and characterization of nano-sized zinc(II) supramolecular compound as a precursor for thepreparation of pure-phase zinc(II) oxide nanoparticles, *Nanochem. Res.*,2 (2017) 120-131.
- 40- F. Hajmohammadi, Z. Soleimani, J. Hemmat, N. Kazemimejad, AR. Sedrpoushan, M. Ranjbar, M. Heydari, A. Parach, Studies of antibacterial effects of synthesized silver nanoparticles using a novel thermotolerant Isoptericola variabilis sp. IRSH1 against Staphylococcus aureus and Pseudomonas aeruginosa, J Qazvin Univ Med Sci. 2017; 21 (3): 23-30.
- 41- M. Ranjbar and M. Yousefi, Sonochemical Synthesis and Characterization of a Nano-Sized Lead(II) Coordination Polymer; A New Precursor for the Preparation of PbO Nanoparticles, Int. J. Nanosci. Nanotechnol., 12 (2016) 109-118.

- 42- E. Kouhestanian, A Mozafari, M. Ranjbar, H. Salar Amoli, MH Armanmehr, Electrodeposited ZnO thin film as an efficient alternative blocking layer for TiCl<sub>4</sub> pre-treatment in TiO<sub>2</sub> based dye sensitized solar cells, Superlattices and Microstructures, 96 (2016) 82-94.
- 43- M Ranjbar, A Mozaffari, E Kouhestanian, H Salar Amoli, Sonochemical synthesis and characterization of a Zn(II) supramolecule, bis(2,6 diaminopyridinium)bis(pyridine-2,6-dicarboxylato)zincate(II), as a novel precursor for the ZnO-based dye sensitizer solar cell, Journal of Photochemistry and Photobiology A: Chemistry 321 (2016) 110-121.
- 44- A Mozafari, M. Ranjbar, E. kouhestanian, H. Salar Amoli, MH Armanmehr, **An investigation on the effect of electrodeposited nanostructured ZnO** *Materials Science in Semiconductor Processing* 40 (2015) 285-292.
- 45- A Parsaee, A Eliassi, M Ranjbar, Considerations about the production of hydrogen by steam reforming of methanol in a microchannel reactor coated with catalyst, *Journal of Iranian Chemical Engineering (Nashrie Mohandesi Shimi Iran)* 15 (2016) 53-65. (In Persian language).
- 46- M. Ranjbar, M. Yousefi, M. Lahooti, SH. Mahmoudi Najafi, A. Malekzadeh, **Synthesis of pure monoclinic zirconia nanoparticles using ultrasound cavitation technique**, *Journal of Particle Science and Technology* 2 (2016) 69-77.
- 47- Leila Khoshrooyan, Ali Eliassi, Maryam Ranjbar, **Effects of catalyst particle size on methanol dehydration at different temperatures and weight hourly space velocities**, *Journal of Particle Science and Technology* 2 (2016) 41-47.
- 48- M Ranjbar, M Yousefi, Sonochemical synthesis and characterization of a nano-sized lead(II) coordination polymer; A new precursor for the preparation of PbO nano-structure, *J. Inorg. Organomet. Polym.* 24 (2014) 625-655.
- 49- M Ranjbar, M Nabitabar, Ö Çelik and M Yousefi Sonochemical synthesis and characterization of nano-structured copper(I) supramolecular compound as a precursor for the fabrication of pure phase copper oxide nanoparticles, *J Iran Chem. Soc.* Application of Novel Gamma Alumina Nano (2014) 551-559.
- 50- M Ranjbar, M Lahooti, M Yousefi, A Malekzadeh, Sonochemical synthesis and characterization of nano-sized zirconium(IV) complex: new precursor for the preparation of pure monoclinic and tetragonal zirconia nanoparticles, *Iran Chem. Soc.* 11 (2014) 1257-1264.
- 51- M Ranjbar, M Yousefi, **Synthesis and characterization of lanthanum oxide nanoparticles from thermolysis of nano-sized lanthanum(III) supramolecule as a novel precursor**, *J. Inorg. Organomet. Polym.*, 24 (2014) 652-655.
- 52- A Eliassi and M Ranjbar, Application of Novel **Structure for Preparation of Dimethyl ether from Methanol**, *International Journal of Nanoscience and Nanotechnology, IJNN* (2014), *10*, 13-26.
- 53- H Salaramoli, E Maleki, Z Shariatinia, M Ranjbar, CdS/CdSe quantum dots bco-sensitized solar cells with Cu2S counter electrode prepared by SILAR, spray pyrolysis and Zn-Cu alloy methods, *Journal of Photochemistry and Photobiology A*: *Chemistry*, 271 (2013) 56-64.
- 54- M Ranjbar, M Yousefi, R Nozari, S Sheshmani, Synthesis and Characterization of Cadmium-Thioacetamide Nanocomposites Using a Facile Sonochemical Approach: A precursor for Producing CdS Nanoparticles via Thermal Decomposition, International Journal of Nanoscience and Nanotechnology, IJNN, 2013, 203-212.
- 55- M Ranjbar, M Yousefi, M Lahooti, A Malekzadeh, Preparation and Characterization of Tetragonal Zirconium Oxide Nanocrystals from Isophthalic Acid-Zirconium(IV) Nanocomposit, International Journal of Nanoscience and Nanotechnology, IJNN, 2012, 191-196.
- 56- M Ranjbar, S Mannan, M Yousefi and Anvar Shalmashi "Yttria Nanoparticles Prepared from Salicylic Acid-Y(III) Nanocomposite as a New Precursor" American Chemical Science Journal, 3 (2013) 1-10.
- 57- M Ranjbar, E Malakooti, S Sheshmani, Synthesis and Characterization of Mercury(II) Complexes Containing 2,9-Dimethyl 1,10-Phenantroline by Sonochemical Method, *Journal of Chemistry*, (2013) 1-6.
- 58- M Ranjbar, N Shahsavan, M Yousefi, A Shalmashi, "Synthesis and Characterization of Salicylic Acid Yttrium(III) Nano Composite: A New Precursor for Y<sub>2</sub>O<sub>3</sub> Nano Structures" American Chemical Science Journal, 3 (2012) 1-10.

- 59- M Ranjbar, N Shahsavan, M Yousefi, **Synthesis and Characterization of Nano Structured Zinc(II) Cysteine Complex Under Ultrasound Irradiation**, *American Chemical Science Journal*, 2 (2012) 111-121.
- 60- M. Ranjbar, S. H. Mahmoudi Najafi, N. Shahsavan, M. Yousefi," **Synthesis of Zinc(II) Oxide Wurtzite Nano Crystals Via Zn(II) Minoxidil Nanocomposite as a New Precursor"** *International Journal of Nanoscience and Nanotechnology, IJNN,* (2011) 147-152
- 61- M. Ranjbar, Ö. Çelik, S. H. Mahmodi Najafi, S. Sheshmani · N. Akbari Mobarakeh, **Synthesis of Lead(II) minoxidil Coordination Polymer : A new Precursor for Lead(II) Oxide and Lead(II) Hydroxyl Bromide**, *J. Inorg. Organomet. Polym.*, 22 (2012) 837-844.
- 62- M. Ranjbar, S. H. Mahmoudi Najafi, and Seik Weng Ng, Catena-Poly[lead(II)-[ I-2,4-diamino6-(piperidin-1-yl)pyrimidine N-oxide, *Acta Cryst.* (2009). E 65, m749.
- 63- M. Ranjbar, "**Short review on sorces, applications and methods for cadmium recovery**" *Iranian Chemical Enginneering Journal*, 1378, No. 36, 54-67 (In Persian Language).
- 64- B. Ranjbar, and M. Ranjbar, "Nanosilica application in rubber industry", *Iranian Journal of polymer*, 48 (2006) 46.
- 65- M. Rafizadeh, M. Ranjbar, and V. Amani, "Crystal structure of Gadolinium complex, Dihydronium 2,6-diaminopyridinium tris(2,6-pyridinedicarboxylato) gadolinium(III) dehydrate, C<sub>31</sub>H<sub>34</sub>GdN<sub>9</sub>O<sub>16</sub>, Anal. Sci. 21 (2005) x113
- 66- H. Aghabozorg, A. Moghimi, F. Manteghi, M. Ranjbar <sup>"</sup>A Nine-Coordinated Zr<sup>IV</sup> Complex and a Self-Assembling System Obtained from a Proton Transfer Compound Containing 2,6-Pyridinedicarboxylate and 2,6-Pyridinediammonium; Synthesis and X-ray Crystal Structure", Z. Anorg. Allg. Chem.631(2005) 909.
- 67- M. Abdollahi, M. Ranjbar, "**Aplication of siliconedioxide nanoparticles in concrete**" *Cement Magazine*, 90 (2004) 48 (In Persian Language).
- 68- M. Ranjbar and H. Aghabozorh, "Crystal Structure of a Polymeric Hg(II) complex of a Pyridine Containing a Self-Assembling System" *Anal. Sci.* 20 (2004) x153.
- 69- A. Moghimi, S. Shokrollahi, M. Shamsipur, H. Aghabozorg, M. Ranjbar, "X- Ray Crystal Structure and Solution Study of Hexa coordinate Mercury(II) Complex of a Pyridine Containing Poroton Transfer Compound" J. Mol. Struct. 701 (2004) 49-56.
- 70- M. Ranjbar, M. Abdollahi, M. Rafizadeh" Crystal Structure of a Seven-Coordinate Thallium(III) Complex, 2,6-Diaminopyridinumbis(2,6-pyridinedicarboxylato)aqua thallate(III)tetrahydrate" Anal. Sci. 20 (2004) x133.
- 71- M. Ranjbar" Crystal Structure of a Five-Coordinate Vanadium(V) Complex, 2,6-Diamino pyridinum 2,6-pyridinedicarboxylatodioxovanadate(V)" Anal. Sci. 20 (2004) x135.
- 72- M. Ranjbar, M. Abdollahi, **"An Introduction to Nonporous Materials"** *Iranian journal of Polymer*, 35 (**2004**) 60 (In Persian Language).
- 73- M. Rafizadeh, M. Ranjbar, and V. Amani," **Dihydronium 2,6-diaminopyridinium tris(2,6-pyridinedicarboxylato)ytterbate(III) dihydrate**" *Acta Cryst.* (2004) m479-m481.
- 74- M. Ranjbar, H. Aghabozorg and A. Moghimi," Synthesis and Crystal Structure of Bis(2,6-diaminopyridinium) tetrachloro palladate(II) of a Pyridine Containing Self-Assembling System " *Iranian Journal of Crystallography and Mineralogy*, 2 (2003) 197-205.
- 75- M. Ranjbar, H. Aghabozorg and A. Moghimi," Crystal Structure of a Binuclear Seven-Coordinate Tin(IV) Complex *Anal. Sci.* 19(2003) x71.
- 76- M. Ranjbar, H. Aghabozorg and A. Moghimi," Crystal structure of bis(2,6-diaminopyridinum) diaqua-bis-(2,6-pyridinedicarboxylato) dibismuthate(III)-) tetrahydrate, (C<sub>28</sub>H<sub>16</sub>O<sub>18</sub>N<sub>4</sub>Bi<sub>2</sub>)(C<sub>5</sub>H<sub>8</sub>N<sub>3</sub>)<sub>2</sub>.4H<sub>2</sub>O Z. Kristallogr. NCS 218 (2003) 432.
- 77- M. Ranjbar, H. Aghabozorg and A. Moghimi," Crystal structure of bis(2,6-diaminopyridinum) tetrachloro palladate(II), C<sub>10</sub>H<sub>16</sub>Cl<sub>4</sub>N<sub>6</sub>Pd" Z. Kristallogr. NCS 218 (2003) 75.
- 78- M. Ranjbar, H. Aghabozorg and A. Moghimi," Crystal Structure of a Binuclear Polymeric Self-Assembled Lead(II) Complex" *Anal. Sci.* 19(2003) 803.
- 79- A. Moghimi, M. Ranjbar, H. Aghabozorg, F. Jalali, M. Shamsipur, and RK Chadha, **Synthesis,** NMR Characterization, X-ray Crystal Structure and Solution Studies of Ni(II) Complexes of a Pyridine Containing Self- assembling System, *J. Chem. Research* (2002)1047-1065.

- 80- A. Moghimi, M. Ranjbar, H. Aghabozorg, F. Jalali, M. Shamsipur, and R. K.Chadha, "Synthesis, NMR Characterization, X—ray Crystal Structure and of Co(II) and La(III) Complexes of a Pyridine Containing Solution Studies Self—Assembling System Can. J. Chem. 80(2002) 1687-1696.
- 81- M. Ranjbar, A. Moghimi, and H. Aghabozorg, "A Seven-coordinate pyridine- 2,6-dicarboxylat- Bridged Cadmium(II) Complex, at 110 K" Acta Cryst. Sec. E. 58 (2002) m304.
- 82- M. Ranjbar, M. Taghavipur, H. Aghabozorg, A. Moghimi, F. Jalali, and M. Shamsipur, "Synthesis, NMR Characterization, X-ray Crystal Structure and Cu(II) Complexes of a Pyridine Containing Self-assembling System" Polish J. Chem. 76 (2002) 785-794.
- 83- M. Ranjbar, A. Moghimi, H. Aghabozorg, and G. A. P. Yap, "Crystal Structure of Zinc(II) Complex of a Pyridine Containing Self-assembling System" *Anal. Sci.* 18 (2002) 219.
- 84- A. Moghimi, M. Ranjbar, H. Aghabozorg, F. Jalali, M. Shamsipur, G. A. P. Yap, d H. Rahbarnoohi, "A Novel Pyridinine Containing Self-assembling System: Synthesis, Characterization, X-ray Crystal Structure, <sup>13</sup>C Solid Phase NMR And Solution Studies" J. Mol. Struct. 605 (2002) 133-149.
- 85- M. Ranjbar, H. Aghabozorg, A. Moghimi, and A. Yanovsky, "Crystal Structure Of 2,6-pyridiniumbis(2,6-pyridinedicarboxylate)Chromium(III).2,6-pyridinediacid, One Half Hydrate, C<sub>26</sub>H<sub>20</sub>CrN<sub>6</sub>O<sub>12.5</sub>" Zeitschrift för Kristallographie, New Crystal Structure, 216 (2001) 626.
- 86- M. Ranjbar, H. Aghabozorg, A. Moghimi, and A. Yanovsky, "Crystal Structure Of Bi(III) Complex of a Pyridine Containing Self-assembling System" *Anal. Sci.* 17 (2001) 4164.

### **PATENTS**

- 1- M. Ranjbar, M. Nabitabar, "Fabrication of electrolyte based of ceria by different precoursors for fuel cells", 139550740003002606, Iranian Patent Office.
- 2- M. Ranjbar, M. Taghizadeh, S. Sheshmani, "Production of LSM for SOFC from metal complexes" 010615, Iranian Patent Office.
- 3- M. Ranjbar, R. Aghaee Hakak, S. Mirzaee, "Production of zinc methionine complex by sonochemical method as supplementary food", 139550140003001496, Iranian Patent Office.
- 4- S. Shokrollahzadeh, M. Ranjbar, M. Abbassi, "Catalytic Ozonation by ZnO/expanded Perlite for remazol black 5 degredation", 139550140003001143, Iranian Patent Office.
- 5- M. Ranjbar, S. Shokrollahzadeh, M. Bayat, "Synthesis and Characterization of new Fe and Mn complexes and their application for catalytic ozonation process", 139550140003001141, Iranian Patent Office.
- 6- M. Ranjbar, M. Abdollahi, R. Ranjbar, "Preparation of hydrofluoric acid from fluorspar in rubber line reactor at low temperature", 1388050396, Iranian Patent Office.
- 7- M. Ranjbar, "Production of cadmium sulphate from zinc factory wastes via solvent extraction", 38703830, Iranian Patent Office.
- 8- M. Ranjbar, S. Safarzadematin, "Preparation of alkaline silicates via pyrometalurgical dusts", 38703831, Iranian Patent Office.
- 9- S. Safarzadematin, M. Ranjbar, "preparation of colloidal nanosilica and nanosilica powder from water glass", 49833, Iranian Patent Office.

### **STUDENT THESIS**

- 1. Synthesis and Characterization of Closo Hydroborates for production of hydrogen as solid State suitable for Solid Oxide Fuel Cells. PhD Project (Rouzbeh Aghaee Hakkak) 2023 (as co supervisor with collaboration of Prof. Dr. Thomas Schleid Stuttgart University, Germany)
- 2. Synthesis, characterization, and application of new imidazolate MOFs for adsorption of Cd, Ni, and Pb metal ions, PhD Project (Amir Khosravi), 2023, (as main supervisor, with collaboration Dr Razieh Habibpour)
- 3. Synthesis and characterization of metal-organic frame work (MOF) based on imidazole derivatives and their application in removal of organic pollutants, PhD Project (Shabnam AliBakhshi), 2022, (Co supervisor).
- 4. Investigation of Metal Organic Frameworkseffects on Performance of Pervoskite Solar Cells, PhD Project (Mahsa Seifpanah), 2018 (as main supervisor with collaboration Dr Mohamad Abedi).
- Fabrication and characterization of anode electrode from nickel oxide/gadolinium doped ceria for solid oxide fuel cells by new precursors, PhD Project (Somaye Ghamari), 2017, (as main supervisor), IROST, Tehran, Iran.
- 6. Synthesis and characterization of new Ferritic hexagonal nanocomposites and their application, PhD Project (Saeid Mortazavi Nik), 2017 (as co supervisor) Science and Research Branch, Islamic Azad University, Tehran, Iran and IROST.
- 7. New achievement on perovskite type solar cells, PhD Project (Elham Maleki), 2017 (as co supervisor) Kashan University and IROST.
- 8. Synthesis and evaluation of Fe/Mo and Cu/Zn/ Al nanocatalyst for methylal and Hydrogen production PhD project (Ali Dehghani), 2016 (as main Supervisor), IROST.
- 9. Efficiency improvement of ZnO-based dye sensitizer solar cells PhD project (Elham Koohestanian), 2016 (as main Supervisor), IROST.
- 10. Preparation of cathodic nano structures LSM and LCNF from inorganic precursors for Solid Oxide fuel cells PhD project (Mostafa Yousefi), 2016 (as main Supervisor), IROST.
- 11. Preparation and Characterization of Barium cerate nano catalyst from new precursors MSc project (Parisa Esteghfari), 2015 (as main Supervisor) IROST.

- 12. Hydrogen production by methanol steam reforming in a micro-channel reactor coated with Cu-Zn-Ce-Al and Cu/Zn/Al spinel Catalyst MSc Project (Azadeh Parsaee) 2015 (as co supervisor), IROST.
- 13. Synthesis and characterization of new Fe3O4, Mn3O4 and Mn3O4/Fe3O4 nano catalysts for degradation of phenol by catalytic ozonation MSc Project (Marzie Bayat) 2015 (as main supervisor) IROST.
- 14. Catalytic ozonation by nano-ZnO/perlite for degradation of Remazol Black 5, MSc Project (Maseud Abbassi) 2016 (as main supervisor), IROST.
- 15. Synthesis and characterization of metal organic frameworks (MOF) by Cu and Zn aminoacids MSc Project (Roozbeh Aghaee Hakak) 2016 (as main supervisor), IROST.
- 16. Synthesis and investigation of MOFs nanoporous containing Ni and Cu, MSc Project (Nasim Saghafi kia) 2016 (as co-supervisor), IROST.
- 17. Effects of Gamma-Alumina Grain Size on Methanol Dehydration Dimethyl Ether (DME) on microchanel reactor, MSc Project (Leila Khoshrooyan) 2015 (as co-supervisor).
- 18. Preparation of NiO and CuO nanostructures by metal complexes as precursor for anodic row Materials of Solid Oxide Full cells" MSc Thesis (Marziya Taheriyan) 2013, (as main supervisor), Shahre Rey Branch Azad University.
- 19. Preparation of cathodic row materials for SOFC by metal complexes as precursor, MSc Thesis (Mahsa Taghizadeh Mazandarani,) 2013, (as main supervisor), Shahre Rey Branch Azad University.
- 20. Preparation and characterization of three components CuO/YSZ nanocomposite as raw anodic materials for SOFC, MSc thesis (Masoomeh Nabitabar) 2012, (as main supervisor), Payam noor Abhar University.
- 21. Preparation of phosphor amine nano structures as dye for dye sensitized solar cells, MSc Project (Razie Shajareh Tooba) 2013 (as co-supervisor), Amir Kabir University.
- 22. Preparation of quantum dots CdS for dye sensitized solar cells, MSc student (Elham Maleki) 2012 (as co supervisor) Amir Kabir University.
- 23. Preparation and characterization of electrolyte to use in solid oxide fuel cell-zirconium oxide doped yttrium, MSc thesis (Soraya Manan) 2011 (as main supervisor), Shahre Rey Branch Azad

University.

- 24. Preparation and characterization of zirconium oxide nano structures by metal complexes as precursor, MSc thesis (Masoomeh Lahooti) 2011, (as main supervisor) Damghan University.
- 25. Preparation of zinc oxide using metal complexes as precursors, MSc project (Nasrin Shahsavan) 2011 (as main supervisor), Shahre Rey Branch Azad University.
- 26. Preparation of cadmium containing nano structures by using template effect, MSc project (Robabeh Nozari) 2010 (as main Supervisor) Shahre Rey Branch Azad University.
- 27. Preparation of mercury containing nano structures by using template effect MSc project (Elaheh Malakooti) 2010 (as main Supervisor) Shahre Rey Branch Azad University.
- 28. Preparation of metal containing nano materials by using template effect, MSc project (Afsaneh Behtash Oskooee) 2009 (as main Supervisor) Shahre Rey Branch Azad University.

# **CONFERENCE PAPERS**

- 1- Maryam Ranjbar\*, Elham Kohestanian, Fatemeh Ebrahimi, Berthold Rachet, Jon Zonck, Parisa Estaghfari, **Fabrication of structurally engineered proton exchange membranes from perovskite and brown millerite compounds for hydrogen production**, 32nd National Conference of Crystallography and Mineralogy of Iran, 26-27 Fen 2025, Kerman, Iran.
- 2- Rouzbeh Aghaei, Niloofar Naseri, Maryam Ranjbar, Thomas Schleid, New solid state hydrogen carriers: **Crystal Structure and Thermal Behavior of (NH4)3X[B12H12]**, 22nd Iranian Chemistry Congress, 13-14, May 2024, Tehran, Iran.
- 3- Parisa Akbarian, Maryam Ranjbar, Mehdi Kheirmand, **Harnessing CO₂ and Renewable Hydrogen: The Pathway to Sustainable Green Methanol Production**, Hydro Nova, 7-8
  Dec. 2024, Tehran, Iran.
- 4- Parisa Akbarian, Maryam Ranjbar, Mehdi Kheirmand, **Methanol to Blue Hydrogen**: Economical and Efficient Catalytic Pathways, The 6th Iranian Methanol Seminar, 8 Feb **2025**, Tehran, Iran.
- 5- Maryam Ranjbar, Razieh Habibpour, Eslam Kashi, Hasan Zamanian, Amir Pazouki, Zahra Bagherpour, **Determining the optimal amount of D2EHPA and TBP extractants in the solvent extraction of nickel and cadmium from the filter cake of cold purification of zinc production factory**, 22nd Iranian Chemistry Congress, 13-14, May 2024, Tehran, Iran.
- 6- Niloofar Naseria, Maryam Ranjbara\*, Catalytic Hydrogen release from alkaline sodium borohydride solution using Ni/Pt coated on SBA nanoparticles, Khwarizmi International Conference on Science and Technology, Iranian Research Organization for Science and Technology (IROST), 25-26 Feb 2024.
- 7- Maryam Ranjbar\*, Razieh Habibpour, Eslam Kashi, Hasan Zamanian, Amir Pazouki, Zahra Bagherpour, Investigating the Mineralization Characteristics of the Cold Treatment Cake of the Lead and Zinc Factory in Recovering Cadmium from it, Khwarizmi

- International Conference on Science and Technology, Iranian Research Organization for Science and Technology (IROST), 25-26 Feb 2024
- 8- Maryam Ranjbar, **Green hydrogen production from renewable methanol**, 12 th Fuel Cell Conference Iran, 1-2 March **2023**. Tehran, Iran
- 9- Maryam Ranjbar, **Hydroborate-based solid hydrogen carriers for application in fuel cells,** 12 th Fuel Cell Conference Iran, 1-2 March **2023**. Tehran, Iran.
- 10- Rouzbeh Aghaei Hakkak, Maryam Ranjbar, Thomas Schleid, **Hydrogen release from boron-containing compounds by catalytic reactions**, 3rd Iranian Catalyst Conference (ICC2022) 17-18 May **2022**, Tehran, Iran.
- 11- Maryam Ranjbar, Solid hydrogen carriers and solid oxide fuel cells application in maritime industry, 11th Iranian Fuel Cell Seminar, 24 Feb. 2022, Amol, Iran.
- 12- Seifpanah M., Ranjbar M., Abedi M., **Improvements in Performance of Lead Iodide Perovskite Solar Cells Incorporating zirconium metal organic compounds Additive**,
  The Academics World 684th International Academic Conference on Development in Science and Technology (IACDST) will be held at Berlin, Germany on 2nd- 3rd October, 2019.
- 13- Ghamari, S. Ranjbar, M., Preparation and characterization of Y-doped Barium Cerate Membranes by new precursors, 2017, Teharn, Iran
- 14- Khoshrooyan, A. Eliassi, M. Ranjbar, Effect of Gamma Alumina Grain Size on Methanol Dehydration, The 15 Iranian National Congress of Chemical Engineering, 17-19 Feb. 2015 Tehran, Iran, (In persian language).
- 15- L. Khoshrooyan, A. Eliassi, M. Ranjbar, Effects of Gamma-Alumina Grain Size on Methanol Dehydration to Dimethyl Ether at Different Temperature and Weight Hourly Space Velocity, The 15th Iranian National Congress of Chemical Engineering (IChEC 2015) University of Tehran, Tehran, Iran, 17-19 Feb. 2015.
- 16- M. Taghizadeh, M. ranjbar, Sh. Sheshmani, **Electro catalyst making solid oxide fuel cell cathode using new precursor solid-state reaction method**, *3th confrence on Hydrogen* and *fuel cell, March 2015*.
- 17- P. Esteghfari, M. Ranjbar, **Synthesis of barium cerate by co-precipitation method using a new precipitation agent for solid oxide fuel cells**, *3rd Hydrogen and Fuel Cells Conference HFCC3*, *12-13 May 2015*, *Tehran*, *Iran*.
- 18- M. Yousefi, M. Ranjbar, Facile synthesis and characterization of zirconia nanoparticles by decomposition of a novel inorganic precursor, *The 1st Nanotechnology meeting, application, 5 March 2014, Hamedan, Iran.*
- 19- M. Yousefi, M. Ranjbar, Preparation of PbO nano-powders using nano-structured lead(II) coordination polymer as a novel precursor, The 1st Nanotechnology meeting, application, 5 March 2014, Hamedan, Iran.
- 20- A. Parsaee, A. Eliassi, M. Ranjbar, **Hydrogen production by steam reforming of methanol** with steam water in micro channel reactor coated with spinel catalyst. **3th confrence** on *Hydrogen* and *fuel cell*, 2014.
- 21- M. Ranjbar, Ömer Çelik, Synthesis and characterization of Cu(II) and Pb(II) supra molecules: new precursors for CuO and PbO nanoparticles, 4th National Crystallographic Meeting with International Participation, 17-19 May, 2014, Diyarbakir, Turkey.
- 22- M. Ranjbar, N. Shahsavan, R. Nozari, E. Jalilian, L. Eriksson, **Crystal structure of Zn(II) and Cd(II) complexes of 2,9-dimethyle 1,10-phenantroline**, 4<sup>th</sup> National Crystallographic Meeting with International Participation, 17-19 May, 2014, Diyarbakir, Turkey.
- 23- M. Ranjbar, National Policy, Regulatory and Institutional Support Mechanisms/Framework and Critical Gaps in Testing, Standardization and Certification of Nanomaterials and Nanoproducts, Expert Group Meeting (EGM) on Testing, Standardization and Certification of Nanomaterials and Nanoproducts, 23 Jun 2014, Manila, Philipin.
- 24- S. Shokrollahzadeh, M. Ranjbar, **Ultrasonic assisted preparation of nano structured Cu/ZrO2/Al2O3 catalyst for catalytic ozonation of phenol, 1st international conference on ultrasonic-based applications: from analysis to synthesis**, *15-17*, *Sept 2014*, *Lisbon, Portugal*.

- 25- M. Ranjbar, M. Nabitabar, **Sonochemical Synthesis of Gadolinium Doped Ceria by New Precursors for Low and Intermediate Temperature Solid Oxide Fuel Cells,** 15-17 Sept. 2014, Lisbon, Portugal.
- 26- Khoshrooyan, A.Eliassi, M. Ranjbar, Study of Catalyst Grain Size Effect on Global Reaction Rate of Methanol Dehydration, 17th Iranian Physical Chemistry Conference, 21-22, Oct. 2014.
- 27- M. Ranjbar, M. Mahmoodi Najafi, E. koohestanian, **Performance Evaluation of hybrid Ftvandhay titanium oxide / zinc oxide compared to hybrid Ftvandhay zinc oxide / titanium oxide** , 13 November 2014, (In persian language).
- 28- E. Kouhestanian, S.A. Mozaffari, M. Ranjbar, Electrochemical characterization of new dye sensitized solar cell fabricated by sonochemical synthesized ZnO nanoparticles 10th Annual Electrochemistry Seminar of Iran University of Science and Technology 26-27 Nov, 2014 (In persian language).
- 29- M. Ranjbar, H. Taheriyan, M.Sheshmani, S.Mahmoudi, **Synthesis and Characterization of nanoparticle Copper(II) Minoxidil Complex Under Ultrasonic Irradiations**, 15 th National Inorganic Chemistry conference, 3-4 Sept, 2013, Sabzevar.
- 30- E. koohestanian, A. Mozafari, M. Ranjbar, Investigating the Effect of Thickness on the Performance of ZnO-based DSSC by Electrochemical Impedance Spectroscopy Technique. *11th Annual Electrochemistry Seminar of Iran, 2013*
- 31- M. Ranjbar, M. Taghizadeh Mazandarani. S. Sheshmani, H. Mahmoudi, **Preparation and Characterization a New Nanocomposite of Potassium-Minoxidil by Sonochemical Method**, *15 th National Inorganic Chemistry conference*, *3-4 Sept. 2013*, *Sabzevar*, *Iran*.
- 32- M. Ranjbar, M. Nabitabar, A. Shalmashi, **Preparation of Ce(III)-Salicylic acid Nanocomposite: New Precursor for Ce<sub>2</sub>O<sub>3</sub> Nano Structures**, 15 th National Inorganic Chemistry conference, 3-4 Sept. 2013, Sabzevar, Iran.
- 33- M. Ranjbar, H. Nabitabar, **Sonochemical synthesis of nanostructured Cu(II) complexes:** precursor for the preparation of **CuO** nanostructures, 15 th National Inorganic Chemistry conference, 3-4 Sept. 2013, Sabzevar, Iran.
- 34- M. Ranjbar, M.Yousefi, Rapid synthesis and characterization of lanthanum strontium manganite nanoparticles by sonochemical approach using a new precursor, 15 th National Inorganic Chemistry conference, 3-4 Sept. 2013, Sabzevar, Iran.
- 35- M. Ranjbar, M. Yousefi, **Microwave synthesis and characterization of La<sub>0.75</sub>Sr<sub>0.25</sub>MnO<sub>3</sub>** nanoparticles as cathode for solid oxide fuel cells from a new precursor, The 2<sup>nd</sup> International and 7<sup>th</sup> Joint conference Iranian Metallurgical Engineering and Iranian Foundry Scientific Society, 30-31 October, 2013. Semnan, Iran.
- 36- M. Ranjbar, M. Nabitabar, **GDC nanoparticles as electrolyte for SOFC applications obtained with 10 mol % Gd doped ceria,** The 2<sup>nd</sup> International and 7<sup>th</sup> Joint conference Iranian Metallurgical Engineering and Iranian Foundry Scientific Society, 30-31 October, 2013. Semnan, Iran.
- 37- Taghizadeh Mazandarani, M. Ranjbar, M. Sheshmani, S.H. Mahmoudi, **Preparation of cathodic row materials for SOFC by metal complexes as precursor** " 3<sup>ed</sup> conference of military application of nanotechnology, 27-28 Nov. 2013, Tehran, Iran.
- 38- Taheriyan, M. Ranjbar, M. Sheshmani, S.H. Mahmoudi, **Preparation of anodic raw materials for SOFC**, 3<sup>ed</sup> conference of military application of nanotechnology, 27-28 Nov. 2013, Tehran, Iran.
- 39- M. Ranjbar, M. Nabitabar, A. Shalmashi, **Preparation and characterization of copper (II)** oxide nano structures by sono chemical and thermal decomposition methods.
- 40- E. Maleki, Z. Shariatiniya, M. Ranjbar, H. Salar Amoli, **Synthesis and characterization of cadmium sulfide nano particles via sonochemecal and thermal decomposition**, First International Conference on Nano structures, Materials and Applications, 7-9, Feb. 2012, Masjedsoleiman, Iran.
- 41- M. Ranjbar, M. Nabitabar, A. Shalmashi, **Preparation and characterization of copper (II) oxide nano structures by sono chemical and thermal decomposition methods,** *The first International conference on nano structured materials: Science and Applications, 7-9 Feb. 2012, Masjedsoleiman, Iran.*

- 42- M. Ranjbar, M. Nabitabar, **Preparation and characterization of CuO and YSZ nano structures as anodic row material for SOFC**, Fuel Cells 2012 Science & Technology, 11-12 April 2012, Berlin, Germany.
- 43- M. Ranjbar, S. Mannan, **Synthesis of yttria stabilized zirconia nano particles using sono chemical and thermal decomposdotion methods**, Fuel Cells 2012 Science & Technology, 11-12 April 2012, Berlin, Germany.
- 44- N. Shahsavan, M. Ranjbar, M.Yousefi, Synthesis and Characterization of Cysteine –Zinc Nano Composite: New Precursor for Wurtzite Zinc Oxide, Application of nano technology in Science and medicals, April, 2012, Mashahd, Iran.
- 45- M. Ranjbar, S. Mannan, **Synthesis of yttria stabilized zirconia nano particles using sono chemical and thermal decomposdotion methods**, Fuel Cells 2012 Science & Technology, 11-12 April, 2012, Berlin, Germany.
- 46- M. Ranjbar, M. Nabitabar, **Preparation and characterization of CuO and YSZ nano structures as anodic row material for SOFC.**
- 47- M. Ranjbar, A. Hosseini, M. Abdollahi, M. Rezaee, **Methodology to analyze the possibility of localizing materials and equipment necessary to build a solid oxide fuel cell**, 2th Conference hydrogen and fuel cell, Tehran-Iran, (In persian language).
- 48- M. Ranjbar, M. Mahmoodi Najafi, **Additives for making solid oxide fuel cell, 2th Conference hydrogen and fuel cell** , 2-3 may 2012, Tehran-Iran, (In persian language).
- 49- M. Ranjbar, S. Mannan, Synthesis and characterization of yttria and yttria stabilized zirconia nano structures as electrolyte row material for solid oxide fuel calls, The second conference on Hydrogen and Fuel Cell, 2-3 May 2012, Tehran, Iran.
- 50- E. Malekil, Z. Shariatinial, H. Salar Amoli, M. Ranjbar, Synthesis and Characterization of CdS Nanoparticles Through Sonochemical and Thermal Decomposition in Different Environments, International Congress on Nanoscience & Nanotechnology (ICNN2012) 8 10, September 2012, Kashan, I. R. Iran, (In persian language).
- 51- L. Kunjuraman, M.R.P. Kurup, M. Ranjbar, M. Nabitabar, Synthesis of Metal Complexes of Heterocyclic bis(thiosemicarbazones): New Precursors for Metal Sulphide Nano Structures, International Congress on Nanoscience & Nanotechnology (ICNN2012) 8 10, September 2012, Kashan, I. R. Iran.
- 52- M. Ranjbar, N. Shahsavan, M. Yousefi, **Ultrasonic-assisted Preparation of ZnO Nano-Structures by Different Coordination Compounds as Precursor**, *International Congress on Nanoscience & Nanotechnology (ICNN2012) 8 10, September 2012, Kashan, I. R. Iran.*
- 53- S. Mannana, M. Ranjbar, M. Yousefia, **Synthesis and characterization of yttria nano** structures and yttria stabilized zirconia nano particles by different methods as electrolytic powders, 2<sup>nd</sup> International Conference on Advanced Nanomaterials and NanoTechnology (ICANN 2011) Gowhati, India, 8-10 Dec. 2012.
- 54- R. Shajare, Z. Toba, M. shariatinia, M. ranjbar, H. Salar Amoli, **Phosphorus amide ligand synthesis and its application in solar cells**, *17 December 2012*, *Tehran*, *Iran*, (*In persian language*).
- 55- L. Maleki, H. Salar Amoli, Z. shariatinia, M. Ranjbar, quantum Dotty solar cells by Cu<sub>2</sub>S and CuS cathodes, with efficiency of 1 and 3 percent, nano-structured solar cells, 17 December 2012, Tehran-Iran.
- 56- M. Lahooti, M. Ranjbar, A. Malekzade, A. Morsali, Preparation and Characterization of Monoclinic Zirconium Oxide Nano Structures by Cysteine- Zirconium(IV) Nano Composite as a New Precursor "15 th National Chemistry congress, 4-6 Sept. 2011, Hamedan, Iran.
- 57- M. Lahooti, M. Ranjbar, A. Malekzade, A. Morsali, Preparation and Characterization of Monoclinic and tetragonal Zirconium Oxide Nano Structures by neocuproine-Zirconium(IV) Nano Composite as a New Precursor, 13 th National Inorganic Chemistry conference, 7-8 Sept. 2011, Kermanshah, Iran.
- 58- S. Mannan, M. Ranjbar, M. Yousefi, **Synthesis and Characterization of Yttrium Oxide Nano Particle by Y(III) dipicolinic Acid Complex as a New Precursor** *"13 th National Inorganic Chemistry conference, 7-8 Sept. 2011, Kermanshah, Iran.*
- 59- S. Mannan, M. Ranjbar, M. Yousefi, Preparation and characterization of nano-sized yttria stabilized zirconia as electrolyte for solid oxide fuel cells: Metal complexes as precursors" 15 th National Chemistry congress, 4-6 Sept. 2011, Hamedan, Iran.

- 60- M. Lahooti, M. Ranjbar, A. Malekzade, A. Morsali, Preparation and Characterization of Monoclinic Zirconium Oxide Nano Structures by Cysteine- Zirconium (IV) Nano Composite as a New Precursor, Fifteenth of National Congress on Chemistry, 4-6, Sep. 2011, Hamedan, Iran.
- 61- S. Mannan, M. Ranjbar, M. Yousefi, **Preparation and characterization of nano-sized yttria** stabilized zirconia as electrolyte for solid oxide fuel cells: **Metal complexes as** precursors, *Fifteenth of National Congress on Chemistry, 4-6, Sep. 2011, Hamedan, Iran.*
- 62- M. Lahooti, M. Ranjbar, A. Malekzade, A. Morsali, Preparation and Characterization of Monoclinic and tetragonal Zirconium Oxide Nano Structures by neocuproine-Zirconium(IV) Nano Composite as a New Precursor, Thirteenth of National conference on Inorganic Chemistry, 7-8, Sep. 2011, Kermanshah, Iran.
- 63- S. Mannan, M. Ranjbar, M. Yousefi, **Synthesis and Characterization of Yttrium Oxide Nano Particle by Y(III) dipicolinic Acid Complex as a New Precursor**, *Thirteenth of National conference on Inorganic Chemistry*, *7-8*, *Sep. 2011*, *Kermanshah*, *Iran*.
- 64- M. Lahooti, M. Ranjbar,A. Malekzade, A. Morsali, **Preparation and Characterization of Tetragonal Zirconium Oxide Nano Structures by Isophetalic Acid-Zirconium (IV) Nano Composite as a New Precursor**, 3rd International Conference on Ultrafine Grained and Nanostructured Materials, Center of Excellence For High Performance Materials, School of Metallurgy and Materials Engineering University College of Engineering, University of Tehran, Tehran, Iran. 2-3 November 2011.
- 65- S. Mannan, M. Ranjbar, M. Yousefi, Synthesis and Characterization of Salicylic Acid Yttrium(III) Nano Composite: A New Precursor for Y<sub>2</sub>O<sub>3</sub> Nano Structures, 3rd International Conference on Ultrafine Grained and Nanostructured Materials, Center of Excellence For High Performance Materials, School of Metallurgy and Materials Engineering University College of Engineering, University of Tehran, Tehran, Iran. 2-3 November 2011.
- 66- R. Nozari<sup>a</sup>, M. Ranjbar, E. Malakooti, S. Sheshmani, **Synthesis and X-Ray Crystal Structure of Cd(II) Complexes: New precursor for CdI<sub>2</sub>, CdO and Cd power Micro and Nano Structures,** 3rd International Conference on Ultrafine Grained and Nanostructured Materials, Center of Excellence For High Performance Materials, School of Metallurgy and Materials Engineering University College of Engineering, University of Tehran, Tehran, Iran. 2-3 November 2011.
- 67- A. Eliassi, M. Ranjbar, **Synthesis of Nano Sized Gamma Alumina particles by Precipitation/Digestion Method,** 3rd International Conference on Ultrafine Grained and Nanostructured Materials, Center of Excellence For High Performance Materials, School of Metallurgy and Materials Engineering University College of Engineering, University of Tehran, Tehran, Iran. 2-3 November 2011.
- 68- M. Ranjbar, S. Mannan, Synthesis and characterization of yttria nano structures and yttria stabilized zirconia nano particles by different methods as electrolytic powders, 2<sup>nd</sup> International Conference on Advanced nano materials and nano technologies, Dec. 8-10, 2011, Gwuahati, India.
- 69- N. Akbari Mobarakeh, M. Ranjbar, S. Heydar, M. Najafi, Sh. Sheshmani **Synthesis and characterization of nano structured lead containing materials from a polymeric minoxidil bromide lead(II) complex as precursor** 10-12 March 2010, Kish island, I. R., Iran.
- 70- A. Eliassi, M. Ranjbar, Synthesis of a New Cu/ZnO/Al<sub>2</sub>O<sub>3</sub> Catalyst for Hydrogen Production by Steam Reforming of Methanol 19<sup>th</sup> international congress of chemical and process engineering (CHISA 2010), August 2010, CZECH Republic.
- 71- S. Sheshmai, M. Ranjbar, R. Nozari, E. Malakooti, **Synthesis and Characterization of Metal Sulfide and Oxide (M=Cd, Hg) Nano-structures Using Ultrasonic Method**, *12 th National Inorganic Chemistry conference*, *24-25*, *6*, *1389*, *Gilan*, *Iran*.
- 72- E. Malakooti, M. Ranjbar, R. Nozari, S. Sheshmani, **Synthesis and characterization of cysteine containing Metal complexes and metal sulfide nano structures (M= Cd and Hg)**, 12 th National Inorganic Chemistry conference, , 24-25, 6, 1389, Gilan, Iran.
- 73- N. Shahsavan, M. Ranjbar, M. Yousefi, E. Jalilian, L. Errikson, **Synthesis, NMR**Characterization and X-Ray Crystal Structure of Zn(II) complexes: New precursor for Zinc Oxide Nano Structures, 12 th National Inorganic Chemistry conference, 24-25, 6, 1389, Gilan, Iran.

- 74- N. Shahsavan M. Ranjbar, M. Usefi, **Synthesis and Characterization Zinc Oxide Nano Structures: A coordination polymer of Zn (II) as precursor**, *12 th National Inorganic Chemistry conference*, , *24-25*, *6*, *1389*, *Gilan*, *Iran*.
- 75- S. Sheshmani, M. Ranjbar, S. Mahmoudi Najafi, N. Akbari Mobarakeh, **Preparation and Characterization of Nano-structured Lead(II)** *Compounds* 12 th National Inorganic Chemistry conference, 24-25, 6, 1389, Gilan, Iran.
- 76- R. Nozari, M. Ranjbar, E. Malakooti, S. Sheshmani, Synthesis ans Characterization of metal Oxides nano structures (M=Cd, Hg) by two kinds of Cd(II) and Hg(II) complexes, Containing 2,9-dimethyl 1,10-phenantroline as precursors, 12 th National Inorganic Chemistry conference, , 24-25, 6, 1389, Gilan, Iran.
- 77- E. Malakooti, M. Ranjbar, R. Nozari , S. Sheshmani, Synthesis and characterization of Mercury(II) Complexes Containing 2,9-dimethyle 1,10-phenantrolin by different methods: Precursors for Nano-structured Mercury(II) bromide and Mercury(II) Iodide, International conference on Nanotech India 2010, 9-21, Nov. 2010. Cochin, India.
- 78- E. Malakooti, M. Ranjbar, S. Sheshmani, **Synthesis and Characterization of Mercury Oxide Nano-structures Using Ultrasonic Method by Hg(II) salicylate complex as precursor,** *International conference on Nanotech India 2010, 9-21, Nov. 2010. Cochin, India.*
- 79- N. Shahsavan, M. Ranjbar, M. Yousefi, **Synthesis and Characterization of Coordination Polymer Zinc(II) Nano-rods of Salicylic Acid: New Precursor for Zinc oxide Nano Structures**, *International conference on Nanotech India 2010, 9-21, Nov.* **30**.
- 80- M. Ranjbar, **Nanoscale materials for Hydrogen storage** 1<sup>st</sup> National conference on fuel cell and Hydrogen, ElmO Sanat University, (2009), 20-21 Jan.
- 81- M. Ranjbar, Extraction of cobalt from zinc factories by 2-ethylehexyle phosphoric acid and tributhyl phosphate *National conference on Novel chemical approuches in medical sciences and industries, (2009) 6-7 March Tehran, Iran.*
- 82- N. Akbari Mobarakeh, M. Ranjbar, Sh. Sheshmani, H. Mahmodi Najafi, s. vik ing, **The formation** of ligand complexes lead in the presence of potassium bromide ions and Potassium thiocyanide, 17th Congress of Crystallography and Mineralogy of Iran, 12-13 August 2009, Bu Ali Sina University in Hamedan (In persian language).
- 83- M. Ranjbar, A. Behtash Oskooee, **Nano silica effects on calcium hydroxide consumption in concrete** *Chemistry and industry regional meeting, (2009) 21st Sep. Damghan, Iran.*
- 84- M. Ranjbar, N. Akbari Mobarake, **Nano silica effects on calcium hydroxide consumption in concrete** *Chemistry and industry regional meeting, (2009) 21st Sep. Damghan, Iran.*
- 85- H. Mahmodi Najafi, N. Akbari Mobarakeh, M. Ranjbar, Sh. Sheshmani, New lead coordination polymer complex as a precursor for the preparation of lead oxides, The first congress of Science role in Nano technology, University of Imam Hussein, 8-9 December 2009 (In persian language).
- 86- M. Ranjbar. **Nanoscale materials for Hydrogen storage**, 1<sup>st</sup> National conference on fuel cell and Hydrogen, 1-2, 11, 1387.
- 87- M. Ranjbar, M.Abdollahi, "Comparison study of micro and nano silica effects on free calcium oxide in Portland concrete cement" 1st Iran-Russia Joint Seminar& Workshop on Nanotechnology, (2005) 28-30 May Tehran, Iran.
- 88- P. Dalir Khairillahi, M. Ranjbar, H. Aghabozorg, A. Moghimi "Study of the Reaction between Self Assembling System [pyda.H<sub>2</sub>][pydc] with Cerium(III) and Lanthanium(III) and X-ray Crystal Structure of them " 11th Symposium of Society of Crystallography and Mineralogy of Iran, Feb. 15-16(2004) Yazd-Iran.
- 89- A. Saei, P. Dalir Khairillahi, M. Ranjbar, H. Aghabozorg, A. Moghimi **Synthesis Crystal Structure of a Self-Assembling Pyridine Containing of Sb(III) and Bi(III)** 11<sup>th</sup> Symposium of Society of Crystallography and Mineralogy of Iran, Feb. 4-5 (2004) Yazd- Iran.
- 90- M. Ranjbar, A. Moghimi, H. Aghabozorg, M. Shamsipur **Novel Proton Transfer Compounds** 14<sup>th</sup> Iranian Chemistry & Chemical Engineering Congress Feb. 17-19 (2004) Tehran-Iran.
- 91- A. Moghimi, M. Ranjbar, J. Rafiei, **The Synthesis and Characterization of two Macreheterocyclic Polyether-tetraester derived from Thiodiglycol and diethyleneglycol** 14<sup>th</sup> Iranian Chemistry & Chemical Engineering Congress Feb. 17-19 (2004) Tehran-Iran.
- 92- M. Shamsipur, A. Shokrollahi, M. Ranjbar, A. Moghimi, Potentiometric Study of Cd<sup>2+</sup>, Zn<sup>2+</sup> and Pb<sup>2+</sup> Complexes Pyridine Containing Self-Assembling System in Aqueous

- **Solutions** 14<sup>th</sup> Iranian Chemistry & Chemical Engineering Congress Feb. 17- 19 (2004) Tehran-Iran.
- 93- P. DalirKhairillahi, M. Ranjbar, H. Aghabozorg, A. Moghimi, Synthesis, Characterization, X-ray Crystal Structures of Ga(III), In(II) and Tl(III) Complexes of a Pyridine containing Self-Assembling System" 14th Iranian Chemistry & Chemical Engineering Congress Feb. 17- 19 (2004) Tehran-Iran.
- 94- M. Rafizadeh, M. Ranjbar, V. Amani, Study of New Lanthanide Complexes of Self Assembling System [pyda.H<sub>2</sub>][pydc]: Synthesis and Crystal Structure of Gd(III), and Dy(III) Complexes 8<sup>th</sup> Symposium of Inorganic Chemistry, Aug. 24-26 (2004), Azarbaijan-Iran.
- 95- M. Ranjbar, M. Abdollahi, **Synthesis and Crystal Structure of a Vanadium (V) Complex, with Distorted Ttriganal Bipyramidal Geometry** 8<sup>th</sup> Symposium of Inorganic Chemistry, Aug. 24-26 (2004), Azarbaijan-Iran.
- 96- M. Rafizadeh, M. Ranjbar, V. Amani, **X-Ray Crystal Structure of a Novel** Nabitabar **Calcium(II) Complex** "8<sup>th</sup> Symposium of Inorganic Chemistry, Aug. 24-26 (2004), Azarbaijan-Iran.
- 97- M. Ranjbar, P. Dalir Khairollahi, A. Saei, H. Aghabozorg and A. Moghimi, Synthesis of New Self-Assemble Coordination Compounds by Using a Self-Assembling System as a Ligand, and Characterization of them by Diferent Techniques European Conference of, Inorganic Chemistry, Sep. 4-9 (2004), ESF-Spain.
- 98- M. Ranjbar, H. Aghabozorg, A. Moghimi, **Synthesis and X-ray Crystal Structure of a Novel Self-Assembling Coordination Sn(IV) Complex** 10<sup>th</sup> Symposium of Society of Crystallography and Mineralogy of Iran, Jan. 1-2 (2003) Zahedan-Iran.
- 99- M. Abdollahi, M. Ranjbar, R. Ranjbar, **Preparation of Aluminum Fluoride from Fluorite with High Purity and High Yield** 10<sup>th</sup> Symposium of Society of Crystallography and Mineralogy of Iran, Jan. 1-2 (2003) Zahedan- Iran.
- 100- M. Ranjbar, H. Aghabozorg, A. Moghimi, **Synthesis and X-ray Crystal Structure of a Novel Thallium (III) Complex, 2,6-diaminopyridinum bis(2,6 pyridinedicarboxylato) aquo tetrahydrate** 10<sup>th</sup> Symposium of Society of Crystallography and Mineralogy of Iran, Jan. 1-2 (2003) Zahedan- Iran.
- 101- M. Ranjbar, A. Moghimi, H. Aghabozorg, **Synthesis, NMR Characterization, X- Ray Cr System Ligand LH**<sup>2</sup> 7<sup>th</sup> International Conference on Chemistry and its Role in Development ICCRD'7 Mansoura, April 14-17, 2003, Sharm-El Sheikh, Egypt.ystal Structure of Zn (II), Cd (II) and Hg (II) of a Novel Self- Assembling.
- 102- H. Aghabozorg, M. Ranjbar, A. Moghimi, Review of Crystallographic and Molecular Structures of Complexes Formed Between Self- Assembling System Ligand Containing Pyridine Ring and Cr(III), Co(II), Ni(II), Cu(II), and Zn(II) Salts 7<sup>th</sup> International Conference on Chemistry and its Role in Development ICCRD'7 Mansoura, April 14-17, 2003, Sharm-El Sheikh, Egypt.
- 103- M. Ranjbar, H. Aghabozorg, A. Moghimi, **Synthesis, NMR Characterization, and X- Ray Crystal Structure of a Novel Binuclear Eight-Coordinate Bi(III) Complex** 7<sup>th</sup> Symposium of Inorganic Chemistry, Feb. 26-27 (2003), Zanjan- Iran.
- 104- M. Ranjbar, H. Aghabozorg, A. Moghimi, Synthesis, NMR Study, and X- Ray Crystal Structure of a Novel Anionic Self-Assembled, Nine-Coordinat Zirconium(IV) Complex 7th Symposium of Inorganic Chemistry, Feb. 26-27 (2003), Zanjan- Iran.
- 105- M. Ranjbar, H. Aghabozorg, A. Moghimi **Self-Assembly of Polymer and Sheet Structures in Transition Metal complexes Containing Carboxylic Acid Substituents** 2<sup>th</sup> Symposium of Macrocyclic Chemistry, May 3-4 (2003), Zanjan University.
- 106- M. Ranjbar, A. Moghimi, H. Aghabozorg, **Self-Assembled Coordination Polymers of Some Main Group Metal Ions and Pyridine Containg Self-Assembling System Ligand**2th Symposium of Macrocyclic Chemistry, May 3-4 (2003), Zanjan-Iran.
- 107- M. Ranjbar, M. Taghavipur, A. Moghimi, H. Aghabozorg, Synthesis, NMR Characterization, X-rayCrystal Structure of Co(II), Ni(II) and Cu(II) of a Pyridine Containing Self- Assembling System 3<sup>rd</sup> Congress of Chemistry of Islamic Azad University, 10 & 11 April 2002 Tehran-Iran.
- 108- M. Ranjbar, H. Aghabozorg, A. Moghimi, Study of the Reactions between Self Assembling System [pyda.H<sub>2</sub>][pydc] with Palladium(II) Chloride, and X- ray Crystal

- **Structure of [pyda.H]**<sub>2</sub>**[PdCl**<sub>4</sub>**]** 3<sup>rd</sup> Congress of Chemistry of Islamic Azad University, 10 & 11 April 2002 Tehran-Iran.
- 109- M. Ranjbar, H. Aghabozorg, A. Moghimi, Study of the Reactions Between Self Assembling System [pyda.H<sub>2</sub>][pydc] with Zirconium(IV) Nitrate, and X- ray Crystal Structure of [pyda.H]NO<sub>3</sub> Salt Adduct 3<sup>rd</sup> Congress of Chemistry of Islamic Azad University, 10 & 11 April 2002 Tehran-Iran.
- 110- M. Ranjbar, A. Moghimi, and H. Aghabozorg, **The Synthesis and Characterization of a new Macreheterocyclic Polyether Tetraester Containing Pyridine Subcyclic Unit** *9*<sup>th</sup> *Iranian Seminar in Organic Chemistry, Oct. 16-18 (2001) Tehran-Iran.*
- 111- M. Ranjbar, A. Moghimi, H. Aghabozorg, F. Jalali, and M. Shamsipur, A Novel Pyridine Containing Self-assembling System: Synthesis, Characterization, X-ray Crystal Structure, <sup>13</sup>C Solid Phase NMR And Solution Studies 9<sup>th</sup> Iranian Seminar in Organic Chemistry, Oct. 16-18 (2001) Tehran-Iran.
- 112- M. Ranjbar, A. Moghimi, and H. Aghabozorg, Synthesis, Characterization, X- Ray Crystal Structure of Zn(II), Cd(II), and Hg(II) of a Novel self-Assembling System Ligand LH<sub>2</sub> 6<sup>th</sup> Symposium of Inorganic Chemistry, Nov. 7-8 (2001) Khorasan-Iran.
- 113- M. Ranjbar, A. Moghimi, and H. Aghabozorg, Synthesis, NMR Characterization, X-ray Crystal Structure of a Novel Self-assembling Coordination Cr(III) Complex, 2,6-diaminopyridine bis(2,6-pyridine dicarboxylato) Chromium(III). 2, 6-pyridinedicarboxylic acid, One Half Hydrate 6th Symposium of Inorganic Chemistry, Nov. 7-8 (2001) Khorasan-Iran.
- 114- M. Ranjbar, H. Aghabozorg, and A. Moghimi, **Preparation and X-ray Crystal Structure of an Unusual Bi (III) Complex, [{BiCl(H<sub>2</sub>O)(pydc)}<sub>2</sub>]<sub>n</sub>** *9<sup>th</sup> Symposium of Society of Crystallography and Mineralogy, Nov. 14-15 (2001) Khorasan- Iran.*
- 115- H. Aghabozorg, M. Ranjbar, and A. Moghimi, **Preparation and X-ray Crystal Structure of Unusual La (III) and Pb(II) Complexes** *9<sup>th</sup> Symposium of Society of Crystallography and Mineralogy, Nov. 14-15 (2001) Khorasan-Iran.*