**دانشیار شیمی معدنی**

**دانشگاه حکیم سبزواری**

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**حوزه ی فعالیت تحقیقاتی:**

1- تهیه و شناسایی ترکیبات معدنی بویژه پلی اکسومتال ها

2- کاربرد پلی اکسومتال ها در حوزه های مختلف نظیر:

 کاربرد به عنوان کاتالیزوردر تهیه ترکیبات آلی

 کاربرد در فرآیندهای بیولوژیکی

 کاربرد به عنوان مبادله گر یونی در جداسازی نوکلئیدهای پرتوزا از پساب هسته ای

3- تهیه و کاربرد نانوکامپوزیت‌های مغناطیسی و کاربرد آن‌ها در حوزه کاتالیستی و پزشکی

**محل وسال اخذ مدارک تحصیلی:**

1- کارشناسی شیمی محض-- دانشگاه آزاد اسلامی واحد مشهد-- 1372

2- کارشناسی ارشد شیمی معدنی – دانشگاه فردوسی مشهد-- 1375

3- دکترای شیمی معدنی – دانشگاه فردوسی مشهد-- 1381

 **سوابق شغلی:**

1- ازاسفند ماه سال 1381 لغایت بهمن ماه سال 1387 در دانشگاه دامغان

2- از بهمن ماه سال 1387 تا کنون در دانشگاه حکیم سبزواری

**مقاله های چاپ شده در مجلات:**

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**مقاله های ارائه شده در سمینارها:**

) ، هتروپلی آنیون جدید PSiW18Co3(H2O)3O68 13-(M = CoII) 1- سنتز و شناسایی

با هترواتم های مختلف

 علیزاده، محمد حسن؛ **محمدی زنوز، فرخزاد**. *سیزدهمین کنگره شیمی و مهندسی شیمی ایران؛ 29-27 بهمن ماه 1377 ؛ دانشگاه تربیت مدرس*

 و اثبات ارتباط ساختاری [P2W18O62]6- از گونه [PW9O34]9- 2- روش جدید سنتز آنیون

 [P2W18O62]6- و[PW9O34]9-  تنگستوفسفات های

 محمد حسن علیزاده، **فرخزاد محمدی زنوز** ؛ *ششمین سمینار شیمی معدنی ایران؛ آبان ماه*

 *1380 ؛ دانشگاه فردوسی مشهد.*

3- **F. Mohammadi Zonoz**, M. H. Alizadeh Synthesis, Spectroscopic Characterization and Crystal Structure of a Novel Sandwich- type Polyoxometalate, [Si2W18Cd4 (H2O) 2O68] 12-

 ; *7th Iranian Seminar of Inorganic Chemistry, 26 & 27 Feb. 2003, Zanjan University, Zanjan.*

4- **F.Mohammadi Zonoz,** M. H. Alizadeh, Syntheses and Spectroscopic Characterization of [P2W18Cd4-nZnn(H2O)O68]10- (n= 2,3) Compounds, The New Mixed- Metal Sandwich-type Polyoxometalates; *14th Iranian Chemistry & Chemical Engineering Congress,* *17-19 February 2004,Tarbiate Moalem University, Tehran.*

5- M. H. Alizadeh, **F. Mohammadi Zonoz**, A. R. Salimi, M. Mirzaei ,Structural Investigation of Heteropolyanion Compounds and Relation with their Catalytic Properties. *14th Iranian Chemistry & Chemical Engineering Congress,* *17-19 February 2004, Tarbiate Moalem University, Tehran.*

6- مطالعه شیمی فیزیکی برهمکنش برخی از ترکیبات پلی اکسومتالات با آلبومین سرم انسانی؛ داود عاجلو، حسین بهنام، **فرخزاد محمدی زنوز**، بیژن رنجبر،...؛ *ششمین کنفرانس بیوشیمی فیزیک ایران؛19-17 شهریور ماه 1383 ؛دانشگاه علوم پایه دامغان.*

7- H. Mousavi Nik, **F. Mohammadi Zonoz**, D. Ajloo, G. Ataie Gafari, Investigation of Metocloperamide Effect on Adenosine deaminase Enzyme Kinetic

 *7th Iranian Biophysical Chemistry Conference, 18-19 July 2006,* Research Institute for Fundamental Sciences, Tabriz University, Tabriz.

8- رفع آلودگی محلول های پسمان هسته ای با استفاده از پلی اکسومتالات ها

 سید جواد احمدی،  **فرخزاد محمدی زنوز،** سیما عطار نصرتی؛ *کنفرانس هسته ای ایران؛ 1و2 اسفند ماه 1386؛ دانشگاه یزد.*

9- Inves S. Tavakoli, **F. Mohammadi Zonoz**, N. Najafi tigation of thermal stability of α-[SiMo2W9O30]8- and α-[SiMo3-xVxW9O40](4+x)- (x= 1, 2) mixed Heteropolyoxometalates, , *12th Iranian Seminar of Inorganic Chemistry,* The University of Guilan, Rashat, Iran

10- Najafi, **F. Mohammadi Zonoz**,Investigation of aggregate [SbW9O33]9- Polyoxometalate by cerium ion likage N. S. Tavakoli, H. Salahshoornia, 1*2th Iranian Seminar of Inorganic Chemistry,* The University of Guilan, Rashat, Iran

11- E. Adibi, R. Tayebee, **F. Mohammadi Zonoz** ,Syntheses and characterization of new hybrid compound constructed by H3[PW12O40] with L-proline, , *13th Iranian Seminar of Inorganic Chemistry*, Razi University, Kermanshah, Iran.

12- A. Dashtban, **F. Mohammadi Zonoz**, E. Rezaee Seresht , Syntheses and characterization of new Coordination Compound in Reaction of Cadmium and pyrazine-2,3- dicarboxylic acid, , *14th Iranian Inorganic Chemistry Conference*, 28-29 August 2012, Sharif University of Technology, Tehran, Iran.

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14- A. Zahmati, R. Tayebee, **F. Mohammadi Zonoz**, Two new organic- inorganic hybrid materials based on the mixed metal heteropolyanions with simple amino acids such as L-proline *14th Iranian Inorganic Chemistry Conference*, 28-29 August 2012, Sharif University of Technology, Tehran, Iran.

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16- H. Mehri, **F. Mohammadi Zonoz**, Synthesis and electrocatalytical behaviour of [SiW11M(H2O)O39]5- (M= Cu, Cd) Polyoxometalates, *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran.

17- E.Jafarifar, **F.Mohammadi Zonoz**, [P2W18X4(H2O)2O68]10- (X= Cd, Cu, Co, Zn, Ni, Mn), synthesis and electrocatalytical investigation of transition substituent polyoxometalate(TMSPs), *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran

18- F.Aliabadi, F.Mohammadi Zonoz ,Synthesis and characterization of mixed- metal sandwich- type polyoxometalates [(P2W15O49)2M2M´O14(H2O)2]16- (M= Cd, M´= Cu, Zn, Mn, Co, Ni) by three vacant lacunary [P2W15O56]12-species, , *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran.

20- M. Garivani, **F.Mohammadi Zonoz,** Synthesis and investigation of electrocatalytical properties [(SbW9O33)2M3(H2O)3]12- (M= Cd, Cu) sandwich-type polyoxometalate in reduction of NO2-, , *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran.

21- , M. Garivani, **F.Mohammadi Zonoz**, Synthesis of [{Cd(C4H6N2)}3(SbW9O33)2] and [{Cd2Co(C4H6N2)}3(SbW9O33)2] sandwich- type polyoxometalates with methyl imidazole organic ligand and investigation of their electrocatalytical behavior on reduction of NO2- *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran.

22- H. Mehri, **F. Mohammadi Zonoz,** Mono substituted transition metal Keggin - type polyoxometalate, [PW11M(H2O)O39]5- (M= Cu, Cd), synthesis and investigation of their electrocatalytical behavior, *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran.

23- E.Jafarifar, **F.Mohammadi Zonoz**, Synthesis and electrocatalytical investigation of mixed-metal transition substituent polyoxometalats (TMSPs), [P2W18 Cd2 X2(H2O)2O68]10- (X= Cu, Co, Zn, Ni, Mn), *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran

24- F.Aliabadi, F.Mohammadi Zonoz, Synthesis and electrocatalytical behavior of [(P2W15O49)2M4O14(H2O)2]16- (M= Cd, Cu, Zn, Mn, Co, Ni) polyoxometalates, *15th Iranian Inorganic Chemistry Conference*, 3-4 September 2013, Hakim Sabzevari University, Sabzevar, Iran.

25- **F. Mohammadi Zonoz,** Z. Tayarani-Najaran, N, Mohajeri, Sandwich-type polyoxometalates as effective inhibitor against cancer cells MCF7, PC3, Du145 and B16F10, *16th Iranian Inorganic Chemistry Conference*, 27-29 August 2014, Bu- Ali Sina University, Hamadan, Iran.

26- **F. Mohammadi Zonoz,** Z. Tayarani-Najaran, N, Mohajeri, Anticancer activity of Keggin polyoxometalates on cancer cells MCF7, PC3, Du145 and B16F10, *16th Iranian Inorganic Chemistry Conference*, 27-29 August 2014, Bu- Ali Sina University, Hamadan, Iran.

27- Mohammad Chahkandi, **Farrokhzad Mohammadi Zonoz**, Zahra Akbari Ghane, Mahmoud Akbari, 63Cu NMR computational study of some new Cu complexes containing dicarboxilic ligands, *16th Iranian Inorganic Chemistry Conference*, 27-29 August 2014, Bu- Ali Sina University, Hamadan, Iran.

28- Mohammad Chahkandi, **Farrokhzad Mohammadi Zonoz**, Zahra Akbari Ghane, Mahmoud Akbari, The vibrational and UV-Vis spectroscopic and NBO studies of four new Cu(II) complexes with dicarboxylic ligands: A DFT study,*16th Iranian Inorganic Chemistry Conference,* 27-29 August 2014, Bu- Ali Sina University, Hamadan, Iran.

29- Mohammad Chahkandi, **Farrokhzad Mohammadi Zonoz**, Behnaz Madani Khoshbakht, Investigation of Hydrogen Bond within some Fe and Ni Complexes, *17th Iranian Inorganic Chemistry Conference*, 3 - 5 September 2015, Azarbaijan Shahid Madani University, Tabriz, Iran.

30- Mohammad Chahkandi, **Farrokhzad Mohammadi Zonoz**, Behnaz Madani Khoshbakht, Study of Hydrogen Bond in some Fe and Ni Complexes with NMR and NBO calculations, *17th Iranian Inorganic Chemistry Conference*, 3 -5 September 2015, Azarbaijan Shahid Madani University, Tabriz, Iran.

31- Mahdi Mirzaee , **Farrokhzad Mohammadi Zonoz** , Mojgan Jamali, [PMo10V2O40]5- and [PW10V2O40]5- Supported on Amine Functionalized Nano-boehmite for Catalytic Epoxidation of Alkenes, *18th Iranian Chemistry Congress*, August 30 - September 1, 2015, Semnan University, Semnan, Iran.

32- Mahdi Mirzaee , **Farrokhzad Mohammadi Zonoz** , Mojgan Jamali, Preparation and Characterization of Heteropoly-Acids Supported on Functionalized Nano-boehmite, , *18th Iranian Chemistry Congress*, August 30 - September 1, 2015, Semnan University, Semnan, Iran