



CURRICULUM VITAE

Dr. Muzaffar Ahmad Bhat

Address: Sonasamil P/O: Pulwama, Dist/Teh: Pulwama, Jammu and Kashmir, India

Contact No: +919469142402, 9697231450 (M).

E-Mail: muzaffarbhat9@gmail.com , muzaffarbhat9@yahoo.com

Research Interests

- **Synthesis, characterization, reactivity and biologic activity of sulphur and selenium i.e chalcogen bearing Ligands.**
- **Pesticides and insecticide synthesis especially dithiocarbamates, dithiophosphates, dithiocarbazates and carbazates**
- **Supramolecular chemistry, computational chemistry**
- **Organic synthesis.**

Research Experience

- **Synthesis of dithiocarbamates, dithiophosphates, dithiocarbazates and carbazates and their complexation with metals especially Sn, Cd, Zn, Hg and Cu**

- Synthesis, characterization and reactivity of sulphur, selenium and tellerium bearing ligands
- Purification and drying of all the commonly used solvents by easy and available methods, expertise in handling air sensitive materials via Schlenk line techniques and also have experience in characterization of NMR , IR, Mass spectra and single crystal X-ray data analysis.
- Have synthesized six noval compounds of phosphorous, sulfur and selenium and 38 noval complexes and determined the molecular structure of 8 supramolecular compounds
- Determined the molecular structure of polymeric dithiocarbamates.
- Have synthesized noval series of carbazates containing tertiary butyl carbazates and have determined their molecular structures.
- Expert in carrying out theoretical studies or computational studies using Gaussian 9 package
- Expertise in carrying out docking studies by employing AutoDock 4.2

Achievements

- 1st rank holder in the entrance test conducted by Jiwaji University for Ph.D
- 1st rank holder in the secondary school examination (81.00%) in MMET Public School Pulwama.
- Received the travel bursary award of 800 Aus \$ in the 27th International Conference on Organometallic Chemistry 2016 17-22 july held in Melbourne Australlia.
- Received the postdoc offer from **Rui Wang, MD, PhD, FAHA, Vice-President Research Laurentian University**, 935 Ramsey Lake Road, Sudbury, Ontario, Canada P3E 2C6.

Major Instruments Handled

- **U.V Visible Spectrophotometer. Both single beam and double beam.**
- **F.T I.R .KBr pellets. HPLC and NMR.**
- **Potentiometer and Polariometer.**

Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award.

Title of Thesis: "Preperation, characterization and reactivity of Sulphur and Selenium bearing ligands"

Supervisor

Prof. Sanjay K. Srivastava.

Professor, School of Studies in Chemistry Jiwaji University Gwalior-474011

Date of Award: May 2016.

1. Work experience (in chronological order).

S.No.	Positions held	Name of the Institute	From	To	Pay Scale
1.	Guest Faculty	CSMM, Chemicals, Sales and Marketing Management and Department of Chemistry	30-06-2011	29-07-2013	15000/
2.	Contractual Assistant Professor	Islamic University of Science and Technology, Awantipora Pulwama	11-12-2016	Till date	25000/

2. Publications (*List of papers published in SCI Journals.*)

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Muzzaffar Bhat , Muzzaffar Ahmad Mir Agim, Ray J. Butcher, Sanjay K. Srivastava	First structurally characterized anion exchanged product of noval cyclohexane containing substituted thio piperazinium chloride [C ₆ H ₁₁ S(CH ₂) ₃ C ₄ H ₉ N ₂ C ₆ H ₅ Cl (L ¹ Cl)] : synthesis, crystal structure and supramolecularity of (L ¹ NO ₃).	Inorganic Chemistry communication (IF = 1.98)	77	8-11	2017
2.	Muzzaffar Ahmad Mir, Muzzaffar Ahmad Bhat , Rawoof Ahmad Naikoo, Rayees Ahmad Bhat, Mubashir Khanb, Mahabul Shaik, Pawan Kumar, P.K. Sharma, Radha Tomar.	Utilization of zeolite/polymer composites for gas sensing: A review	Sensors and Actuators B: Chemical, (IF = 4.79)	http://dx.doi.org/10.1016/j.snb.2016.09.152		2016
3.	Muzzaffar Ahmad Mir, Muzzaffar Ahmad Bhat , Rawoof Ahmad Naikoo, Pukhrambam Dipak, Rayees Ahmad Bhat, Radha Tomar, P.K. Sharma	Fabrication of polyaniline/zeolite composites and their response towards nitrogen dioxide	Microporous and Mesoporous Materials (IF = 3.56)	233	53-61	2016
4.	Muzzaffar A. Bhat , Shalini Jain, Sanjay K. Srivastava, Ray J. Butcher, Jan	Poly[μ ₂ -aqua-aqua[μ ₃ -N-butyl-N-(2-hydroxyethyl)dithiocarbamate-k ³ O,O':S]sodium]	Crystallographic Acta (IF = 0.74)	E72,	196–198.	2016.

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5.	Muzzaffar A. Bhat, Pooja Sharma, Ambika Chopra, Sanjay K. Srivastava, Ray J. Butcher	Crystal structure of 1-(3-Chlorophenyl)-4-(3-chloropropyl)-piperazinium chloride redetermined at 100 K.	Crystallographic Acta (IF = 0.74)	http://dx.doi.org/10.1107/S2414314616001681		2016
6.	Muzzaffar Ahmad Mir, Rawoof Ahmad Naikoo, Samiullah Bhat, Radha Tomar, Muzzaffar Ahmad Bhat, Rayees Ahmad Bhat, Pukhrambam Dipak and D. C. Tiwari.	Effect of Different Variables on the Electrical Conductivity Sensitivity of Synthesized Zeolite/Polymer Composites for Various Gases: A Review	American Chemical Science Journal, IF = 0.45)	13(2),	1-18(2016
7	Muzzaffar A. Bhat, Shabir H. Lone, Muzzaffar A. Mir, Sheikh A. Majid, Sanjay K. Srivastava	Synthesis, spectral characterization, DFT studies and biological activity of novel Ligand 1-(2-cyclohexyl thioethyl) piperidine and its complexes with group 12 metal chlorides	Applied Organometallic Chemistry IF=3.6	DOI: 10.1002/aoc.4329		2018
8	Muzzaffar A. Bhat, Shabir H. Lone, Sanjay K. Srivastava	Synthesis, spectroscopic characterization, DFT studies and biological activity of bis (1-(ethyl) piperidine) diselenide (L) and its complexes with selected group 12 metal halides	Inorganica Chimica Acta IF= 2.09	478	222–231	(2018)
9.	Shabir H. Lone, Muzzaffar A. Bhat, Rayees A. Lone, Salman Jameel, Javeed A. Lone	Hemisyntesis, computational and molecular docking studies of novel nitrogen containing steroidal aromatase	New Journal Of Chemistry IF= 3.2	DOI: 10.1039/c8nj00063h		

	and Khursheed A. Bhat	inhibitors: testolactam and testololactam				
10	Shabir H. Lone, Salman Jameel, Muzzaffar A. Bhat , Rayees A. Lone, Ray J. Butcher and Khursheed A. Bhat.	Synthesis of an unusual quinazoline alkaloid: theoretical and experimental investigations of its structural, electronic, molecular and biological properties†	RSC Adv. IF= 3.1	8	2018	8259
11	Muzzaffar A. Bhat , Shabir H. Lone, Muzzaffar A. Mir, Sheikh A. Majid, Haroon Mohi-ud-din Bhat, Raymond J. Butcher, Sanjay K. Srivastava	Synthesis of t-butyl 2-(4-hydroxy-3-methoxybenzylidene)hydrazine carboxylate: Experimental and theoretical investigations of its properties	Journal of Molecular Structure IF= 2.1	1164	(2018)	516-524
12.	Muzzaffar A. Bhat , Shabir H. Lone, Ray J. Butcher, Sanjay K. Srivastava	Theoretical and experimental investigations into structural, electronic, molecular and biological properties of 4-(3-chlorophenyl)-1-(3-chloropropyl) piperazin-1-ium chloride	Journal of Molecular Structure IF= 2.1	1168	(2018)	242-249
13.	Muzzaffar A. Bhat , Shabir H. Lone, Sabeena Ali, Sanjay K. Srivastava	Synthesis, spectral characterization, reactivity and DFT studies of novel ligand phenylseleno benzylacetate (L) and its complexes with group 12 metal chlorides	Journal of Molecular Structure IF= 2.1	1171	(2018)	233-242
14	Muzzaffar A. Bhat , Shabir H. Lone & Sanjay K. Srivastava	1-(3-Chlorophenyl)-4-(3-phenylseleno propyl) piperazine (L); Synthesis, spectroscopic characterization, DFT studies, antimicrobial evaluation and its reactivity towards group 12 metal chlorides	Journal of Coordination Chemistry IF= 2.1	https://doi.org/10.1080/00958972.2018.1489126		

15	Muzzaffar Ahmad Mir, Muzzaffar Ahmad Bhat , Sheikh Abdul Majid, Shabir H. Lone, Manzoor Ahmad Malla, Kautily Rao Tiwari, Ashiq Hussain Pandit, Radha Tomar, Rayees Ahmad Bhat.	Studies on the synthesis and characterization of polyaniline-zeolite nanostructures and their role in carbon monoxide sensing	Journal of Environmental Chemical Engineering IF=1.5	6	(2018)	1137 – 1146
16	Rayees A. Bhat, D. Kumar, Anurag Srivastava, Bilal A. Mir, Manzoor A. Malla, Muzzaffar A. Bhat , and Muzzaffar A. Mir	Experimental, DFT Studies and Biological Evaluation of S-methyl-b-N-(3-(2-nitrophenyl)allylidene)dithiocarbamate	Chemistry Select IF=1.5	DOI: 10.1002/slt.201801698		
17	Muzzaffar A. Bhat , Muzzaffar A. Mir, Shabir H. Lone, Sheikh A. Majid, Rayees A. Bhat, Sanjay K Srivastava	H/BETA Zeolite mediated synthesis of <i>t</i> -butyl carbamate based Schiff bases. A versatile catalyst for the synthesis of highly functionalized imines	Journal of Porous materials IF= 1.8	Accepted		
18	Muzzaffar Ahmad Bhat , Joseph Agim, Raymond. J. Butcher and Sanjay K. Srivastava	Synthesis, spectral characterization, crystallographic analysis, DFT studies, bio evaluation and anion exchange reactions of novel ligand 1-(3-Chlorophenyl)-4-(3-phenylseleno propyl) piperazinium chloride	Journal of Molecular Structure IF= 2.1	Accepted		

Books Published

Books Published

1. **Advances in Organosulphur and Organoselenium Chemistry.**

Muzzaffar Ahmad Bhat, Muzzaffar Ahmad Mir, Sheikh Abdul majid.

ISSN 978-613-5-83596-0 (Lambert Publishers)

2. **Advances in Organotellurium and Hydrid Organotellurium Chemistry**

Muzzaffar Ahmad Bhat

ISSN 978-3-659-56448-2 (Lambert Publishers)

3. **Zeolite: Synthesis and Applications**

S. H Majid, **Muzzaffar Ahmad Bhat**, Muzzaffar Ahmad Mir.

ISSN 978-613-7-15431-1 (Lambert Publishers)

4. **Exploitation of Zeolites/polymers for various applications**

ISBN No. 9786136635149

Muzzaffar Ahmad Mir, **Muzzaffar Ahmad Bhat**, S. H Majid

5. **Zeolite–Polymer based Materials for Gas Sensing**

ISBN No. 9783668662407 (GRIN Verlag)

Muzzaffar Ahmad Mir, **Muzzaffar Ahmad Bhat**, S. H Majid.

Book Chapters

1. **Zeolite-Polymer Composites: Gas Sensing.**

Encyclopedia of polymer Application, Taylor and Francis Group 711 third Avenue, 8th Floor New York.

Muzzaffar Ahmad Mir, **Muzzaffar Ahmad Bhat**, S. H Majid.

Conferences attended

1. Attended National Conference on “Advances In Electroanalytical Chemistry” held at School of Studies in Environmental Chemistry, Jiwaji Univeristy, Gwalior, M.P. (Dec. 23-24, 2011).
2. Attended 3rd International Conference on “Climate Change and Sustainable Management of Natural Resources” held at Institute of Allied Science and Computer Applications, School of Life Science, School of Business, ITM Univeristy, Gwalior, M.P. (Feb. 2-7, 2012).

3. Attended National Conference on “Recent Advances in Chemical Science; Emphasis on Healthy Life” held at Department of Engineering Chemistry, ITM GOI & ITM University, Gwalior, M.P. (Sep. 21-22, 2012).
4. Attended National Conference as volunteer on “New Frontiers for Women in Science and Technology” organised by Jiwaji University, Gwalior, M.P. (March 20-21, 2013).
5. Attended National Conference as volunteer on “Women in Science – Promoting Excellence and Innovation for Future Development” organized by Jiwaji University, Gwalior, M.P. (March 25-27, 2015).
6. Presented paper in National Conference on “Role of Nanomaterials for various Applications in Chemistry: An Ecofriendly Approach” organised by School of Studies in Chemistry, Jiwaji University, Gwalior, M.P. (April 6-8, 2015)
7. Poster presentation in the **27th International Conference on Organometallic Chemistry 2016** 17-22 July held in Melbourne Australia and received the travel bursary award of 800 Aus dollars.

Personal Profile

Name : Muzzaffar Ahmad Bhat
Father's Name : Manzoor Ahmad Bhat
Mother's Name : Haseena Akhter
Date of Birth : 3rd Feb.1988
Nationality : Indian
Languages known : English, Hindi & Urdu
Gender : Male
Marital status : Single
Religion : Muslim

References

1. **Prof. Sanjay K. Srivastav**
Professor in SOS chemistry,
Jiwaji University Gwalior, India.
Tele. , +919425122093

Email :, sksrivias7@yahoo.com

2. **Prof Raymond John Butcher**
Professor of Inorganic & Structural Chemistry Howard University Washington
DC 20059 Office: (202) 806-9892 Cell: (703) 585-6631 Fax: (202) 806-5442
Email:, rbutcher99@yahoo.com

3. **Dr. Khursheed Ahmad Bhat**
Senior Scientist, Indian Institute of Integrative Medicine
(IIIM) Branch Sanatnagar Srinagar
Tele., +919419089979

E-mail:, kabhat@iiim.ac.in

Declaration

I hereby declare that all the information mentioned above is true to the best of my knowledge. I shall be responsible for any action, if any of the above statements are incorrect at any stage in future.

Date: 29-03-2018

Place: Pulwama

(Muzzaffar Ahmad Bhat)