

CURRICULUM VITAE

Personal Details

Name	Dr. Akshpreet Singh
Designation	Assistant Professor
Date of birth	06.07.1992
Address	Department of Chemistry, DAV College, Sector 10, Chandigarh E-mail: akshpreet@davchd.ac.in Ph: 9915778351
Academic qualifications	M.Sc. (H.S), Ph.D. (Chemistry)
Field of specialization	Inorganic chemistry, Organosilicon chemistry



Teaching Experience

S. No.	Position held	Name of Institute	From	To
1.	Assistant Professor	GGDSD College, Sector-32C, Chandigarh	22-07-2019	30-04-2020
2.	Assistant Professor	GGDSD College, Sector-32C, Chandigarh	16-11-2020	22-04-2021
3.	Assistant Professor	DAV College, Sector 10, Chandigarh	22-04-2021	Till date

Professional Recognition/Awards/Achievements/Lecture delivered

1. Best Poster Prize in 'CHASCON-2018' organized by Panjab University, Chandigarh on 12-14 February, 2018.
2. Delivered a lecture on 'Gas Chromatography' in One day Workshop on 'Instrumentation Techniques in Chemistry' organized by Resonance Club, Department of Chemistry, GGDSD College, Sector-32-C, Chandigarh on 21 September, 2019.

Orientation/Refresher/FDP

1. Completed one week Faculty Skill Development Programme on 'Biological Data Analysis & Data Science' organized by Department of Bioinformatics & Biochemistry, GGSDS College, Chandigarh under RUSA, U.T. administration, Chandigarh from 27 February, 2020 to 04 March, 2020.
2. Completed Orientation course which was UGC Sponsored 127th Faculty Induction Programme organized by UGC-HRDC, Panjab University, Chandigarh from 17/12/2021 to 13/01/2022.
3. Completed online Inter-Disciplinary two week Refresher Course in 'Managing Online Classes & Co-creating MOOCS 27.0' from 06/06/2023 to 20/06/2023.

Research Guidance

- Enrolled for Ph.D: 05
- Ph.D Degree Awarded: 01

S. No.	Name of scholar	Title of research topic/thesis	Year of Degree Awarded
1.	Sanjay Sharma	STUDY ON SYNTHESIS AND CHARACTERIZATION OF ORGANOSILANES AND THEIR SILATRANES FOR APPLICATIONS IN CHEMOSENSING, MATERIAL SCIENCE AND BIOLOGICAL FIELDS	2023

List of Patents

1. Indian Patent Granted for an Invention entitled 'ANTHRACENE TETHERED TRIAZOLE CONJUGATED ORGANOSILANE BEARING HIGH ANTIOXIDANT ACTIVITY' with Application no. 202311073294 and Patent no. 558409.
2. Indian Patent Published for an Invention entitled 'SYNTHESIS OF X RAY-CHARACTERIZED BENDIMIDAZOLE HYBRID 1,2,3-TRIAZOLYL COMPOUND VIA CLICK CHEMISTRY APPROACH' with Application no. 202411065016.

List of Publications

S.No	Journal/ Book Name	Title of paper/Chapter	Authors	Year	Volum e/Issue	Page no.
1.	New	Benzimidazole-	Gurjaspreet	2024	48	2028

	Journal of Chemistry	modified organosilane functionalized silica nanoparticles as a 'turn-off' fluorescent probe for highly selective Cu ²⁺ ion detection: unravelling logic gate behaviour and molecular docking studies	Singh, Mohit, Akshpreet Singh , Priyanka S umesh Khurana, Mithun, K . N. Singh, Jasamrit Nayyar, Brij Mohan			
2.	Inorganica Chimica Acta	Azomethine functionalized platform for the selective detection of Zr(IV) ion, biological evaluation and potent TLR-4 inhibitor	Gurjaspreet Singh, Pooja Malik, Pawan, Mohit, Anita Devi, Sofia Gupta, Tamana, Akshpreet Singh , K.N. Singh	2024	1297	136916
3.	International Journal of Biological Macromolecules	A piperazine-modified Schiff base sensor for highly selective detection of Zr (IV) ions: unveiling its antioxidant potential and regulatory effects on Zea mays growth	Gurjaspreet Singh, Sumesh Khurana, Pawan, Mohit, Anita Devi, Akshpreet Singh , Vikas, Daizy R. Batish, Aditi Sharma	2024	261	129689
4.	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	Hybrid silica nanoparticles functionalized with pyrazolone-tethered organosilane: Synthesis and application for Sn (II) ion sensing in tap water	Gurjaspreet Singh, Sanjay Sharma, Akshpreet Singh , Mohit, Jashan Deep Kaur, Sofia Gupta, Tamana, Harshbir Kaur, Swati Devi	2024	308	123736
5.	Materials Chemistry	Graphene oxide functionalized	Gurjaspreet Singh, S	2024	319	129347

	and Physics	organosilanes for electrochemical detection of uric acid in urine and water	anjay Sharma, Akshpreet Singh , Jyoti, Pawan, Jashan Deep Kaur, Harshbir Kaur, Brij Mohan, Shweta Rana			
6.	Inorganica Chemica Acta	1,2,3-Triazole appended Schiff base functionalized silanes: A colorimetric sensor of Al (III) and a potent inhibitor of butyrylcholinesterase in Alzheimer's diseases via molecular docking	Gurjaspreet Singh, Swati Devi, Akshpreet Singh , Mohit, Anita Devi, Diksha, Sanjay Sharma, María Angeles Esteban, Cristóbal Espinosa-Ruíz	2024	572	12226 9
7.	Inorganic Chemistry Communications	Graphene oxide functionalized with silatrane as probe for electrochemical recognition of acetaminophen in pharmaceuticals tablets	Gurjaspreet Singh, Anjay Sharma, Akshpreet Singh , Sofia Gupta, Jyoti, Mohit, Harshbir Kaur, Anku Sh Sheoran, Shweta Rana	2024	170	11325 3
8.	Journal of Molecular Structure	1,2,3-Triazole functionalized organosilanes as naked eye sensor of Zr (IV) and a potent tyrosinase inhibitor	Gurjaspreet Singh, Swati Devi, Akshpreet Singh , Sofia Gupta, Pooja Malik, Sumesh Khurana, Jigmat Stanzin, Mithun, Brij Mohan	2024	1318	13930 9
9.	ChemistrySelect	Click-Generated Triazole-Based Silanes: A Potent Chemosensor for Dihydrogen Phosphate	Gurjaspreet Singh, Tamana, Jashan Deep Kaur, Sofia Gupta, Yamini Thakur, Pooja Malik, Akshpreet Singh , Priyanka, K. N. Singh	2023	8	e20230 0532

10.	Science of The Total Environment	Detection of 2,4-dichlorophenoxyacetic acid in water sample by organosilane based silica nanocomposites	Gurjaspreet Singh, Sanjay Sharma, Akshpreet Singh , Mohit, Anita Devi, Sofia Gupta, Pooja Malik, Sumesh Khurana, Sajeev Soni	2023	858	159594
11.	Inorganica Chimica Acta	Selective colorimetric recognition of cysteine/Fe ³⁺ ions using chalcone derived titanium nanocomposites in aqueous solution and human blood	Gurjaspreet Singh, Kavita Chowdhary, Akshpreet Singh , Pinky Satija, Mohit, Pawan, Sajeev Soni, Neera Raghav, Rohit Sharma	2023	545	121232
12.	Silicon	Design, Synthesis, Drug-Likeness and In Silico Prediction of Polycyclic Aromatic Schiff base Tethered Organosilatrane	Gurjaspreet Singh, Shilpy, Akshpreet Singh , Surjeet Singh, Sushma, Mohit, Yamini Thakur, K. N. Singh, Sajeev Soni	2023	15	867
13.	Materials Chemistry and Physics	Graphene oxide functionalized organosilane based fluorescent biosensor for detecting guanine in human urine	Gurjaspreet Singh, Sanjay Sharma, Akshpreet Singh , Diksha, Sushma, Pawan, Suman, Mohit, Priyanka	2022	287	126130
14.	Journal of Molecular Structure	Design of pyrene functionalized triazole linked organosilane for specific detection of Ce ³⁺ ions	Gurjaspreet Singh, Shilpy, Akshpreet Singh , Sushma, Mohit, Pinky Satija, Amandeep Saroa, Deepak kumar, K. N.	2021	1243	130787

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15.	New Journal of chemistry	The first report of X-ray characterized organosilatrane-based receptors for the electrochemical analysis of Al ³⁺ ions	Gurjaspreet Singh, Sanjay Sharma, Akshpreet Singh , Ranjeet Kaur, Pawan, Mohit, Shweta Rana, Subash Chandra Sahoo, Amarjit Kaur	2021	45	16083
16.	Journal of Organometallic Chemistry	A quick microwave preparation of isatin hydrazone schiff base conjugated organosilicon compounds: Exploration of their antibacterial, antifungal, and antioxidative potentials	Gurjaspreet Singh, Pooja Kalra, Akshpreet Singh , Geetika Sharma, Sanchita, Pawan, Mohit, Cristóbal Espinosa-Ruíz, María Angeles Esteban	2021	953	122051
17.	Journal of Organometallic Chemistry	Designing of chalcone functionalized 1,2,3-triazole allied bis-organosilanes as potent antioxidants and optical sensor for recognition of Sn ²⁺ and Hg ²⁺ ions	Gurjaspreet Singh, Sushma, Akshpreet Singh , Priyanka, Kavita Chowdhary, Jandeep Singh, Maria Angeles Esteban, Cristóbal Espinosa-Ruíz, D. González-Silvera	2021	953	122049
18.	Inorganica	Organosilanes:	Gurjaspreet Singh,	2021	528	120591

	Chemica Acta	Synthesis and modification to magnetic silica nanoparticles for recognition of Hg (II) ions	Mohit, Akshpreet Singh , Diksha, Pinky Satija, Anamika Saini, Pawan, Priyanka, K. N. Singh			
19.	New Journal of chemistry	Schiff base-functionalized silatrane-based receptor as a potential chemo-sensor for the detection of Al ³⁺ ions	Gurjaspreet Singh, Priyanka, Akshpreet Singh , Pinky Satija, Sushma, Pawan, Mohit, Jandeep Singh and Jasbinder Singh	2021	45	7850
20.	ChemistrySelect	Benzothiazole Encapped Silane and Its Nano Composites for Sequential Detection of Copper Ions and Cysteine in Aqueous Solution	Gurjaspreet Singh, Kavita Chowdhary, Akshpreet Singh , Pinky Satija, Shilpy, Diksha, Suman, Sushma, Mohit	2021	6	2281
21.	Journal of Inorganic and Organometallic polymers and materials	Triazole Containing Salicylimine Linked Organosiloxane for Recognition of Ce ³⁺ Ions in Aqueous Media	Gurjaspreet Singh, Shilpy, Akshpreet Singh , Diksha, Pinky Satija, Sushma, Mohit, Jashan Deep Kaur & K. N. Singh	2021	31	997
22.	New Journal of chemistry	Organosilanes and their magnetic nanoparticles as naked eye red emissive sensors for Ag ⁺ ions and potent anti-oxidants	Gurjaspreet Singh, Diksha, Akshpreet Singh , Pinky Satija, Pawan, Mohit, D. González-Silvera, Cristóbal Espinosa-Ruíz and María Angeles Esteban	2021	45	5517
23.	Journal of Molecular	Bis-triazole with indole pendant	Gurjaspreet Singh, Pinky Satija,	2021	1231	129963

	Structure	Organosilicon framework: Probe for recognition of Pb ²⁺ ions	Akshpreet Singh , Pawan, Mohit, Jashan Deep Kaur, Anita Devi, Anamika Saini, Jandeep Singh			
24.	Journal of molecular structure	Propargyl-functionalized single arm allied Anthracene based Schiff bases: Crystal structure, solvatochromism and selective recognition of Fe ³⁺ ion	Gurjaspreet Singh, Pawan, Akshpreet Singh , Shilpy, Diksha, Suman, Geetika Sharma, Subash Chandra Sahoo, Amarjit Kaur	2021	1229	129618
25.	Polycyclic Aromatic Compounds	Synthesis, characterization, hydrolytic stability, nickel (II) chloride complex and anti-parasitic activity of pyrene tethered silatranes,	Gurjaspreet Singh, Akshpreet Singh , Kavita Chowdhary, Pinky Satija, Sanchita, Pooja Kalra, Geetika Sharma, Shweta Sinha, and Rakesh Sehgal	2021	41	173
26.	Inorganica Chimica Acta	Schiff base derived bis-organosilanes: Immobilization on silica nanosphere and Cu ²⁺ and Fe ³⁺ dual ion sensing	Gurjaspreet Singh, Sushma, Akshpreet Singh , Pinky Satija, Shilpy, Mohit, Priyanka, Jandeep Singh, Ashu Khosla	2021	514	120028
27.	Chemistry Select	Design and Synthesis of Heterocyclic Encapsulated Organosilatranes for In Silico, In Vitro Antioxidant and Cytotoxicity Evaluation	Gurjaspreet Singh, Geetika Sharma, Pinky Satija, Akshpreet Singh , Pawan, C. E. Riuz, D.G. Silvera, M.A. Esteban, Sajeev Soni	2020	5	15055
28.	New Journal of Chemistry	Designing the recognition of Sn ²⁺ ions and antioxidants: N-heterocyclic organosilatranes and their magnetic nanocomposites,	Gurjaspreet Singh, Diksha, Akshpreet Singh , Sanchita, Geetika Sharma, Shilpy, Pawan, Cristóbal Espinosa-Ruíz and María Angeles Esteban	2020	44	6238

29.	Chemistry Select	First Report on the Synthesis of Antipyrine Crowned Siloxy Framework: Optical Recognition of Fe ²⁺ and Hg ²⁺ Ions	Gurjaspreet Singh, Pinky Satija, Akshpreet Singh , Sushma, Geetika Sharma, Mohit, Pawan, Suman, and Priyanka	2020	5	8823
30.	Journal of Molecular Structure	New pyrimidine based organosilicon compounds as receptor for selective recognition of Cu ²⁺ ions	Gurjaspreet Singh, Sanchita, Akshpreet Singh , Geetika Sharma, Pooja Kalra, Pawan, Jandeep Singh, Sajeev Soni, Jasamrit kaur	2020	1216	128220
31.	Journal of Molecular Structure	Polycyclic aromatic hydrocarbon functionalized organosilicones based chemosensors: Synthesis, magnetic nanoparticles and biological application	Gurjaspreet Singh, Shilpy, Akshpreet Singh , Diksha, Pawan, Suman, Cristobal Espinosa-Ruíz, Maria Angeles Esteban, K.N. Singh	2020	1221	128811
32.	Journal of Organometallic Chemistry	Bis-Organosilicon based receptor for detection of Hg ²⁺ ions: Low detection limit and excellent selectivity	Gurjaspreet Singh, Pinky Satija, Akshpreet Singh , Kavita Chowdhary, Geetika Sharma, Mohit, Shilpy, Jandeep Singh, Jasbinder Singh	2020	923	121458
33.	Materials Chemistry and Physics	Azo dye featuring triazole appended organosilicon multifunctionalized sensor: Paradigm for detection of Cu ²⁺ and Fe ²⁺ ions	Gurjaspreet Singh, Pinky Satija, Akshpreet Singh , Diksha, Pawan, Suman, Sushma, Mohit, Sajeev Soni	2020	249	123005
34.	New Journal of Chemistry	Synthesis and X-ray characterization of Antipyrine tethered Organosilanes and their magnetic nanoparticles: Potent Anti-oxidants and receptor for Sn (II) ions	Gurjaspreet Singh, Suman, Pinky Satija, Akshpreet Singh , Shilpy, D González-Silvera, Cristobal Espinosa Ruiz, M Angeles Esteban, Subash Chandra Sahoo	2020	44	15157
35.	New Journal of	Synthesis of Organosilicone allied N- Heteroaryl Schiff	Gurjaspreet Singh, Shilpy, Akshpreet Singh , Diksha,	2020	44	13542

	Chemistry	base chemosensor for detection of Cu ²⁺ metal ion and their biological applications	Pawan, Suman, Cristóbal Espinosa-Ruíz, Maria Angeles Esteban, K.N. Singh			
36.	RSC Advances	CuAAC-ensembled 1,2,3-triazole-linked isosteres as pharmacophores in drug discovery: review	Alisha Rani, Gurjaspreet Singh, Akshpreet Singh , Ubair Maqbool, Gurpreet Kaur and Jandeep Singh	2020	10	5610
	Journal of Photochemistry and Photobiology A: Chemistry	Selective two way Cd(II) and Co(II) ions detection by 1,2,3-triazole linked fluorescein derivative	Prabhjot Kaur, Bajrang, Navpreet Kaur, Gurjaspreet Singh, Akshpreet Singh , Gurpreet Kaur, Jandeep Singh	2019	382	111847
37.	Silicon	2,5-Dimercapto-1,3,4-thiadiazole tethered γ -propylsilatrane: Syntheses, Characterization, UV-Vis and Electrochemical Studies.	Gurjaspreet Singh, Shally Girdhar, Akshpreet Singh , Amandeep Saroa, Pinky Satija, Vikas Verma, Jashinder Singh.	2019	11	2575
38.	Applied Organometallics Chemistry	Synthesis and characterization of microwave-assisted biologically active triazole silanes,	Gurjaspreet Singh, Pinky Satija, Akshpreet Singh , Sanchita, Darpandeep Aulakh, Mario Wriedt, Cristobal Espinosa Ruiz, M. Angeles Esteban, Shweta Sinha, Rakesh Sehgal	2019	33	4695
39.	New Journal of chemistry	First report of silver ion recognition via silatrane based receptor: Excellent selectivity, low detection limit and good applicability	Gurjaspreet Singh, Akshpreet Singh , Pinky Satija, Geetika Sharma, Shilpy, Jandeep Singh, Jashinder Singh, Kamal Nain Singh and Amarjit Kaur	2019	43	5525
40.	Inorganica Chimica	Ester appended organosilatrane:	Gurjaspreet Singh, Sanchita,	2019	490	85

	Acta,	Paradigm for the detection of Cu ²⁺ , Pb ²⁺ and Hg ²⁺ ion	Akshpreet Singh , Geetika Sharma, Pooja Kalra, Pinky Satija, Diksha, Sajeev Soni, Vikas Verma			
41.	RSC Advances	Molecular keypad controlled circuit for Ce(III) and NO ₃ ⁻ ions recognition by mw synthesized silicon embedded organic luminescent sensor.	Navpreet Kaur, Gurjaspreet Singh, Jasbhinder Singh, Akshpreet Singh , Pinky Satija, Gurpreet Kaur and Jandeep Singh	2018	8	36445
42.	New Journal of Chemistry	Chalcone scaffolds as photo functional hybrid material of indolin-2-one functionalized siloxy framework for optical sensing of Cu ²⁺ .	Gurjaspreet Singh, Pooja Kalra, Aanchal Arora, Akshpreet Singh , Geetika Sharma, a Sanchitaa and Pinky Satijaa	2018	42	16902
43.	Journal of Organometallic Chemistry	Synthesis, characterization and antibacterial studies of schiff based 1,2,3-triazole bridged silatranes	Gurjaspreet Singh, Jasbhinder Singh, Akshpreet Singh , Jandeep Singh, Manoj Kumar, Kshitiz Gupta and Sanjay Chhibber	2018	871	21
44.	New Journal of chemistry	The first report of the synthesis of organo-functionalized triethoxysilanes via a Knoevenagel condensation approach.	Gurjaspreet Singh, Akshpreet Singh , Pinky Satija and Kavita Chowdhary	2018	42	12467
45.	Silicon	Schiff Based Silatranyl Compounds Exhibiting 'Fe ³⁺ and Mn ²⁺ Fluorescence	Gurjaspreet Singh, Jasbhinder Singh, Jandeep Singh, Akshpreet Singh , Kshitiz	2018	10	2817

		Dual Ion Sensing and Antibacterial Activity'	Gupta, Sanjay Chhibber and Vikas Verma			
46.	New Journal of Chemistry	Selective mercury ion recognition using methyl red (MR) based silatrane sensor	Gurjaspreet Singh, Shally Girdhar, Akshpreet Singh , Amandeep Saroa, Jaspreet Singh Lakhi, Sadhika Khullar, and Sanjay K. Mandal	2018	42	6315
47.	Chemistry Select	Synthesis and Immobilization of Benzothiazole-Appended Triazole-Silane: Biological Evaluation and Molecular Docking Approach	Gurjaspreet Singh, Kavita Chowdhary, Pinky Satija, Akshpreet Singh , Baljinder Singh, Kashmir Singh, Cristóbal Espinosa, M. Angeles Esteban, Rakesh Sehgal, Vikas Verma	2018	3	1609
48.	Inorganica Chimica Acta	Design and synthesis of indole triazole pendant siloxy framework as a chemo sensor for sensing of Cu ²⁺ and Ni ²⁺ : A comparison between traditional and microwave method	Gurjaspreet Singh, Pooja Kalra , Aanchal Arora , Sanchita , Geetika Sharma, Akshpreet Singh , Vikas Verma	2018	473	186
49.	ChemistrySelect	Molecular Design, Synthesis, Computational Screening, Antimicrobial Evaluation and Molecular Docking Study of Acetylinic Isatin Hybrids	Gurjaspreet Singh, Aanchal Arora, Akshpreet Singh , Pooja Kalra, Sunita Rani, Kashmir Singh, Indresh K. Maurya, and Rahul S. Mandal	2018	2	1942

50.	ChemistryS elect	Acetylenic Indole- Encapsulated Schiff Bases: Synthesis, In Silico Studies as Potent Antimicrobial Agents, Cytotoxic Evaluation and Synergistic Effects	Gurjaspreet Singh, Pooja Kalra, Aanchal Arora, Akshpreet Singh , Geetika Sharma, Sanchita, Indresh Kumar Maurya, Sanjay Dutta, Parthapratim Munshi, Vikas Verma	2018	3	2366
51.	New journal of Chemistry	First synthesis of pyrene-functionalized silatranes for mechanistic insights into their potential anti-parasitic and anti-oxidation activities	Gurjaspreet Singh, Akshpreet Singh , Jasbhinder Singh, Darpandeep Aulakh, Mario Wriedt, Cristo´bal Espinosa, M. Angeles Esteban, Rakesh Sehgal, Kapil Goyald and Shweta Sinha	2017	41	15165