




University Faculty Details Page on DU Web-site

Title	Prof./Dr./Mr./Ms.	First Name	Gurmeet	Last Name	Singh	
Designation	Professor					
Department	Chemistry					
Address (Campus)	Room No 007, Multistoried Building, Block C, Department of Chemistry, University Of Delhi, Delhi- 110007					
(Residence)	18, Cavalry lines, University of Delhi					
Phone No (Campus)	27667725 Ext 1628. 27662780.					
(Residence)optional	27667828					
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Fax	27662780					
Email	gurmeet123@yahoo.com, gurmeet123@gmail.com					
Web-Page						
Education						
Subject	Institution	Year	Details			
Ph.D.	University of Delhi	1979	Thesis topic: Studies on the mechanism of corrosion inhibition action of Dicyandiamide and related inhibitors			
P.G.	M. Sc. Physical Chemistry, St. Stephen's College, Delhi University	1975	Subjects: Chemistry			
U.G.	B.Sc. (Hons.- Chemistry), St. Stephen's College, Delhi University	1973	Subjects: Physics, Mathematics, English, History of Science			
Career Profile						
Organisation / Institution	Designation	Duration	Role			
Department of Chemistry, University of Delhi	Lecturer	1976-1987	Teaching and Research			
Department of Chemistry, University of Delhi	Reader (Associate Professor)	1987-1997	Teaching and Research			
Department of Chemistry, University of Delhi	Professor	1997- Till date	Teaching and Research			
Research Interests / Specialization						
<p>Corrosion Science and Technology Inhibition and inhibitor structures – co-relational studies Inhibition of copper corrosion Surface characterization by ESCA and SEM Nano layer deposition and its characterization Smart Electrochemical Materials for Energy and Sensing Devices Chemical and Electrochemical growth of thin films Semiconducting Nano Materials for environment Electrochemical Energy: Conversion and Storage Advanced Carbon and Conducting polymer based Nano-composites</p>						
Teaching Experience (Subjects/Courses Taught)						
(i) Worked as a lecturer in Chemistry, University of Delhi from 17th November 1976 to 16th February 1987. (ii) Worked as a Reader (Associate Professor) from 17th February 1987 to 16th February 1997 in the Department of Chemistry, University of Delhi, Delhi-110007 (iii) Worked as Associate Professor in the Department of Chemistry, Egerton University, P.O. Box 536, Njoro, Kenya from 1st August 1989 to 12th July 1991.						

(iv) Working as Professor since 16th February 1997 in the Department of Chemistry, University of Delhi, Delhi-110007.

Honors & Awards

- (i) Meritorious Contribution award (2007–08) received at Defence Institute of Advanced Technology, Pune on 7th Nov, 2008., during 14th National Association of Corrosion Engineers (NACE), USA (International Gateway India Section; NIGIS)
- (ii) The Annapurna Award given by the Society for Advancement of Electrochemical Science & Technology (SAEST) for the best paper of 1991 entitled, "Inhibition of zinc corrosion by benzotriazole and benzimidazole in KOH solution – surface characterization by ESCA & SEM", Trans. SAEST 26, No. 2-3, 1991, 182-88 (given in April 1994).
- (iii) Best paper award given by The Electrochemical Society of India, Indian Institute of Science, Bangalore in July 1993 for the research paper entitled "Corrosion Inhibition of mild steel by some amide derivatives in sulphuric acid medium", Vol. 40, No. 2, April-June 1991, 79-84, J. Electrochem. Society of India.
- (iv) Invited as Chair Professor by Lunghwa University, Taipei, Taiwan from Aug. 1st 2011 to Jan 31st 2012 to start some collaborative research.
- (v) Awarded the prestigious "IAAM Medal" of the year 2016 by International Association of Advanced Materials, Sweden on 2nd March 16.
- (vi) Awarded visiting Professorship from Japan Advanced Institute of Science and Technology (JAIST), Ishikawa, Japan, 2017.

Publications (LAST FIVE YEARS)

Books / Monographs

<u>Year of Publication</u>	<u>Title</u>	<u>Publisher</u>	<u>Co-Author</u>
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In Indexed/ Peer Reviewed Journals

<u>Year of Publication</u>	<u>Title</u>	<u>Journal</u>	<u>Co-Author</u>
2017	Electrochemical, morphological and theoretical insights of a new environmentally benign organic inhibitor for mild steel corrosion in acidic media	J. Mol. Liq. 241 (2017) 9-19.	Raman Kumar, Rashi Chopra
2017	Electrochemical and surface characterization of a new eco-friendly corrosion inhibitor for mild steel in acidic media: A cumulative study	J. Mol. Liq. 237 (2017) 413-427	Raman Kumar, Ompal Singh Yadav
2017	Experimental, surface characterization and computational evaluation of the acid corrosion inhibition of mild steel by methoxycarbonylmethyltriphenylphosphonium bromide (MCMTTPB)	Indian J. Chem. Technol. 24 (2017) 256-268	Madhusudan Goyal, Ompal Singh Yadav, Raman Kumar, Raj Kishore Sharma
2017	Anti-corrosive Properties of 2, 3-Dihydroxyquinoxaline on Mild Steel Corrosion in Sulphuric acid	Indian J. Chem. Technol. 24 (2017) 169-177	Kirti Kansal, Rashi Chopra, Raman Kumar, Bhaskaran, Akshay Kumar, Raj Kishore sharma
2016	Investigation of phytochemical components and corrosion inhibition property of Ficus racemosa stem extract on Mild steel in H ₂ SO ₄ medium	J. Environ. Chem. Eng. 4 (2016) 4699–4707	Manpreet Kaur Bagga, Ranu Gadi, Ompal Singh Yadav, Raman Kumar, Rashi Chopra
	Nickel-shell assisted growth of nickel-cobalt hydroxide nanofibres and their symmetric/asymmetric supercapacitive characteristics	Journal of Power Sources 325 (2016) 762-771	R.B. Marichi, V. Sahu, S. Lalwani, M. Mishra, G. Gupta, R.K. Sharma
	Nitrogen-doped carbon nanosheets for high-performance liquid as well as solid state supercapacitor cells	RSC Advances 6 (41), 35014-35023	V Sahu, S Grover, G Singh, RK Sharma,
	Polyaniline All Solid-State Pseudocapacitor: Role of Morphological Variations in Performance Evolution	Electrochimica Acta 196, 131-139	S Grover, S Goel, RB Marichi, V Sahu, G Singh, RK Sharma

	<p>2015</p> <p>Cobalt Dithiocarbamate Coordination Polymeric Nanoparticles: Morphology Dependent Magnetic and Antimicrobial Properties</p> <p>104. Zinc Oxide Nanoring Embedded Lacey Graphene Nanoribbons in Symmetric/Asymmetric Electrochemical Capacitive Energy Storage,</p> <p>Three dimensional mesoporous NiMn₂O₄ embedded graphene nanoribbons for energy storage devices, Mater. Chem. and Physics, Communicated (2015)</p> <p>1,1'-bis(di-tert-butylphosphino) ferrocene copper(I) complex catalyzed C-H activation and carboxylation of terminal alkynes.</p> <p>Silver(I) and Palladium(II) Complexes of New Pentamethylene-Functionalized Quasi-Pincer Bis-carbene ligands and its application in Heck and Suzuki-Miyaura coupling reaction,</p> <p>Silver(I) complexes as efficient source for silver oxide nanoparticles with catalytic activity in A³ coupling reactions,</p> <p>Asymmetric Supercapacitive Characteristics of Pani Embedded Holey Graphene Nanoribbons,</p> <p style="text-align: center;"><u>(Appeared on the cover page of the journal)</u></p> <p>Co₃O₄@Reduced Graphene Oxide Nanoribbon for high performance Asymmetric Supercapacitor,</p> <p><u>Heavily nitrogen doped. graphene supercapacitor from silk cocoon</u></p> <p>Synthesis, Electronic and Optical Properties of Cobalt (II) Dithiocarbamate Fluorescent Nanowires for Optoelectronic Devices,</p> <p>High performance, all solid state, flexible supercapacitor based on ionic liquid functionalized graphene,</p> <p>Ultra high performance Supercapacitor from Lacey Reduced Graphene Oxide Nanoribbons,</p> <p>All solid state, high performance supercapacitor using Zinc</p>	<p>Journal of nanoscience and nanotechnology 15 (12), 9396-9406</p> <p>Nanoscale 7 (48), 20642-20651</p> <p>Dalton Trans, revision submitted (Ms. ID: DT-ART-07-2015-002697)</p> <p>Journal of Chemistry, revision submitted (Ms. ID: NJ-ART-02-2015-000419)</p> <p>InorChimActa, revision submitted (Ms. ID: ICA-D-15-00064 R1), 2015</p> <p>ACS Sustainable Chem. Eng. 2015, 3 (7), pp 1460–1469</p> <p>ElectrochimicaActa169, 2015, 276–282</p> <p>ElectrochimicaActa160 (2015) 244-253</p> <p>SK Ujjain, P. Ahuja, RK Sharma, G Singh</p> <p>Electrochimicaacta 157 (2015) 245–251</p> <p>ACS Applied Materials and Interfaces, 2015, 7 (5), pp 3110–3116</p> <p>Journal of Materials Chemistry 'A' 3, (2015)</p>	<p>SK Ujjain, P Ahuja, R Bhatia, M Sharma, RK Sharma, G Singh</p> <p>V Sahu, S Goel, RK Sharma, G Singh.,</p> <p>ManojTrivedi, Gurmeet Singh, Abhinav Kumar, Nigam P. Rath,</p> <p>Manoj Trivedi, Gurmeet Singh, Abhinav Kumar, Nigam P. Rath,New</p> <p>Manoj Trivedi, Gurmeet Singh, Abhinav Kumar, and Nigam P. Rath</p> <p>Raj Kishore Sharma, Sonia Grover, Vikrant Sahu, ShubhraGoel, Gurmeet Singh</p> <p>Sanjeev Kumar Ujjain, Gurmeet Singh, Raj Kishore Sharma.</p> <p>V. Sahu, S Grover, B. Tulachan, M. Sharma, G Srivastava, Gurmeet Singh ... Raj Kishore Sharma,</p> <p>International Journal of Chemistry 7 (1), p69, 2015</p> <p>S.K. Ujjain, V. Sahu, R.K. Sharma, G Singh,</p> <p>V. Sahu, S. Shekhar, RK Sharma, G Singh</p> <p>R.K. Sharma, G Singh,</p>
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<p>Manganite embedded Graphene nanoribbons</p> <p>2014</p> <p>Performance evaluation of asymmetric supercapacitor based on Cobalt Manganite modified Graphene nanoribbons,</p> <p>Sonochemically Synthesized Reduced Graphene Oxide Supported SnO₂NanocompositeFor Charge Storage.</p> <p>Syntheses, Characterization, and Electrochemistry of Compounds Containing 1-Diphenylphosphino-1'-(di-tert-butylphosphino)ferrocene (dppdtbpf),</p> <p>Synthesis, spectral and structural studies of silver and gold(I) complexes containing some symmetrical diphosphine ligands,</p> <p>One-Pot Synthesis of Composition-Tunable CdSe-ZnSe (core-shell) and Zn_xCd_{1-x}Se (Ternary-Alloy) Nanocrystals with high luminescence and Stability,</p> <p>Enhanced supercapacitor performance by incorporating nickel in manganese oxide, ,</p> <p>Performance evaluation of asymmetric supercapacitor based on Cobalt Manganite modified Graphene nanoribbons,</p> <p>Syntheses, Characterization, and Electrochemistry of Compounds Containing 1,1'-bis(Diphenylphosphino-1'-(di-tert-butylphosphino)ferrocene (dppdtbpf),</p> <p>Syntheses, Characterization, and Structural studies of Copper(I) complexes containing 1,1'-bis(di-tert-butylphosphino) ferrocene (dtbpf) and their Application in Palladium-Catalyzed Sonogashira Coupling of Aryl halides,</p> <p>Cyano and end-to-end azido bridged 3D copper(II)-copper(I) mixed-</p>	<p>4931-4937.</p> <p>ElectrochimicaActa2014, 146, 429-436</p> <p>Advance Science Letters 20, 1369-1373 (2014)</p> <p>Journal of Organometallic Chemistry, 773, 2002,209, 2014</p> <p>Journal of Organometallic Chemistry, 758, 9-18, 2014</p> <p>RSC Adv., 2014,4, 57192-57199</p> <p>Electrochim. Acta2014, 146, 429-436</p> <p>Journal of Organometallic Chemistry, 2014,772-773, 202-209.</p> <p>Dalton Trans., 2014, 43, 13620-13629.</p> <p>RSC Advances, 2014, 4, 34110-34116.</p> <p>New Journal of Chemistry.2014, of 38,</p>	<p>P Ahuja,</p> <p>Preety Ahuja, V. Sahu, Sanjeev Ujjain, Raj Kishore Sharma,Gurmeet Singh,</p> <p>Vikrant Sahu, Shubra Lalwani, Gurmeet Singh, Raj Kishore Sharma.</p> <p>ManojTrivedi,Sanjeev Kumar Ujjain, Gurmeet Singh, Abhinav Kumar, Santosh Kumar Dubey, Nigam P. Rath,</p> <p>Manoj Trivedi, Bhaskaran, Gurmeet Singh, Abhinav Kumar, Nigam P. Rath,</p> <p>Himani Sharma, Shailesh N. Sharma, Sukhvir Singh, R.M. Mehra, Gurmeet Singh and S.M. Shivaprasad</p> <p>Preety Ahuja, Sanjeev Kumar Ujjain, Raj Kishore Sharma and Gurmeet Singh</p> <p>Preety Ahuja, Vikrant Sahu, Sanjeev Ujjain, Raj Kishore Sharma, Gurmeet Singh,</p> <p>Manoj Trivedi, Sanjeev Ujjain, Gurmeet Singh, Abhinav Kumar, Santosh Kumar Dubey, Nigam P. Rath</p> <p>Manoj Trivedi, Gurmeet Singh, Abhinav Kumar, and Nigam P. Rath</p> <p>Manoj Trivedi, Gurmeet Singh, Abhinav Kumar,</p>
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	<p>valence coordination polymer and its transformation to copper nitride nanoparticles,</p> <p>Cyano-bridged copper(II)-copper(I) mixed-valence coordination polymer as source for copper oxide nanoparticles with catalytic activity in C-N, C-O and C-S cross-coupling reactions,</p> <p>Synthesis, spectral and structural studies of silver and gold(I) complexes containing some symmetrical diphosphine ligands,</p> <p>Multiwalled carbon nanotube supported polypyrrole manganese oxide composite supercapacitor electrode: Role of manganese oxide dispersion in performance evolution</p> <p>2013</p> <p>Imidazole containing palladium(II) complexes as efficient pre-catalyst systems for Heck and Suzuki coupling reaction: Synthesis, structural characterization and catalytic properties,</p> <p>Synthesis of hydrophilic carbon black for application in electrochemical electrodes; role of water in protonic conduction and maintaining the hydration level,</p> <p>Investigation for the Interaction of Tyramine-Based Anthraquinone Analogue with Human Serum Albumin by Optical Spectroscopic Technique.</p> <p>A Thiocyanato-Bridged Copper(I) Cubane Complex and its application in Palladium-Catalyzed Sonogashira Coupling of Aryl halides.</p>	<p>4267-4274.</p> <p>Journal of Organometallic Chemistry, 2014, 758, 9-18</p> <p>ElectrochimicaActa, 116 (2014)137-145</p> <p>InorganicaChimica Acta394 (2013) 107-116.</p> <p>RSC Adv., 2013, 3 (12), 3917-3924</p> <p>ChemBiol Drug Des 2013; 81: 343-348.</p> <p>Dalton Trans., 2013, 42 (36), 12849-12852.</p>	<p>Nigam P. Rath,</p> <p>Manoj Trivedi, Sanjeev Ujjain, Raj Kishore Sharma, Gurmeet Singh, Abhinav Kumar, and Nigam P. Rath,</p> <p>Manoj Trivedi, Bhaskaran, Gurmeet Singh, Abhinav Kumar, Nigam P. Rath</p> <p>Sonia Grover, Shashank Shekhar, Raj Kishore Sharma and Gurmeet Singh</p> <p>ManojTrivedi, Gurmeet Singh, R. Nagarajan, Nigam P. Rath,</p> <p>Vikrant Sahu, Shashank Shekhar, Preety Ahuja, Govind Gupta, Sushil Kumar Singh, Raj Kishore Sharma and Gurmeet Singh,</p> <p>Aggarwal S, Tiwari AK, Srivastava P, Chadha N, Kumar V, Singh G, Mishra AK..</p> <p>Trivedi M, Singh G, Kumar A, Rath NP.</p>	
Total Publication Profile optional				
<u>In Indexed/ Peer Reviewed Journals</u>				

<u>Articles</u>
<u>Conference Presentations</u>
<ul style="list-style-type: none"> • Delivered an invited talk in Japan-India Materials Science Symposium held at JAIST Japan, Ishikawa, Japan on 2nd – 10th March 2017. • Delivered an invited talk and chaired a technical session in International Conference Innovative Manufacturing Technology (IMT 2016) held at KrynicaZdrój, Prezydent Hotel, Poland on 13th – 15th April 2016. • Gave opening remarks and delivered an invited talk in Emerging Trends in Pharmaceutical and Chemical Sciences (ETPCS-2016) 28th- 29th, March- 2016 Organized by Dept. of Chemistry, Sri Venkateswara University, Tirupati, In association with University Grants Commission. • Delivered an invited talk in DBT Sponsored Faculty Development Programme on Technological Innovations in Science from 25th April to 1st May, 2016 held at Hans Raj Mahila Maha Vidyalaya, Mahatma Hans Raj Marg, Jalandhar-144008
<u>Public Service / University Service / Consulting Activity</u>
<p>Appointed as Election Observer in West Bengal Assembly elections during 2011 by Election Commission of India</p> <ul style="list-style-type: none"> (i) Member, Executive Council, University of Delhi, July 2005 – Dec. 2010. (ii) Member, Recruitment and Assessment Board (RAB), CSIR, Ministry of Science and Technology, New Delhi. (iii) Member, UGC Subject-Expert Committee, New Delhi. (iv) Member, Research Committees of GND University, Amritsar; Dr. Hari Singh Gour University, Sagar; Panjabi University, Patiala and M.D. University, Rohtak. (v) Member, Governing Council, SAEST, CECRI, Karaikudi (Tamil Nadu) (vi) Teacher in-charge of University Science Society (1976-85). (vii) NCC Commissioned Officer in the Naval Wing of Delhi University in the rank of Lieutenant Commander. (viii) Member of NCERT (CIET) group involved in making TV lessons and tape slides lessons in different topics of Chemistry. (ix) Deputy Proctor, University of Delhi (1994-96). (x) Provost, Mansarowar Hostel, University of Delhi. (xi) Officer-on-Special Duty (Principal), Deshbandhu College, University of Delhi (April 1997-December 1999). (xii) Member of International Editorial Board of Transactions of the SAEST (An Electrochemistry Research Journal). (xiii) Member, Rotary Club of Delhi UPTOWN. President of the Club (1999-2000) & Secretary (1998-99). Received the Outstanding President & Outstanding Secretary award in the District as well as Rotary International Presidential citation for the best club. Rotary GSE team leader to California, USA – April /May 2010. (xiv) Chief Election Officer for conducting Delhi University Students' Union (DUSU) Elections, (2005- till date). (xv) Joint Proctor, University of Delhi (2001-2005). (xvi) Proctor, University of Delhi (2005-2010)
<u>Professional Societies Memberships</u>
<ul style="list-style-type: none"> (i) Fellow – S.A.E.S.T. (India) (ii) Governing Council Member – S.A.E.S.T. (India) (iii) Fellow – The Electrochemistry Society of India (iv) Member – The Royal Society of Chemistry, London (v) Member – Indian Association of Solid State Chemists and Allied Scientists (ISCAS).
<u>Projects (Major Grants / Collaborations)</u>
<ol style="list-style-type: none"> 1. Synthesis and Application of Highly Dispersed, ... as electrodes in a supercapacitor device Council of Scientific and Industrial Research, New Delhi Rs 28 lacs 2. Synthesis and Characterization of Conducting Novel Structures Department of Science and Technology, New Delhi Rs55 lacs

3. Metal oxide embedded orderedSupercapacitor Device University Grant Commission, Delhi
Rs12 lacs
4. To optimise process parameters for making highly Photo-catalytically active TiO₂ film suitable for removing organic impurities from air and water. CSIR sponsored
5. UGC funded project entitled, "Phosponium Compounds as Corrosion inhibitors," Sanctioned vide letter no. 33-265/2007(SR) dated 28th Feb. 2008
6. TriphenylPhosponium derivatives as potential corrosion inhibitors for mild steel and other alloys, Department of Science and Technology, 48 lacs , Sanctioned 2012.
7. Schiff bases as corrosion inhibitors for mild steel in acidic medium, University Grant Commission, Delhi
Rs 12, 16,800/-, 42-319/2013 (SR)
8. University of Delhi R & D grant 2.8 Lacs.

Other Details