


STANDARD TEMPLATE OF FACULTY PROFILE FOR UPLOADING OF UNIVERSITY WEBSITE

Title		First Name	Vaishali	Last Name	Singh	
Designation	Professor					
School /Dept. Name	USBAS					
Address:	BFR-304 University School of Basic & Applied Sciences GGSIPU					
Phone No.	Office	011-25302418				
	Residence	(optional)				
	Mobile	(optional)				
Email	1. vaishalisingh@ipu.ac.in		2.			
Web Page (if any)						
Subjects Taught	Physical Chemistry					
Areas of Interest/Specialization	Chemical Kinetics Mesoporous systems for sensing applications Nanocomposites					
Experience (in years)	Total					
	Industry					
	Teaching	Approx.25 years				
	Research	Approx. 30 years				
Educational Qualifications	UG	1990 B.Sc.with Chemistry, Physics and Mathematics				
	PG	1992 M.Sc. in Chemistry with specialization in Physical Chemistry				
	Doctorate	1998 on 'Kinetics of condensation reactions between substituted phenols and formaldehyde'.				
	Any other					
Research Publications in Journals (last 5 years)	A. Ratan, A. Tripathi, V. Singh , Swift heavy ion beam modified MoS ₂ - PVA nanocomposite free-standing electrodes for polymeric electrolyte based asymmetric supercapacitor, Vacuum. 184 (2021) 109992. Impact factor : 3.627					

A. Ratan, S. Kunchakara, A. Tripathi, **V. Singh**, Physio-chemical influence of high electron-phonon coupling induced by 120 MeV Ag⁹⁺ SHI irradiation on exfoliated MoS₂ - PVA nanocomposite films for achieving remarkable electrical conductivity for potential application in organic electronics, Polym. Test. 91 (2020) 106776.

Impact factor : 4.282

S. Kunchakara, A. Ratan, M. Dutt, J. Shah, R.K. Kotnala, **V. Singh**, Impedimetric humidity sensing studies of Ag doped MCM-41 mesoporous silica coated on silver sputtered interdigitated electrodes, J. Phys. Chem. Solids. 145 (2020) 109531. **Impact factor : 3.995**

M. Dutt, A. Ratan, M. Tomar, V. Gupta, **V. Singh**, Mesoporous metal oxide- α -Fe₂O₃ nanocomposites for sensing formaldehyde and ethanol at room temperature, J. Phys. Chem. Solids. 145 (2020) 109536. **Impact factor : 3.995**

M. Dutt, A. Kaushik, M. Tomar, V. Gupta, **V. Singh**, Synthesis of mesoporous α -Fe₂O₃ nanostructures via nanocasting using MCM-41 and KIT-6 as hard templates for sensing volatile organic compounds (VOCs), J. Porous Mater. 27 (2020) 285–294. **Impact factor : 2.496**

A. Ratan, S. Kunchakara, M. Dutt, A. Tripathi, **V. Singh**, Enhanced electrical properties of few layers MoS₂-PVA nanocomposite film via homogeneous dispersion and annealing effect induced by 80 MeV Carbon⁶⁺ swift heavy ion irradiation, Mater. Sci. Semicond. Process. 108 (2020) 104877. **Impact factor : 3.927**

A. Ratan, S. Kunchakara, M. Dutt, A. Tripathi, **V. Singh**, 100 MeV Silicon⁹⁺ swift heavy ion irradiation - Strategic defect annealing approach to enhance the electrical conductivity of few-layered MoS₂ sheets - PVA nanocomposite film, Vacuum. (2019) 108939. **Impact factor : 3.627**

S. Kunchakara, A. Ratan, J. Shah, R.K. Kotnala, **V. Singh**, Humidity sensing of Mg doped MCM-41 on silver sputtered thin films, J. Mater. Sci. Mater. Electron. (2019). **Impact factor : 2.478**

S. Kunchakara, M. Dutt, A. Ratan, J. Shah, **V. Singh**, R.K. Kotnala, Synthesis and characterizations of highly ordered KCl-MCM-41 porous nanocomposites for impedimetric humidity sensing, J. Porous Mater. 26 (2019) 389–398.

Impact factor : 2.496

M. Kaur, A. Ratan, S. Kunchakara, M. Dutt, **V. Singh**, Cr doped MCM-41 nanocomposites: an efficient mesoporous catalyst facilitating conversion of toluene to benzaldehyde, an industrial precursor, J. Porous Mater. 26 (2019) 239–246. **Impact factor : 2.496**

M. Dutt, K. Suhasini, A. Ratan, J. Shah, R.K. Kotnala, **V. Singh**, Mesoporous silica mediated synthesis of α -Fe₂O₃ porous structures and their application as humidity sensors, J. Mater. Sci. Mater. Electron. 29 (2018) **Impact factor : 2.478**

S. Kunchakara, J. Shah, **V. Singh**, R.K. Kotnala, Wide range humidity sensing of LiCl incorporated in mesoporous silica circular discs, Phase Transitions. 90 (2017) 1241–1255. **Impact factor : 1.452**

Papers Published in Conference Proceedings (last 5 years)				
Books Authored/Book Volume Chapters				
No. of Conferences(Recent)	National	Attended	Organized	
		<p>Year 2020: ICONSAT 2020 International Conference on Nanoscience and Technology held during March 5-7, 2020 at Kolkata- Poster presentation</p> <p>“Invited talk” at the International Online Conference on Nano Materials (ICN 2021) 9-11 April 2021 at Mahatma Gandhi University, Kottayam, Kerala, India (IL 47).</p>		
	International	<p>Year 2019: 27th International Conference on Composite Engineering held at Granada, Spain-Guest Speaker</p> <p>Year 2018: 26th International Conference on Composite Engineering held at Paris, France- Guest Speaker</p>		
Research Guidance	Awarded	PG	M. Phil	Doctorate
		Ten		Five
	Undergoing			Three
Research Projects	Completed	Structural and morphological studies of		

		transition metaldichalcogenides/polymer nanocomposites upon SHI irradiation sponsored by UGC--IUAC, New Delhi
	Undergoing	
Awards & Distinctions		<ul style="list-style-type: none"> • Recipient of National scholarship in 1990, for holding a University merit position during graduation • Qualified CSIR-NET examination • Qualified GATE-94 with 96.8 percentile • Awarded the Best Teacher of GGSIPU in the year 2003
Administrative Assignments Handled		<ol style="list-style-type: none"> 1. Incharge, Centre of Human Values & Ethics, GGSIPU. 2. Chairperson, University Student's Grievance Redressal Committee. 3. Member, Internal Complaints Committee of the University. 4. Programme Coordinator, M.Tech (Nanoscience & Technology) since 2008.
Association with Professional Bodies		<ul style="list-style-type: none"> • External member of the SRC at DTU • Subject expert for appointments for faculty positions at institutes affiliated to GGSIPU • External expert for appointments for faculty positions at University of Delhi • Member, Governing Body at Acharya Narendra Dev College, University of Delhi
Any other Achievements		Worked as Departmental Research Associate at University of Delhi for nearly 4 years that involved PG teaching & research at the Department of Chemistry, DU.