CURRICULUM VITAE

Name:	**Prof. Sunil Kumar Srivastava**	
Designation:	**Professor**	
School:	**School of Physical Sciences**	
Department:	**Department of Physics**	
Specialisation & Research Interests:	Laser and Spectroscopy, Molecular interaction, Hydrogen bonding, Phase transition in liquid crystal and solids, Raman spectroscopy, Surface Enhanced Raman Spectroscopy, UV-Resonance Raman Spectroscopy, Raman Imaging, Bio-molecular Sensing, Spectroscopy of Nano-structured Materials and Carbonaceous Materials (Graphene, CNTs, Quantum Dots. etc.). Ab-initio Calculations and DFT	
Email IDs (Official & Personal)	sksrivastava@mgcub.ac.in kashisunil77@gmail.com	
Mobile No.:	+91-9424610776	
Address:	New Agarwa, Motihari-845401	

2. ACADEMIC QUALIFICATION (in reverse Chronological order):

Degree	Year	University / Board
Ph.D.	2006	Banaras Hindu University
M.Sc.	2000	Banaras Hindu University
B.Sc.	1998	Banaras Hindu University

Degree	Year	University / Board
Intermediate	1994	UP Board
High School	1992	UP Board

3. ANY OTHER QUALIFICATION:

4. PROFESSIONAL EXPERIENCE:

Organisation/Institute/University	Position Held	Duration
Postdoctoral Fellow	01/05/2007 – 30/06/2008	University of Würzburg, Germany
Alexander von Humboldt Postdoctoral Fellow	01/07/2008 – 31/12/2009	University of Osnabrück, Germany
DST Fast Track Scientist	09/11/2010 – 02/10/2011	Banaras Hindu University
Assistant Professor	03/10/2011 – 19/10/2016	Guru Ghasidas Viswavidyalaya, Bilaspur (M.P.)
Associate Professor	21/10/2016 – 21/10/2019	Mahatma Gandhi Central University, Motihari, Bihar
Professor	22/10/2019 – till date	Mahatma Gandhi Central University, Motihari, Bihar

5. ADMINISTRATIVE ASSIGNMENTS:

Position Held	Duration	Nature of Work
Convener, Library Committee, MGCUB	November 2016 – till date	Coordination and management of University Library.

Director Examination/Additional Controller of Examination, MGCUB	July 2017 – till date	Administrative functions of the office of CoE such as conduct of examination including entrance examinations, preparation and declaration of results and academics awards, Repository of Academic awards on NAD portal.
Member, Board of Studies (BoS), Department of Physics, MGCUB	May 2017 –May 2020	Preparation of draft Syllabus of UG, PG and Research Degree Programmes and periodical review of the same.
Vice-Chancellor Nominee, Board of Studies (BoS), Department of Chemistry, MGCUB	May 2017 –May 2020	Preparation of draft Syllabus of UG, PG and Research Degree Programmes and periodical review of the same.
Vice-Chancellor Nominee , School Board, School of Mathematical and Statistical Sciences, MGCUB	October 2017 – October 2020	Preparation of draft syllabus of UG, PG and Research Degree Programmes and periodical review of the same.
Deputy Nodal Officer, CUCET-2019	February - July 2019	Conduct of CUCET-2019 examination.

6. COURSES TAUGHT:

B.Sc. (H) Physics: Mechanics, Electrostatics and Magnetostatics, Mathematical Physics, Nuclear Physics, Atomic and Molecular Physics

B.Sc. (H) Electronics: Analog Communication, Digital Electronics, Microprocessor and Microcontrollers.

M. Sc. Physics: Atomic and Molecular Physics, Laser Physics and Spectroscopy

7. RESEARCH SUPERVISION:

A. Ph.D.: Nil

i. Awarded : -
ii. Submitted : -
iii. Ongoing : -

B. M.Phil.: Nil

i.	**Awarded**	**:**	**-**
ii.	**Submitted**	**:**	**-**
iii.	**Ongoing**	**:**	**-**

C. Non-Degree Oriented (Master's Level Dissertation):

i.	**Awarded**	**:**	**5**
ii.	**Submitted**	**:**	**5**
iii.	**Ongoing**	**:**	**-**

8. CONTRIBUTION TO CORPORATE LIFE OF THE UNIVERSITY:

Member, Draft Ordinance on Medium of Instruction, Examinations, Evaluations and Grading System for Programme(s) of study other than Research Degree Programme(s)

Convener, Committee for finalising the tender document for Empanelment of Library Vendors

Convener, Committee for Annual Report Finalization

Member, Committee for preparing documents for Rate Contract Chemicals and Glasswares

9. MEMBERSHIP OF SOCIETIES / PROFESSIONAL BODIES:

Life member Alexander von Humboldt Foundation, Germany

Life Member of Laser and Spectroscopy Society of India

Life Member of Indian Society for Particle Accelerators

10. PUBLICATIONS:

A. BOOKS/MONOGRAPHS:

1. Authored: (Book Chapter)

Resonance Raman Applications,
S. Schlücker and **S. K. Srivastava**,
Encyclopedia of Spectroscopy and Spectrometry, 2nd edition, Vol 3. Oxford: Elsevier, 2010, J. C. Lindon, G. E. Tranter and D. W. Koppenaal, eds. ISBN : 978-0-12-374417-3

2. Edited: Nil

i. ……
ii. …….
iii. …….

B. PAPERS IN REFEREED/PEER REVIEWED JOURNALS:

i. Vibrational spectra of Pb2Bi2Te3, PbBi2 Te 4, and PbBi4Te7 topological insulators: temperature-dependent Raman and theoretical insights from DFT simulations
P Mal, G Bera, GR Turpu, S**K Srivastava**, A Gangan, B Chakraborty, B Das, P Das
Physical Chemistry Chemical Physics 21 (2019), 15030-15039

ii. Carbon nanostructure (0-3 dimensional) supported isolated gold nanoparticles as an effective SERS substrate
S Abraham, M Koenig, **SK Srivastava**, V Kumar, B Walkenfort, A Srivastava
Sensors and Actuators B: Chemical *273* (2018) 455-465.

iii. A vibrational and conformational characterization of arginine at different pH values investigated using Raman spectroscopy combined with DFT calculations
S Bhunia, **SK Srivastava**, A Materny, AK Ojha
Journal of Raman Spectroscopy *47* (2016) 1073-1085.

iv. Two dimensional graphene derivatives supported isolated gold nanoparticles as an efficient SERS substrate
S Abraham, M König, S Pandey, **SK Srivastava**, B Walkenfort, A Srivastava
Asian Journal of Physics *25* (2016) 121-126.

v. Enhanced electrochemical biosensing efficiency of silica particles supported on partially reduced graphene oxide for sensitive detection of cholesterol
S Abraham, S Srivastava, V Kumar, S Pandey, PK Rastogi, NR Nirala, S Kashyap, **SK Srivastava**, VN Singh, V Ganesan, PS Saxena, A Srivastava
Journal of Electroanalytical Chemistry *757* (2015) 65-72.

vi. Monitoring potential molecular interactions of adenine with other amino acids using Raman spectroscopy and DFT modeling
S Singh, P Donfack, **SK Srivastava**, DK Singh, A Materny, BP Asthana, PC Mishra
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy *149* (2015) 647-655.

vii. Functional graphene–gold nanoparticle hybrid system for enhanced electrochemical biosensing of free cholesterol
S Abraham, NR Nirala, S Pandey, M Srivastava, **S Srivastava**, B Walkenfort, A Srivastava
Analytical Methods *7*, (2015) 3993-4002.

viii. Secrets of Solid State and Aqueous Solution Structures of [Ni(tmdta)]2-

R Meier, C Platas-Iglesias, FW Heinemann, G Linti, J Schulte, **SK Srivastava**
Inorganic Chemistry *53* (2014) 6684-6697.

ix. Mesoporous silica particle embedded functional graphene oxide as an efficient platform for urea biosensing
S Abraham, V Ciobota, S Srivastava, **SK Srivastava**, RK Singh, J Dellith, BD Malhotra, M Schmitt, J Popp, A Srivastava
Analytical Methods *6* (2014) 6711-6720.

x. Hydrogen bonding patterns in different acrylamide–water clusters: microsolvation probed by micro Raman spectroscopy and DFT calculations
S Singh, **SK Srivastava**, DK Singh
RSC Advances *4* (2014) 1761-1774.

xi. Study of structure–activity relationship of enantiomeric, protonated and deprotonated forms of warfarin via vibrational spectroscopy and DFT calculations
A Mishra, **SK Srivastava**, D Swati
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy *113* (2013) 439-446.

xii. Raman scattering and DFT calculations used for analyzing the structural features of DMSO in water and methanol
S Singh, **SK Srivastava**, DK Singh
RSC Advances *3* (2013) 4381-4390.

xiii. Structural and Spectroscopic Studies of Hydroxyapatite Nanorods Formed via Microwave-Assisted Synthesis Route
VK Mishra, **SK Srivastava**, BP Asthana, D Kumar
Journal of the American Ceramic Society *95* (2012) 2709-2715.

xiv. Modeling the weak hydrogen bonding of pyrrole and dichloromethane through Raman and DFT study
DK Singh, BP Asthana, **SK Srivastava**
Journal of Molecular Modeling *18* (2012) 3541-3552.

xv. Low temperature Raman and DFT study of creatinine
K Vikram, S Mishra, **SK Srivastava**, RK Singh
Journal of Molecular Structure *1012* (2012) 141-150.

xvi. Molecular interactions of 2′-deoxyguanosine 5′-monophosphate with glycine in aqueous media probed via concentration and pH dependent Raman spectroscopic investigations and DFT study
S Singh, **SK Srivastava**, P Donfack, S Schlücker, A Materny, BP Asthana
Physical Chemistry Chemical Physics *14* (2012) 14315-14324.

xvii. Study of mechanism of enhanced antibacterial activity by green synthesis of silver nanoparticles
UK Parashar, V Kumar, T Bera, PS Saxena, G Nath, **SK Srivastava**, R Giri, A srivastava
Nanotechnology *22* (2011) 415104.

xviii. Study of Hydrogen Bonding Patterns of a Pharmaceutically Active Drug Molecule Paraldehyde: a Raman and DFT Study
S Singh, DK Singh, **SK Srivastava**, BP Asthana
Zeitschrift für Physikalische Chemie *225* (2011) 723-740.

xix. Intermolecular hydrogen bonding in the binary mixture [(C2H5) 2CO+ CH3OH] probed by polarized Raman measurements and DFT calculations
DK Singh, **SK Srivastava**, P Raghuvansh, RK Singh, BP Asthana
Vibrational Spectroscopy *56* (2011) 34-41.

xx. Vibrational study of fluorobenzene and its solvation with methanol via polarized Raman measurements and quantum chemical calculations
S Singh, DK Singh, **SK Srivastava**, BP Asthana
Vibrational Spectroscopy *56* (2011) 26-33.

xxi. Self-association and hydrogen bonding of propionaldehyde in binary mixtures with water and methanol investigated by concentration-dependent polarized Raman study and DFT Calculation
DK Singh, **SK Srivastava**, S Schlücker, RK Singh, BP Asthana
Journal of Raman Spectroscopy *42* (2011) 851-858.

xxii. Hydrogen bonding in different pyrimidine–methanol clusters probed by polarized Raman spectroscopy and DFT calculations
DK Singh, S Mishra, AK Ojha, **SK Srivastava**, S Schlücker, BP Asthana, J Popp, Ranjan K Singh
Journal of Raman Spectroscopy *42* (2011) 667-675.

xxiii. Clusters of acrylonitrile in methanol/ethanol: A structure–spectra correlation by quantum chemical and polarized Raman study
DK Singh, **SK Srivastava**, BP Asthana
Chemical Physics *380* (2011) 24-33.

xxiv. Hydrogen bonding in the pyrimidine/formamide system: a concentration-dependent Raman and DFT study
SK Srivastava, S Schlücker, WA Alves
Journal of Raman Spectroscopy *41* (2010) 1714-1719.

xxv. Crystal → nematic phase transition in the liquid crystalline system 1-isothiocyanato-4-(trans-4-propylcyclohexyl) benzene (3CHBT) probed by temperature-dependent micro-Raman study and DFT calculations
K Vikram, N Tarcea, **SK Srivastava**, BP Asthana, J Popp, RK Singh
Journal of Raman Spectroscopy *41* (2010) 1067-1075.

xxvi. Site-specific pKa determination of the carboxylate-binding subunit in artificial peptide receptors
S Niebling, **SK Srivastava**, C Herrmann, PR Wich, C Schmuck, S Schlücker
Chemical Communications *46* (2010) 2133-2135.

xxvii. Dynamics and mechanism of the Crystal II→ smectic G phase transition in TB7A by a temperature-dependent micro-Raman study and DFT calculations
K Vikram, **SK Srivastava**, AK Ojha, S Schluecker, W Kiefer, RK Singh
Journal of Raman Spectroscopy *40* (2009) 881-886.

xxviii. Vibrational study of thiophene and its solvation in two polar solvents, DMSO and methanol by Raman spectroscopy combined with ab initio and DFT calculations
DK Singh, **SK Srivastava**, AK Ojha, BP Asthana
Journal of Molecular Structure *892* (2008) 384-391.

xxix. pH-dependent raman study of pyrrole and its vibrational analysis using DFT calculations
DK Singh, **SK Srivastava**, AK Ojha, BP Asthana
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy *71* (2008) 881-886.

xxx. Characterization of guanidiniocarbonyl pyrroles in water by pH-dependent UV Raman spectroscopy and component analysis
SK Srivastava, S Niebling, B Küstner, PR Wich, C Schmuck, S Schlücker
Physical Chemistry Chemical Physics *10* (2008) 6770-6775.

xxxi. Improper hydrogen bonding and motional narrowing in binary mixtures of 2-and 3-bromopyridine in methanol probed by polarized Raman study and DFT calculations
AK Ojha, **SK Srivastava**, S Schlücker, W Kiefer, BP Asthana, RK Singh
Journal of Raman Spectroscopy *38* (2007) 1656-1664.

xxxii. Concentration-dependent surface-enhanced Raman scattering and molecular dynamic study of dimethyl formamide
S Mishra, AK Ojha, D Singh, RR Prasad, **SK Srivastava**, RK Singh
Journal of Raman Spectroscopy *38* (2007) 1454-1460.

xxxiii. DFT study of hydrogen bond bridging mode of pyridine and diazenes in water environment
D Singh, **SK Srivastava**, AK Ojha, BP Asthana, RK Singh
Journal of Molecular Structure: THEOCHEM *819* (2007) 88-94.

xxxiv. Concentration-dependent Raman study of noncoincidence effect in the NH2 bending and CO stretching modes of HCONH2 in the binary mixture (HCONH2+ CH3OH)
AK Ojha, **SK Srivastava**, BP Asthana, RK Singh
Journal of Raman Spectroscopy *38* (2007) 159-165.

xxxv. Complex formation of HCONH2 in CH3OH environment and investigation of linewidth changes of ν (CO) stretching and NH2 bending modes
AK Ojha, **SK Srivastava**, RK Singh, W Kiefer, BP Asthana
Vibrational Spectroscopy *43* (2007) 177-183.

xxxvi. UV resonance Raman spectroscopic monitoring of supramolecular complex formation: peptide recognition in aqueous solution
B Küstner, C Schmuck, P Wich, C Jehn, **SK Srivastava**, S Schlücker
Physical Chemistry Chemical Physics *9* (2007) 4598-4603.

xxxvii. Influence of self-association and inter-molecular hydrogen bonding on the ν(CN) stretching mode of CH3CN and C2H5CN in binary mixtures with CH3OH –A comparative study via concentration dependent polarized Raman study and ab initio calculation

SK Srivastava, AK Ojha, P Raghuvansh, W Kiefer, BP Asthana
Journal of Raman Spectroscopy *37* (2006) 1287-1295.

xxxviii. A new approach to explain concentration-dependent changes of isotropic Raman line width in the associated binary mixtures
AK Ojha, **SK Srivastava**, RK Singh, BP Asthana
The Journal of Physical Chemistry A *110* (2006) 9849-9853.

xxxix. Study of vibrational dephasing of C-Cl stretching mode of 2Cl-pyridine and 3Cl-pyridine in methanol environment by polarized Raman study and DFT calculations
RK Singh, **SK Srivastava**, AK Ojha, U Arvind, BP Asthana
Journal of Raman Spectroscopy *37* (2006) 76-84.

xl. Probing self-associated structures of the solute molecule, acrylonitrile, the solvent molecule 2Cl-phenol and their binary complexes via concentration-dependent Raman study and DFT calculations
SK Srivastava, AK Ojha, PK Sinha, BP Asthana, RK Singh
Journal of Raman Spectroscopy *37* (2006) 68-75.

xli. Investigation of ν (NH) and ν (CN) stretching modes of propylamine (C3H7NH2) in a binary system C3H7NH2+ CH3OH via concentration dependent Raman study and ab initio calculations
SK Srivastava, AK Ojha, W Kiefer, BP Asthana
Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy *61* (2005) 2832-2839.

xlii. Concentration dependent wavenumber shifts and linewidth changes of some prominent vibrational modes of C4H8O investigated in a binary system (C4H8O+ H2O) by polarized Raman study and ab initio calculations.
AK Ojha, **SK Srivastava**, N Peica, S Schlücker, W Kiefer, BP Asthana
Journal of Molecular Structure *735-736* (2005) 349-357.

xliii. Investigation of hydrogen bonding and self-association in neat HCONH2 and the binary mixture (HCONH2+ CH3OH) by concentration dependent Raman study and ab initio calculations
AK Ojha, **SK Srivastava**, J Koster, MK Shukla, J Leszczynski, BP Asthana, W. Kiefer
Journal of Molecular Structure *689* (2004) 127-135.

xliv. Hydrogen-bonding and self association investigated in the binary mixture (C6H5CN+ CH3OH) via concentration dependent Raman study of the CN stretching mode of benzonitrile (C6H5CN) and ab-initio calculations.
P Raghuvansh, **SK Srivastava**, RK Singh, BP Asthana, W Kiefer
Physical Chemistry Chemical Physics *6* (2004) 531-536.

xlv. Isotopic dilution, self-association, and Raman non-coincidence in the binary system (CH3)2CO+ (CD3)2CO reinvestigated by polarized Raman measurement and ab initio calculations
SK Srivastava, AK Ojha, J Koster, MK Shukla, J Leszczynski, BP Asthana, W. Kiefer
Journal of Molecular Structure *661* (2003) 11-21.

C. PAPERS IN CONFERENCES PROCEEDINGS:

i. Synthesis and temperature dependent Raman studies of large crystalline faces topological GeBi4Te7 single crystal
P Mal, G Bera, GR Turpu, **SK Srivastava**, P Das
AIP Conference Proceedings *1953* (2018) 070022.

ii. rGO-SnO2 Composites for Supercapacitor Applications
P Rambabu, **SK Srivastava**, P Das, GR Turpu
IOP Conference Series: Materials Science and Engineering *149* (2016) 012169.

iii. Study of photo catalytic degradation of an industrial dye Ujala Supreme and Methyl Orange using SnO2-rGO composites
P Rambabu, **SK Srivastava**, GR Turpu
AIP Conference Proceedings *1728* (2016) 020375.

iv. Quantitative UV RR Spectroscopy of Artificial Peptide Receptors
S Nieblinga, **SK Srivastava**, C Herrmann, PR Wich, C Schmuck, S Schlücker
AIP Conference Proceedings *1267* (2010) 883-884.

v. Self-association and Hydrogen Bonding of Propionaldehyde in Binary Mixtures with Water and Methanol: A Concentration dependent Raman and DFT Study
SK Srivastava, DK Singh, S Schlücker, BP Asthana
AIP Conference Proceedings *1267* (2010) 902-903.

vi. Analysis of the symmetric and anti-symmetric NH stretching modes of n-propylamine in binary mixtures with methanol: a concentration dependent Raman study and ab-initio calculations
SK Srivastava, AK Ojha, S Schlücker, BP Asthana, W Kiefer
Proceedings of the XIX International Conference on Raman Spectroscopy: Science Access *2*, (2004) 336-337

vii. Hydrogen bonding in binary mixtures of tetrahydrofuran and water: a concentration dependent Raman study and ab-initio calculations
AK Ojha, **SK Srivastava**, S Schlücker, BP Asthana, W Kiefer
Proceedings of the XIX International Conference on Raman Spectroscopy: Science Access *2*, (2004) 334-335.

11. Patents/Copyrights /IPR (If Any)

Nil

12. INVITED TALKS:

SERS Microscopy: Selective and Sensitive Localization of Proteins in Tissue Specimens
International Conference on Perspectives in Vibrational Spectroscopy, 24-28 February 2008, Trivandrum

13. RESEARCH PROJECTS *(COMPLETED / ONGOING)*:

Alexander von Humboldt Research Group Linkage Programme, Germany (Completed) as Co-PI
Title: Structure and Dynamics of Hydrogen Bonded Systems: From Model Systems to Nucleobases (*Total Amount: Euro 55,000 for a period of three years 2011-2014*).

DST-Fast track young scientist project (partially completed) as PI
Title: Synthesis and Characterization of unprocessed and functionalized carbon nanotubes (CNTs): A combined resonance Raman spectroscopic and DFT study (*Total Amount: Rs. 24,24,000 for a period of three years 2010 -2014*).

14. PARTICIPATION& PRESENTATIONS IN SEMINARS/SYMPOSIA/WORKSHOPS/CONFERENCES:

National Symposium on Atomic, Molecular Structure, Interaction and Laser Spectroscopy, 14-15, March 2004, Varanasi. India

First Indo-US Workshop od Spectroscopy, 9-11, January 2006, Varanasi, India

National Symposium on Atomic, Molecular and Laser Physics, 17-19, March 2007, Varanasi. India

International Conference and Humboldt-Kolleg, 28-30 November 2005, Varanasi, India

CFN Summer school on nano-biology, 20-23 August 2007, Karlsruhe, Germany

International Conference On Perspectives in Vibrational Spectroscopy, 24-28 February 2008, Trivandrum, India

Bunsentagung "Analysis, Manipulation and Simulation of the Nanometerscale, May 2008, Universität Saarland, Germany

Summer School "Medicinal Chemistry" September, 2008 Universität Regensburg, Germany

Int. Conference & Humboldt-Kolleg on Structural Characterization and Spectroscopy of Materials Relevant to Nanotechnology, Bio-medical and Geobiology, 7-9 November 2008, Varanasi, India

European Conference on the Spectroscopy of Biological Molecules, August, 2009, Palermo, Italy

International Conference on Perspectives in Vibrational Spectroscopy, 21-24 February 2010, Varanasi, India

International Conference and Humboldt Kolleg Frontier of Environmental and Health Science Useful to Mankind: A Multidisciplinary Approach, 24-27 February 2010, Lucknow, India

International workshop on spectroscopic signatures of molecular complexes / ions in our atmosphere and beyond, 2-4 February 2010, Varanasi, India

International Conference on Multifunctional Materials, 7-9 Dec. 2010, Varanasi, India.

National conference on advancements and futuristic trends in material science, 24-25 March 2011, Bareilly, India

XXIV international Conference on Raman Spectroscopy, 10-15 August 2014, Jena, Germany

90 Years of Raman Effect: Current Status and Future Direction, 27th Feb. – 2nd March 2018, Bangalore, India

15. AWARDS, FELLOWSHIPS & OTHER DISTINCTIONS:

DST-Fast Track Scientist Fellowship	2010
Alexander von Humboldt Fellowship, Germany	2008
UGC Research Fellow, Banaras Hindu University, India	2006
DST-DAAD Research Fellowship, University of Würzburg, Germany	2001 & 2002

16. ANY OTHER SIGNIFICANT INFORMATION:

(Prof. Sunil Kumar Srivastava)