




SLC (University of Delhi) Shyam Lal College



NAAC A++

Faculty Profile

Title	Dr	First Name	Sunny	Last Name	Aggarwal	Photograph 
Designation	Assistant Professor					
Department	Physics					
Address	1/9686A, Street No. 6 Pratappura west Gorakh park shahdara Delhi					
Email	saggarwal@shyamlal.du.ac.in					
Web-Page						

Educational Qualification

Degree	Subject	University/ College/Institution	Year
B.Sc Physics Hons.	PHYSICS	Kirori Mal College, University of Delhi	2008
M.Sc Physics	PHYSICS	University of Delhi	2010
Ph.D.	ATOMIC PHYSICS	University of Delhi	2014
NET-JRF	Physical Science	UGC	2010
GATE	PHYSICS		2010

Experience

	Name of the University/College/ Institute/Organisation	Designation & Status (Permanent/Ad-hoc)	From	To	Effective time period
Teaching	Shyamlal College, University of delhi		24 July 2013	Till date	
Research/ Corporate	Department of physics, University of Delhi		15 March 2011	23 July 2013	
	Shyamlal College, University of delhi		24 July 2013	Till date	
Consultancy					

Teaching-Learning Process (Academic Year 2022-23 Onwards)

Are You using ICT (LMS, E-Resources)?	If yes, please give the details below:	
	Name	Total Numbers
E-Resources	MOOC, SWAYAM	
Techniques and Platforms		

Career Advancement and Contribution to College Corporate Life (2022-23 Onwards)

	Name of the Committee/ Centre/ Society/ Cell	Designation	From	To
Convenor/Member of Committees	Debating Committee	Member	2023	2024
	Website Committee	Member	2023	2024
	Time Table Committee	Member	2022	2023
	Magazine Committee	Member	2022	2023
	IQAC	Member	2023	2024
	CHD	Member	2023	2024
	Research and Development cell	Member	2023	2024
	Innovation Council	Member	2021	2024
Any Other Administrative Responsibility (Bursar, Coordinator, Superintendent etc.)	NIRF	Convenor	2023	2024

Areas of Interest/Specialisation

S.No.	Areas of Interest/ Specialisation
1	Atomic structure, Photoionization cross section, Collisional Strength
2	Quantum mechanics

Subjects Taught

S.No.	Subject	S.No.	Subject
1	Quantum Mechanics	5	Wave and Optics
2	Elements of modern physics	6	Solid state Physics
3	Mechanics	7	Nuclear and Particle physics
4	Thermal Physics	8	Advanced Quantum Mechanics

Publications: Citation Index in Scopus/Web of Science or Pub Med/ Indian Citation Index

Title of Paper	Name of the Author	Title of the Journal	Year of Publication	Citation Index	h-Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self-citations	Impact factor, if any
Theoretical analysis of atomic parameters of Sm-like and Nd-like W ions in soft x-ray region	Narendra Singh, Sunny Aggarwal, Arun Goyal	Physica Scripta	2022	0	11	Shyam Lal College	0	2.9
Study of excitation energies of doubly excited states and identification of EUV, SXR and HXR spectral lines in M1 transitions of W LXXIII and Au LXXVIII	N Singh, A Goyal, S Aggarwal	Journal of Electron Spectroscopy and Related Phenomena	2022	0	11	Shyam Lal College	0	1.80
Determination of atomic properties in	N Singh, A Goyal, S	Results in	2021	1	11	Shyam Lal	1	4.565

the oxygen isoelectronic sequence	Aggarwal	Physics				College		
Extended Atomic Structure Calculations for W^{11+} and W^{13+}	N Singh, S Aggarwal, M Mohan	Atoms	2020	4	11	Shyam Lal College	4	1.8
Analysis of discrepancy in previously published excitation energies of Ne-like ions from two independent codes and atomic data of Rb XXVIII and Ba XLVII	A Goyal, R Sharma, S Aggarwal	Journal of Electron Spectroscopy and Related Phenomena	2020	0	11	Shyam Lal College	0	1.80
L-shell spectroscopy of neon and fluorine like copper ions from laser produced plasma	C Kaur, S Chaurasia, N Singh, J Pasley, S Aggarwal, M Mohan	Physics of Plasmas	2019	0	11	Shyam Lal College	0	2.2
Theoretical study of energy levels and radiative properties of Be-like W^{70+}	N Singh, S Aggarwal, M Mohan	Journal of Electron Spectroscopy and Related Phenomena	2018	2	11	Shyam Lal College	2	1.80
Multi-configuration Dirac–Hartree–Fock (MCDHF) calculations for Ni XXV	N Singh, S Aggarwal	Radiation Physics and Chemistry	2018	2	11	Shyam Lal College	1	2.93
Spectroscopic study of EUV and SXR transitions of Cs XXV	A Goyal, I Khatri, N Singh, S Aggarwal, AK Singh, R Sharma	Canadian Journal of Physics	2018	2	11	Shyam Lal College	1	1.2
Atomic data for Ne-like ions useful in plasma diagnostic	N Singh, S Aggarwal, M Mohan	Canadian Journal of Physics	2018	5	11	Shyam Lal College	3	1.2
Energy levels and radiative rates for Ne-like ions from Cu to Ga	N Singh, S Aggarwal	Pramana	2017	2	11	Shyam Lal College	1	2.8
MCDHF calculations and	Sunny Aggarwal,	INDC	2017	0	11	Shyam Lal	0	0

study of plasma parameters for Li-like ions	N Singh, Man Mohan					College		
Photoionization study of Ne-like K ₉ ⁺ , Ca ₁₀ ⁺ , Sc ₁₁ ⁺ , Ti ₁₂ ⁺ , V ₁₃ ⁺ , Cr ₁₄ ⁺ , Mn ₁₅ ⁺ , and Fe ₁₆ ⁺ ions using the screening constant by unit nuclear charge method	A Goyal, I Khatri, M Sow, I Sakho, S Aggarwal, AK Singh, M Mohan	Radiation Physics and Chemistry	2016	9	11	Shyam Lal College	8	2.93
MCDHF calculations and study of plasma parameters for Li-like ions	I Khatri, A Goyal, S Aggarwal, AK Singh, M Mohan	Radiation Physics and Chemistry	2016	6	11	Shyam Lal College	4	2.93
Energy levels, lifetimes and radiative data of Ba XXVI	AK Singh, A Goyal, I Khatri, S Aggarwal, R Sharma, M Mohan	Atomic Data and Nuclear Data Tables	2016	4	11	Shyam Lal College	2	1.8
Extreme ultraviolet and soft x-ray spectral lines in Rb XXIX	I Khatri, A Goyal, S Aggarwal, AK Singh, M Mohan	Chinese Physics B	2016	3	11	Shyam Lal College	2	1.65
Atomic structure calculations and study of line intensity ratio for Kr XXIV	A Goyal, N Singh, S Aggarwal, AK Singh, M Mohan	Canadian Journal of Physics	2016	6	11	Shyam Lal College	5	1.2
Calculation of energy levels, lifetimes and radiative data for La XXIX to Sm XXXIV	A Goyal, I Khatri, S Aggarwal, AK Singh, M Mohan	Atomic Data and Nuclear Data	2016	20	11	Shyam Lal College	17	1.8
Energy levels and radiative transition rates for Ba XLVIII	I Khatri, A Goyal, S Aggarwal, AK Singh, M Mohan	Atomic Data and Nuclear Data	2016	10	11	Shyam Lal College	9	1.8
Extreme ultraviolet and x-ray transition wavelengths in Rb	I Khatri, A Goyal, S Aggarwal,	Chinese Physics B	2015	7	11	Shyam Lal College	6	1.65

XXIV	AK Singh, M Mohan							
Atomic structure calculations and identification of EUV and SXR spectral lines in Sr XXX	Arun Goyal, Indu Khatri, Sunny Aggarwal, AK Singh, Man Mohan	Journal of Quantitative Spectroscopy and Radiative Transfer	2015	19	11	Shyam Lal College	16	1.80
Collisional Excitation of Fluorine Like Tungsten using Relativistic Dirac Atomic R-matrix Method	MM Arun Goyal, Indu Khatri, Sunny Aggarwal, AK Singh, Rinku Sharma	Journal of Atomic, Molecular, Condensate and Nano Physics	2015	8	11	Shyam Lal College	5	0
Relativistic atomic data for W XLVII	S Aggarwal, AKS Jha, I Khatri, N Singh, M Mohan	Chinese Physics B	2015	12	11	Shyam Lal College	10	1.65
Collisional Excitation of Fluorine Like Tungsten using Relativistic Dirac Atomic R-matrix Method Research Article	Arun Goyal, Indu Khatri, Sunny Aggarwal, AK Singh, Rinku Sharma, Man Mohan	Transition	2015	0	11	Shyam Lal College	0	0
R-matrix calculations of photoionization cross section of Ne-like tungsten	I Khatri, A Goyal, S Aggarwal, AK Singh, M Mohan	Canadian Journal of Physics	2015	4	11	Shyam Lal College	3	1.2
Atomic structure calculations for Br-like ions	A Goyal, I Khatri, S Aggarwal, AK Singh, M Mohan	Canadian Journal of Physics	2015	17	11	Shyam Lal College	15	1.2
Atomic structure calculations for F-like tungsten	S Aggarwal	Chinese Physics B	2014	10	11	Shyam Lal College	5	1.65
Energy levels and radiative transition rates for Ge XXXI, As XXXII, and Se XXXIII	S Aggarwal, J Singh, AKS Jha, M Mohan	Atomic Data and Nuclear Data Tables	2014	4	11	Shyam Lal College	3	1.8

Reply to Comment on “Multiconfigurational Dirac–Fock energy levels and radiative rates for Br-like tungsten” (<i>Can. J. Phys.</i> 91 , 394 (2013))	M Mohan, S Aggarwal, N Singh, AKS Jha	Canadian Journal of Physics	2014	9	11	Shyam Lal College	5	1.65
Atomic Data for He-like Tungsten Research Article	S Aggarwal, AK Singh, M Mohan	Journal of Atomic, Molecular, Condensate & Nano Physics	2014	0	11	Shyam Lal College	0	0
Multiconfigurational Dirac–Fock atomic structure calculations for Cl-like tungsten	M Mohan, S Aggarwal, N Singh	Canadian Journal of Physics	2014	12	11	Shyam Lal College	10	1.65
Multiconfigurational Dirac–Fock energy levels and radiative rates for Ni XXI	S Aggarwal, N Verma, AK Singh, N Singh, R Sharma, M Mohan	Canadian Journal of Physics	2014	8	11	Shyam Lal College	5	1.65
Breit–Pauli atomic structure calculations for Fe XI	S Aggarwal, J Singh, M Mohan	Atomic Data and Nuclear Data Table	2013	5	11	Shyam Lal College	2	1.8
Level energies, lifetimes and radiative rates in the 4p4d configurations of bromine-like ions	AK Singh, S Aggarwal, M Mohan	Physica Scripta	2013	25	11	Department of Physics & Astrophysics, University of Delhi	20	2.93
New atomic data for Kr XXXV useful in fusion plasma	S Aggarwal, J Singh, M Mohan	Chinese Physics B	2013	19	11	Department of Physics & Astrophysics, University of Delhi	14	1.8
Multiconfigurational Dirac–Fock energy levels and radiative rates for Br-like tungsten	S Aggarwal, AKS Jha, M Mohan	Canadian Journal of Physics	2013	23	11	Department of Physics & Astrophysics, University of Delhi	21	1.65
Photoionization Cross-Section of	S Aggarwal, J Singh,	Journal of Astrophysics	2012	9	11	Department of Physics &	5	1.1

Chlorine-like Iron	AKS Jha, M Mohan	and Astronomy				Astrophysics , University of Delhi		
Photoionization of Al-like Si using the R-matrix method	J Singh, S Aggarwal, AKS Jha, AK Singh, M Mohan	Canadian Journal of Physics	2011	4	11	Department of Physics & Astrophysics , University of Delhi	2	1.65

Conference/ Seminar/ Symposium/ Workshop/ Presentation

Sr. No.	National/ International/ state	Topic	Presentation /Attended /Resource Person	Date	Duration	
1	International	International conference on Current developments in Atomic, Molecular, Optical & NanoPhysics with applications (CDAMOP 2011), University of Delhi, Delhi, India,	Attended	14-16 Dec 2011	3 Days	Conferences
2	National	DAE-BRNS Symposium on Atomic, Molecular and Optical Physics 2012 Indian Institute of Science Education and Research-Kolkata(IISER-K), Kolkata, India,	Presentation	December 14-17, 2012	4 Days	
3	International	16th International Conference on the Physics of Highly Charged Ions 2-7 September 2012 Heidelberg, Germany	Attended	2-7 Sept 2012	6 Days	
4	International	Current Developments in Atomic, Molecular, Optical and Nano Physics (CDAMOP)	Presentation	11-14 March , 2015	4 Days	
5	National	Charged particle collisions and electronic processes in atoms, molecules and materials (Qpace-2016).	Presentation	9-11 January, 2016	3 Days	
6	International	Developing countries and sustainable development: Reconnecting past with present” at SLC, DU	Attended	5-6 March 2018	2 Days	
7	International	❖ Atomic, Molecular, Optical and NanoPhysics with applications (CAMONP 2019), Department of applied physics, DTU, Delhi, India	Presentation	18-20 Dec 2019	3 Days	
8	International	International Conference on Atomic, molecular, material, Nano and optical physics with applications	Presentation	20-22 Dec 2023	3 Days	
9	International	Atomic and molecular radiation physics:astronomy to biomedicine	Attended	10 Feb-5 March 2014	24 Days	Workshops
10	International	Joint ICTP-IAEA School on Atomic	Attended	27	7 Days	

		Processes in Plasmas		February to 3 March 2017	
11	National	Recent Advances in atomic & molecular Physics	Attended	19 sept 2017	1 Day
12	National	Science with lens of Scientific & Technical Terminology	Attended	29-30 Jan 2020	2 Days
13	National	NEP 2020:Role of a teacher	Attended	4 Nov 2023	1 Day

Research Projects/ Innovation Projects (Major Grants/Research Collaboration)

S.No.	Title of the Project	Funding Agency	Status/Output
1	Atomic structure calculations useful for plasma and astrophysics	University of delhi	Completed

Research Guidance (Ph. D./ M. Phil.)

	No. of Ph.D. Students	No. of M.Phil. Students
Awarded	NA	-----
Submitted	NA	-----
Under Progress	NA	-----

Fellowships/Awards /Distinctions/Recognitions

Year of Award	Name of the Fellowship/Award/ Distinction/ Recognition	Designation	Name of the Academic Bodies /Association	International /National/ State
2005	Indira Award		Delhi Govt	State
2011-2013	JRF		UGC	National
2013-2015	SRF		UGC	National

Incentive to the teachers who receive recognition/awards

State	National	International

Association with the Professional Bodies

	Name of the Organisation	Year
Membership		
Any Other		

Development of E-Learning Delivery Process/Material

S.No.	Title of the Module	Recognized by/Submitted at/ Delivered at any government setup

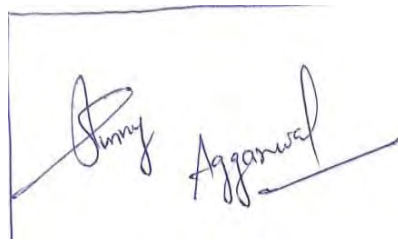
Refresher/ Orientation Programme/ FDP / Other Specialised Courses

S.No.	Topic	Name of the Organiser	Place	Duration and Year
1	Recent Advances in basic and Applied sciences	IQAC & Dept of physics and chemistry SLC in collaboration with Mahatma Hansraj Malviya Mission teacher training centre,	Delhi	11-16 Dec 2023

		Hansraj College DU		
2	NEP 2020 Orientation & Sensitization Programme	Mahatma Hansraj Malviya Mission teacher training centre, Hansraj College DU	Delhi	16-30 Dec 2023
3	Induction/orientation Programme	Ramanujan College	Delhi	21 Aug-19 Sept 2023
4	Refresher course in ADVANCED RESEARCH METHODOLOGY	Ramanujan College	Delhi	22 Sept- 6 Oct 2023
5	FDP on Psychological skills for teaching and Learning	Ramanujan College	Delhi	10-16 Oct 2023

Declaration

I do hereby solemnly declare that the information given and the statements made by me are correct and true to the best of my knowledge.



A handwritten signature in blue ink, enclosed in a rectangular box. The signature is written in a cursive style and reads "Jomy Aggarwal".

Signature with Full Name