



GOVERNMENT G.N.A. P.G. COLLEGE, BHATAPARA (C.G.)
(Affiliated to Pt. Ravishankar Shukla University Raipur)

Faculty Details

Title	First Name	Last Name	Photograph		
	Dr. VIKAS	GULHARE			
Designation	Assistant Professor Physics and Head of The Department				
Address	Govt. G. N. A. P. G. College, Bhatapara (C.G.), PIN-493118				
Phone Number	Office	07726-220312			
	Residence	-----			
	Mobile	98278-83758			
Email Id	vikasgulhare123@gmail.com				
Web Page					
Educational Qualification					
Degree	Institution		Year		
Ph.D.	GGU Bilaspur CG		2010		
M. Phil.	Alagappa Univ. TN		2008		
M. Sc. Physics	Govt. E. R. R. P. G. Sc. College, Bilaspur (CG)		2000		
B. Sc. Maths	Govt. E. R. R. P. G. Sc. College, Bilaspur (CG)		1998		
PGDCA	AISECT BHOPAL MP		2001		
Career Profile					
RESEARCH EXPERIENCES: 15 Years					
TEACHING EXPERIENCES: 12YRS-PG, 23YRS-UG					
RESEARCH BROAD AREA: SOLID STATE PHYSICS					
SPECIALIZATION: LUMINESCENCE MATERIALS, ELECTRONICS					
BOS MEMBERS: CG STATE, Pt. Ravishankar Shukla Univ. Raipur					
JOURNAL REVIEWER : IJSR, JOURNAL OF OPTICS (16-PAPER REVIEWED)					

SOCIETY MEMBERS: SEDI ACF BHATAPARA CG

Administrative Assignments

IQAC INCHARGE
NAAC INCHARGE
UGC INCHARGE
LOKSEWA GUARANTEE INCHARGE
SKILL DEVELOPMENT
SLM NODAL
JB MEMBER
NEP MEMBER
RUSA MEMBER
PM-USHA MEMBER
IDP MEMBER

Areas of Interest / Specialization

Solid State, Electronics

Subjects Taught

UG and PG level, Accordingly Syllabus

Mathematical and quantum physics

Electronics, Microprocessor 8085

Electricity and Magnetism

Research Guidance

Applied to research guide in Pt. Ravishankar Shukla University Raipur CG

Publications Profile

S. No.	Title of the Research Paper, with Author(s), name, Journal's, name, year of publication, Volume & Page No.	ISSN Number	UGC Care List/Peer Reviewed	Published year	No. of author(s)
1.1	Effect of deformation on thermoluminescence	0019-5596	UGC CARE	2011	04 A.K.Upadhyay, Vikas

	e of BaSO ₄ : Tb phosphors. Published in Indian Journal of Pure and Applied Physics (Vol.4)June 2011 pp 382-384				Gulhare, S.J.Dhoble and R.S.Kher
1.2	Impulsive Excitation of Mechanoluminescence in gamma irradiated Sr(VO ₃) ₂ : Tb phosphors. Paper published in an international peer review NSS research journal ISSN 2320-8767, E-ISSN 2394-3793 (2016) Vol.I	2320-8767	PEER reviewed	2016	04 Vikas Gulhare, Preeti Soni, R. S. Kher and S. J. Dhoble
1.3	Mechanoluminescence and Thermoluminescence characterization of gamma irradiated Eu Doped Magnesium Metavanadate Phosphors. Paper presented/published in International conference on innovative research in science management and technology organized by Bilaspur University, Bilaspur (C.G.) in collaboration with University of Maryland and Frostburg University, Frostburg USA Review of Business and technology research, Vol. 15, No. 3, 2018	1941-9406	PEER reviewed	2018	Vikas Gulhare, R. S. Kher and S. J. Dhoble
1.4	MECHANOLUMINESCENCE	2319-7064,	PEER reviewed	2021	Vikas Gulhare¹, R. S. Kher² and

	CHARAC TERIZAO N OF GAMMA IRRADIA TED Tb DOPED Mg(VO ₃) ₂ PHOSPH ORS Paper published in an international peer review International Journal of Science and research Volume 10 Issue 7 th July2021,				S. J. Dhoble ³
1.5	LUMINESCENCE CHARACTERIZA TION OF Tb DOPED Ca(VO ₃) ₂ PHOSPHORS Paper published in an international peer review NSS research journal	2320-8767	PEER reviewed		Vikas Gulhare ¹ , R. S. Kher ² and S. J. Dhoble ³
1.6	Impulsive excitation of mechanoluminesce nce in γ -irradiated Mg(VO ₃) ₂ : Ce phosphors Paper published in an international peer review NSS research journal (April to June 2021) Vol.I,Issue- XXXIV	2320-8767	PEER reviewed	2021	Vikas Gulhare ¹ , S.J. Dhoble ² and R.S. Kher ³
1.7	LUMINESCENCE CHARACTERIZA TION OF γ - IRRADIATED Ce DOPED BARIUM ORTHOVANADA TE PHOSPHORS Paper published in an international peer review International Journal of Science and research Volume 10 Issue 7 th July2021,ISSN: 2319-7064,	2319-7064	PEER reviewed	2020	Vikas Gulhare ¹ R. S. Kher ² and S. J. Dhoble ³

	SJIF(2020):7.803				
1.8	Optical studies of Zinc oxide thin films grown at different substrate temperature Paper published in an international peer review International Journal of recent research and review, Vol. XVII Issue 1 march 2024 ISSN 2277-8322	2277-8322	PEER reviewed	2024	Deepak Kumar Yadav ¹ Vikas Gulhare¹ , and Shakshi ²
1.9	Environment and its pillars of Sustainability International Journal of Science and research Volume 13 Issue 3, Mar2024,ISSN:23 19-7064, SJIF(2022):7.942	2319-7064	PEER reviewed	2024	Preeti Soni ¹ , Vikas Gulhare²
10	Mechanoluminescence characterisation of γ -irradiated Ba(VO ₄) ₂ : Eu phosphors Paper published in an international peer review International Journal of Science and research Volume 10 Issue 10 Oct. 2021,ISSN:2319-7064, SJIF(2020):7.803	2319-7064	PEER reviewed	2020	Vikas Gulhare¹ , R. S. Kher ² and S. J. Dhoble ³
11	Lyoluminescence of gamma irradiated sodium bromide samples. M. Banerjee, M. Mehta, Vikas Gulhare , R.S. Kher and M. S. K. Khokhar	Full paper published in NCLA proceeding	Paper presented and published in national conference on luminescence and its applications, NCLA 2005 held at Bangalore university, Bangalore	2005	
12	Impulsive excitation of mechanoluminescence	Paper presented and Full paper	Proc. Nat. Conf. on Novel Materials and	2010	

	nce in γ -irradiated Eu activated Sr(VO_3) ₂ phosphors. Vikas Gulhare, A K Upadhyay, S J Dhoble and R S Kher	published in proceeding	their Applications(NCNMA-2010), Organized by Nilkanthrao Shinde Science and arts College, Bhadrawati, Nagpur(MH), India		
13	Mechanoluminescence characterization of γ -irradiated Ce activated Sr(VO_3) ₂ phosphors. Vikas Gulhare, A. K. Upadhyay, R. S. Kher, S. J. Dhoble and M.S.K. Khokhar	Paper presented in National conference	Paper presented in national conference on luminescence , VIMARSH Chouksey Eng. College Bilaspur C.G. 12th-13th sept. 2013	2011	
14	Similarities in mechano, thermo and lyoluminescence of gamma irradiated sodium chloride. R.S. Kher, M. Mehta, Vikas Gulhare and Awanish Upadhyay	Paper presented in National conference	Paper published in proceeding of national conference on recent trends in nanoscience NS-2006, held at Kamala Nehru College, Nagpur (MH)	2006	
15	Luminescence Characterization of Vanadate Based Phosphors	Paper presented in National conference	NCANA 27/11/2017 GD rungta college of engineering and technology Bhilai	2017	
16	A review of nanotechnology and its application Paper published in an international peer review International Journal of Science and research Volume 14 Issue 6 2025, ISSN:2319-7064, Imp. F 2024:7.101	Pp 1016-1018	Open access International Journal	2025	

17	Tailoring Optical Properties of PVA-SiC Nanocomposites films for optoelectronic application	Paper published in International conference on emerginh trends in complex system	Advanced Materials and photonics Springer nature publication	2026	
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Chapters in Books and Published Books:

S. No.	Title of Book	Name of the publisher	Year	ISBN No.
01	General Physics-I, B. Sc. First year CS program, MATS University Aarang Raipur (C.G.), PIN-493441	Open and distance learning MATS university	2013	ISBN-NO. :978-93-82945-13-0
02	B. Sc. Part-III physics practical book	Pt. Sundarlal Sharma open university, Bilaspur(C.G.)	2018	ISBN-NO. :978-93-91965-67-9
03	B. Sc. First year Physics Text book	Prabodh Publication Raipur C.G.	2023	ISBN-NO. :978-81-924547-5-7
04	B. Sc. First Semester Physics Text book,	Prabodh Publication Raipur C.G.(NEP 2020)	2024	ISBN-NO. :978-81-976862-4-5
05	B. Sc. Second Semester Physics Text book,	Prabodh Publication Raipur C.G.(NEP 2020)	2024	ISBN-NO. :978-93-49212-35-0
06	B. Sc. First Semester Physics VAC Text book Renewable energy and energy harvesting	CIVIL PUBLICATION HINDI MEDIUM	2024	ISBN-NO. :978-93-341-5715-4
07	B. Sc. First Semester Physics VAC Text book Renewable energy and energy harvesting	CIVIL PUBLICATION ENGLISH MEDIUM	2024	ISBN-NO. :978-93-341-7895-1
08	B. Sc. Third Semester Physics Text book,	Prabodh Publication Raipur C.G.(NEP 2020)	2025	ISBN-NO. :978-93-49212-60-2
09	B. Sc. First Semester Physics Text book, SLM book for PSSOU university, Bilaspur(C.G.) (NEP 2020)	Awaited(In press) PSSOU		
10	M. Sc. Previous Physics Paper-IV Electronics SLM book for Pt. Sundarlal Sharma open university, Bilaspur(C.G.)	Awaited(In press) PSSOU		
11	M. Sc. Previous Physics	Awaited(In		

	Paper-I Mathematical Physics SLM book for PSSOU university, Bilaspur(C.G.)	press)) PSSOU		
12	M. Sc. Previous Physics practical SLM book for PSSOU university, Bilaspur(C.G.)	Awaited(In press)) PSSOU		
13	M. Sc. Final Quantum Physics SLM book for PSSOU university, Bilaspur(C.G.)	Awaited(In press)) PSSOU		

Conference Organization/ Presentations (in the last five years)

1	Paper presented and Abstract published in National seminar on advanced materials for sustainable and social application (NSAMSISA) organized by Govt. Pt. S. S. college Dharsiva ,Raipur (C.G.) 17-18 Jan 2020
2	Paper presented and Abstract published in National seminar on “ characterization and processing of advanced materials (NSCPAM-2021) organized by Govt. Pt. S. S. college Dharsiva ,Raipur (C.G.) 26 Jun 2021
3	Paper presented in Modern Aspects of Science and Technology, International Seminar organized by Govt. D. B. Girls College Raipur CG 17-18 Oct. 2025

Research Projects (Major Grants/Research Collaboration)/Patent Published

S. No.	Title of Patent	International/National	Patent/Technology Transfers	year
1	A novel adsorbent material for the removal of heavy metals from industrial wastewater using chitosan and activated carbon Nanoparticles	National	patent	2023
2	Nanostructured filtration system for environmental pollution reduction	National	patent	2025
3	Quad Magnetic Axial Drive System	National	patent	2026

Awards and Distinctions

Teacher honors award by DWPS Education society, Bhatapara CG

Association With Professional Bodies

Peer Review Member Of International Journal Of Science and Research

01	Synthesis and luminescence characterization of a new yellowish-orange phosphors: $\text{Ba}_3\text{B}_{10}\text{O}_{17}:\text{Sm}^{3+}$	Luminescence: The journal of biological and chemical luminescence
02	Dielectric and Piezoelectric properties of Sr based Ceramic	International Journal of Science and research (Open Access)
03	Design, construction and testing of a smart static and dynamic obstacle walking stick for the blinds using MCU and controlling software	International Journal of Science and research (Open Access)
04	Distance sensing and liquid crystal display for stationary and moving object based on arduino uno and Ultrasonic sensor mounted on a servo motor	International Journal of Science and research (Open Access)
05	SHAHID theory of quantum gravity	International Journal of Science and research (Open Access)
06	Application of electromagnetic field on motor vehicles for enhanced their breaking capabilities	International Journal of Science and research (Open Access)
07	Estimation of the ground heat flux from percentage of the net radiation in ILE-IFE,OSUN STATE, NIGERIA	International Journal of Science and research (Open Access)
08	Estimation of annual effective dose from soil Gas Radon in selected region in Ilorin Nigeria	International Journal of Science and research (Open Access)
09	Design construction and testing of a smart static and dynamic obstacle walking stick for the blinds using MCU and controlling software	International Journal of Science and research (Open Access)
10	GEO-ELECTRICAL investigation of ground water potential using vertical electrical sounding	International Journal of Science and research (Open Access)
11	Comparative study on evaporating demand of the atmosphere using energy balance method	International Journal of Science and research (Open Access)
12	Identification of the relationship between the laser delay time and the intensity of the LIBS signal and determination of quantitative analysis of cement powder by LIBS	International Journal of Science and research (Open Access)
13	The solution of the nonlinear schrodinger equation using the G,G G expansion function method	International Journal of Science and research (Open Access)
14	Theoretical determination of electronic specific heat and transition temp. of high Tc cuprate superconductor based on polaronic mechanism interlayer and interlayer interactions	International Journal of Science and research (Open Access)
15	Neutrino mass generation using see saw mechanism	International Journal of Science and research (Open Access)
16	Optical properties of ternary PVA/Tio2-SiC nanosystems for multifunctional opto electronic field	Journal of optics(Springer)
17	Synthesis and ameliorating the microstructures and optical features of tantalum carbide nanostructures doped PVA/PVP for versatile optoelectronic devices	Journal of optics(Springer)

Other Activities:

INVITED LECTURES:

11/03/2017	Govt. S. V.S college,Bilaigarh(C.G.)	One day workshop on NAAC Accreditation and Educational Quality
26/11/2016	D.L.S. P.G. College Bilaspur C.G.	Semiconductor devices and application(Department of Physics)
2018	Govt. G.N.A. P.G. Bhatapara C.G.	Environmental issues ((Department of Economics)
	Govt. G.N.A. P.G. Bhatapara C.G.	Quantum Chemistry (Department of Chemistry)
11/10/2022	Govt. G.N.A. P.G. Bhatapara C.G.	Solid state theory and crystallization (Department of Chemistry)
22/02/2023	Govt. Ptaleshwar college Masturi C.G.	Basic application of semiconductor devices (Department of Physics)
12/12/2023	Govt. Polytechnique College, Bhatapara C.G.	Basic physics (Electrical and civil branch)
22/08/2023	SEDI Ambuja cement foundation Bhatapara C.G.	Career guidance and motivation session for SEDI graduates
01/03/2024	Govt. G.N.A. P.G. Bhatapara C.G.	Material Chemistry (Department of Chemistry)
30/11/2024	Govt. Polytechnique College, Bhatapara C.G.	Fluid Mechanics (Mechanical I,II,III Sem branch)

Lecture In Youtube:

SN	TOPIC	YOUTUBE LINK
1	Gravitational force and intensity	https://youtu.be/J31quM815_Y
2	Kepler's law	https://youtu.be/t3Fd_UjWXlg
3	OP-AMP	https://youtu.be/LY7nEdYglVo
4	Hooke's Law Expt.	https://youtu.be/P0ikt7jAx-8?si=Qux4c7hCdZO89xrv
5	Teachmint Link-93 lecture	https://www.teachmint.com/teacher/61110976bcf88afb1b6d81c0
6	Google Class Room-24 lecture	https://classroom.google.com/c/MjYwNzE0ODkwNDg2?cjc=pvq7422 https://classroom.google.com/c/MjU3Mzc5ODizMzc?cjc=ojj4uky https://classroom.google.com/c/MjE0MjY4Nzg3ODA4?cjc=ex36lw5

Participation in Orientation Courses/ Refresher Courses/ Workshops/ FDPS etc.		
Date	Program Name	Sponsored By
30/05/2016 to 25/06/16	Orientation	UGC-MHRD in GGV, Bilaspur(CG)-495009
15/02/2021 to 27/02/2021	Refresher	UGC-MHRD in GGV, Bilaspur(CG)-495009
09/08/2021 to 13/08/2021	Faculty Development program	Mahatma Gandhi Institute of technology, Hyderabad, Telangana PIN-500075
25/04/2022 to 30/04/2022	Faculty Development program	Sanskriti school of engineering, Puttaparthi
02/05/2022 to 07/05/2022	Faculty Development program	Kamla Nehru Mahavidyalaya, Nagpur(MH)
23/05/2022 to 28/05/2022	Faculty Development program	Kamla Nehru Mahavidyalaya, Nagpur(MH)
12/12/2022 to 26/12/2022	Refresher	UGC-HRDC in PRSU, Raipur(C.G.)-PIN-492010
20/05/2023	Faculty Development program	PRISM Group of Institutions Bhilai(C.G.)
10/06/2023	Faculty Development program	PRISM Group of Institutions Bhilai(C.G.)
12/10/2023 to 19/10/2023	Faculty Development program	Govt. K.R.M. P.G. Mahavidyalaya Rajnandgaon (C.G.)
07/10/2023 to 14/10/2023	Faculty Development program	I.G. Govt. P.G. College, Vaishali Nagar Bhilai(C.G.)
03/01/2024 to 12/01/2024	Faculty Development program	MMTTR course organized by UGC-HRDC in PRSU, Raipur(C.G.)-PIN-492010
15/01/2024 to 20/01/2024	Faculty Cum workshop	Gyan Vihar University, Jaipur, Rajasthan
08/12/2025 to 20/12/2025	Refresher	Shree Maata Vaishno Devi University, Katra, Jammu
21/7/2025 to 26/7/2025	Faculty Development program	Smart and Sustainable Materials Dept. of chemistry SRM Institutes, Ramapuram Chennai
Seminars/ Conferences Attended:		
1	Workshop on Experimental Physics for College Teachers, 7-9 Aug 2003 Organized by C. M. D. College Bilaspur (CG).	
2	National Conferences on Luminescence and its Applications NCLA-2005 Organized by Bangalore University and luminescence society of India.	
3	Fourth Young Scientists Congress, 28Feb-1Mar 2006 Organized by Indira Gandhi Agricultural University, Raipur (CG)	
4	National conference on Recent Trends in Nanoscience NS-2006 Organized by Kamla Nehru Mahavidyalaya, Nagpur (MH) and Luminescence society of India (Maharashtra chapter)	
5	National Conference on Advances in Electronic Materials and Devices AEMD-06,	

	Organized by Guru Ghasidas University, Bilaspur (CG)
6	National Conference on Novel Materials and Their Applications (NCNMA- 2010), Organized by Nikanthrao Shinde Science and Arts College, Bhadrawati, Nagpur (MH)
7	National Conferences on Luminescence and its Applications NCLA-2011 Organized by Pt. Ravishankar Shukla University, luminescence society of India and Disha Institute of Management and Technology Raipur (C.G.).
8	CGCOST sponsored of VIMARSH national conference on 12-13 Sept 2013, Chouksey engineering college Bilaspur(C.G.)
9	Three days workshop from 25-27 Jan 2013 on Training of course writer for self- learning material development organized by MATS institute of Open and distance learning, Raipur(C.G.)
10	National seminar on energy harvesting materials and techniques for sustainable development energy -2015, organized by department of physics, Govt. V.Y. T. P.G. College, Durg (C.G.)
11	One day work shop on new education policy, under the project of RUSA 07 Oct. 2015 organized by Bilaspur University , Bilaspur (C.G.)
12	One day seminar on Process of NAAC Accreditation of Colleges, under the project of RUSA 04 Dec. 2015 organized by Govt. D. K. P.G. College Baloda-Bazar (C.G.)-493332
13	National Conferences on Luminescence and its Applications NCLA-2016 Organized by R.T. M. University Nagpur and luminescence society of India.
14	National seminar sponsored by UGC on Sustainable routes out of poverty past experiences and future challenges organized by Economics Department, Govt. G. N. A. P. G. College, Bhatapara (C.G.) on 25-26 Feb 2016
15	Enhancing 21 st Century Competencies Sponsored by UGC organized by T.C. L. Govt. P.G. College Janjgir(C.G.) India
16	One day national seminar on class room teaching 22 july 2017 sponsored by indian association of physics teachers held at Dr. C.V. Raman University Kota Bilaspur (C.G.) India
17	National conference on advances in nano technology and their applications(NCANA) 27 nov 2017 organized by GD-rungta college of engineering and technology, Bhilai, India
18	One day workshop on development of self - learning material organized by Pt. Sundarlal Sharma Open University Chhattisgarh 10 th july 2018
19	International conference on innovative research in science management and technology organized by Bilaspur University, Bilaspur (C.G.) INDIA in collaboration with University of Maryland and Frostburg University, Frostburg USA 4-5 August 2018
20	NAAC awareness workshop “ quality and excellence in higher education preparation of SSR as per revised accreditation framework” organized by IQAC cell AVB University Bilaspur(C.G.) 26-27 July 2019
21	National seminar on recent trends in environmental issues organized by D.P. Vipra college Bilaspur(C.G.) 14 Oct. 2019
22	Paper presented and Abstract published in National seminar on advanced materials for sustainable and social application (NSAMSISA) organized by Govt. Pt. S. S. college Dharsiva ,Raipur (C.G.) 17-18 Jan 2020
23	Paper presented and Abstract published in National seminar on “ characterization and processing of advanced materials (NSCPAM-2021) organized by Govt. Pt. S. S. college Dharsiva ,Raipur (C.G.) 26 Jun 2021
24	Participation in International webinar organized by Kalyan post graduate college, Bhilai Nagar c.g. on “Energy and Environment” from 4-6 june 2021
25	One day national webinar on “ Nuclear radiation for societal applications” On 07/09/2021 organised by department of physics and IQAC, Dada patil mahavidyalaya, Karjat

	(MS) India.
26	Virtual one week workshop on Advanced characterization tools: Fundamentals & applications jointly organized by Govt. Pt. S. S. college Dharsiva ,Raipur (C.G.) & C.V. Global university, Bhubneshwar Orissa 16 th -21 st may 2022
27	International webinar on breaking barrier in science jointly organized by kamla Nehru mahavidyalaya, Nagpur and ACT Mumbai(MH) 14Feb. 2023
28	Current trends in Green chemistry, International seminar organized by Department of physics and mathematics, Bhabha college, Dantan(WB) 16 Sep 2024
29	Modern Aspects of Science and Technology, International Seminar organized by Govt. D. B. Girls College Raipur CG 17-18 Oct. 2025
30	SWAYAM AND MOOC COURSE ONE DAY WORKSHOP Organised by GGU Bilaspur CG 22/02/2025

Programs Organized and Conducted:

1	Workshop sponsored by RUSA	03 Mar.2016
2	Workshop sponsored by RUSA	06 Jul. 2016
3	Extension Lecture-02 (Department of Physics)	21 Dec. 2015 29 Dec. 2015
4	Educational Tour for UG level students visit Science center Raipur(C.G.)	05 Feb 2016
5	Seminar sponsored by UGC in Economics Department	25-26 Feb. 2016
6	Workshop sponsored by UGC in Chemistry Department	05-06 Aug. 2016
7	Placement organized by Kotak Mahindra Bank	05 May. 2016
8	Visit SEDI for skill development,ACF bhatapara(c.g.)	2019
9	Visit Shree cement plant, Khapradeeh, Baloda- Bazar	2019
10	Online Quiz Competition organized by Department of physics	March 2021
11	One day national webinar in recent advances in chemistry organized by IQAC and Chemistry department	26/07/2021
12	Science exhibition organized by department of physics	19/02/2022
13	Skill development program by SEDI	2022
14	Skill development program by SEDI	15/12/2023
15	BARC Atomic energy program conduct in College and got certificate	08/08/2024
16	PRISM GROUP Bhilai c.g. campus selection program	10/08/2024
17	Science day celebration Organized with association of CGCOST	28/02/2025