जम्मू केंद्रीय विश्वविद्यालय
Central University of Jammu
राया–सूचानी (बागला), जिला: सांबा–181143, जम्मू (जम्मू एवं कश्मीर), भारत
Rahya-Suchani (Bagla), District: Samba – 181143, Jammu (J&K), India.
www.cujammu.ac.in

FACULTY PROFILE

First Name	Dr. VINAY	Middle Name	KUMAR	Last Name	DHIMAN	Photograph (attach below)
Title & Designation		PROFESSOR				
Address		Department of Physics and Astronomical Sciences, Central University of Jammu Rahya-Suchani (Bagla) , Samba-181143, Jammu (J&K)				
Phone Number/Mobile		+91-9419904016				
		+91-7006692960				
Email		vinay.phy@cujammu.ac.in, vinaykumar.cuj@gmail.com				
Web-Page		http://www.cujammu.ac.in//5104/Default.aspx				

Educational Qualifications:

Degree	Institution	Year
B.Sc.	Himachal Pradesh University, Shimla	2000
M.Sc. (Physics)	Jiwaji University, Gwalior	2002
Ph.D. (Physics)	Kurukshetra University, Kurukshetra	2007

Administrative Assignments:

Dean, School of Basic and Applied Sciences, CUJ	Oct 2023 to till date
Head, Department of Physics and Astronomical Sciences, Central University of Jammu, Samba (J&K), CUJ	Nov 2023 to till date
Head, Department of Nanoscience and Materials, CUJ	Nov 2021 - Oct 2023
Head, Department of Physics and Astronomical Sciences, Central University of Jammu, Samba (J&K)	Oct. 2017 – Oct 2020.
Coordinator, Satish Dhawan Centre for Space Research, Central University of Jammu	Oct. 2018 – till date.
Member, Academic Council, Central University of Jammu	Sep 2017- Sep 2020
Member, Executing Council, Central University of Jammu	Jan 2018-Jan 2021
Member, Court, Central University of Jammu	Dec 2017-Dec 2020
Coordinator, NAAC SSR, Central University of Jammu	2019
Coordinator, Centre of Nanotechnology, Shri Mata Vaishno Devi University	Jan 2015 – Sep 2017

Areas of Interest / Specialization:

- Nanotechnology
- Luminescence of nanomaterials.
- Solid state lightning
- Material Characterization
- Material modification using swift heavy ion irradiation
- Radiation dosimetry

- Surface Science of materials

Subjects Taught:

- Quantum Mechanics
- Physics of Nanomaterials
- Classical Mechanics
- Electrodynamics
- Engineering Physics

Research Guidance:

M. Phil. SUPERVISION

Sr. No.	Name of the Research Student	Degree	Status
1.	Natasha Chopra	M.Phil.	Degree awarded in 2008
2.	Upma Choudhary	M.Phil.	Degree awarded in 2008
3.	Jaspreet Kaur	M.Phil.	Degree awarded in 2008

Ph. D. SUPERVISION

Sr. No.	Name of the Research Student	Degree	Status
1.	Ankush Kumar Bedyal	Ph.D.	Awarded, Feb 2016
2.	Palvi Gupta	Ph.D.	Awarded, April 2018
3.	Mohit Manhas	Ph.D.	Awarded, April 2018
4.	Neharika	Ph.D.	Awarded, Dec 2018
5.	Pankaj Biswas	Ph.D.	Awarded, Mar 2019
6.	Sumara Khursheed	Ph.D.	Awarded, Mar 2020
7.	Rubby Mahajan	Ph.D.	Awarded, Mar 2022
8.	Payal Khajuria	Ph.D.	Awarded, Feb 2023
9.	Surbhi Pathania	Ph.D.	Awarded, March 2023

Publications Profile:

a) Research Publication

List of publication(s) till July 2023 Scopus h index : 39

S. No.	Year	Publication	Publisher
1.	2023	Pankaj Biswas, Vinay Kumar, and Kamni , KSrVO4:Tb3+2A potential green-emitting nanophosphor candidate for white LEDs, J Mater Sci: Mater Electron (2023) 34:149	Springer
2.	2023	Isha Charak, M. Manhas, A. K. Bedyal, Ankush Vij, H. C. Swart & Vinay Kumar, Synthesis, luminescence and photometric investigation of Sr2B2O5:Dy3+ phosphor for UV-based white LEDs Applied Physics A volume 129, Article number: 222 (2023)	Springer
3.	2022	Rajan Singh, A.K. Bedyal, M. Manhas, H.C. Swart, Vinay Kumar, Charge compensated CaSr2(PO4)2:Sm3+, Li+/Na+/K+ phosphor: Luminescence and thermometric studies , Journal of Alloys and Compounds 901 (2022) 163793	Elsevier, Netherland

4.	**2022**	**Rajan Singh, M. Manhas, A.K. Bedyal, F. Durani, H.C. Swart, Vinay Kumar, Thermometric and luminescence studies of Eu3+ activated CaSr2(PO4)2 phosphor for non-contact optical thermometry and solid state lighting applications, Materials Chemistry and Physics 291 (2022) 126735**	**Elsevier, Netherland**
5.	**2022**	**S Pathania, J J L. Hmar, B Verma, T Majumder, Vinay Kumar & P. Chinnamuthu, Titanium Dioxide (TiO2) Sensitized Zinc Oxide (ZnO)/Conducting Polymer Nanocomposites for Improving Performance of Hybrid Flexible Solar Cells, Journal of Electronic Materials volume 51, pages 5986–6001 (2022)**	**Springer**
6.	**2022**	**Payal Khajuria, M. Manhas, A.K. Bedyal, Ankush Vij, H.C. Swart, Vinay Kumar, Structural and luminescence characterization of thermally stable orange-red emitting LiSrP3O9:Sm3+ phosphor to fill the amber gap in WLEDs, Displays 75 (2022) 102302.**	**Elsevier, Netherland**
7.	**2022**	**Surbhi Pathania, Jehova Jire L. Hmar, Vinay Kumar , Onkar Nath Verma, Tanuj Kumar,Chinnamuthu Paulsamy4Gold (Au)-Doped Lead Sulfide-Polyvinyl Alcohol (PbS-PVA) Nanocomposites for High-Performance, Flexible Memristors, Journal of Electronic Materials volume 51, pages4964–4977 (2022)**	**Springer**
8.	**2022**	**Payal Khajuria, M. Manhas, A. K. Bedyal, Ankush Vij, H. C. Swart, and Vinay Kumar, Structural and spectral investigation of a near UV converted LiSrP3O9:Dy3+ phosphor for white light emitting diodes,2022, Journal of Materials Science: Materials in Electronics volume 33, pages 6031–6042 (2022)**	**Springer**
9.	**2021**	**A.K. Bedyal, Samvit G. Menon Trilok Pathak, Vinay Kumar, Hendrik C. Swart , Sr4Al14O25: Eu2+, Dy3+@ZnO nanocomposites as highly efficient visible light photocatalysts for the degradation of aqueous methyl orange Journal of Alloys and Compounds, Volume 860, Year 2021, Pages 158370**	**Elsevier, Netherland**
10.	**2021**	**Rubby Mahajan ., Ram Prakash ., Sandeep Kumar ., Vinay Kumar R.J. Choudhary ., D.M. Phase ., Surface and luminescent properties of Mg3(PO4)2:Dy3+ phosphors, Optik, Volume 225, Year 2021**	**Elsevier, Netherland**
11.	**2021**	**Isha Charak, M. Manhas, Payal Khajuria, A. K. Bedyal, H. C. Swart & Vinay Kumar , Investigation of thermoluminescence response and kinetic parameters of CaMgB2O5: Tb3+ phosphor against UV-C radiation for dosimetric Application, Journal of Materials Science: Materials in Electronics** volume **32, pages 17418–17426 (2021)**	**Springer**
12.	**2021**	**Khursheed S., Vinay Kumar, J Singh et al., Study of luminescence from terbium doped strontium borate nanophosphors in PMMA Applied Physics A: Materials Science and Processing,** volume **127, Article number: 218 (2021)**	**Springer,**
13.	**2021**	**Payal Khajuria, A. K. Bedyal, M. Manhas, H. C. Swart, F. Durani, Vinay Kumar, Spectral, surface and thermometric investigations ofupconverting Er3+/Yb3+ co-doped Na3Y(PO4)2 phosphor, Journal of Alloys and Compounds, Volume 877, Year 2021, Pages 160327**	**Elsevier, Netherland**

14.	2021	Structural and spectral studies of highly pure red-emitting Ca3B2O6:Eu3+phosphors for white light emitting diodes, Charak I., Vinay Kumar et al., Journal of Alloys and Compounds, Volume 869, Year 2021	Elsevier, Netherland
15.	2020	A.K. Bedyal, A.K. Kunti, Samvit G. Menon, Vinay Kumar , H.C. Swart Red emitting non-rare earth doped LiMgBO3 phosphor for light emitting diodes, Journal of Alloys and Compounds 830 (2020) 154622	Elsevier, Netherland
16.	2020	Pankaj Biswas, Vinay Kumar, Kamni, The structural and spectral study of LiSrVO4:Tb3+ phosphor for UV-shifted imaging devices 2020, Material Todays: Proceedings Volume 28, Part 2, 2020, Pages 1018-1023	Elsevier, Netherland
17.	2019	A. K. Bedyal, D. D. Ramteke, Vinay Kumar, H. C. Swart, Excitation wavelength and Eu3+/Tb3+ content ratio dependent tunable photo luminescence from NaSrBO3:Eu3+/Tb3+ phosphor, Journal of Materials Science: Materials in Electronics (2019) 30:11714–11726	Springer
18.	2019	Rubby Mahajan, Sandeep Kumar, Ram Prakash, Vinay Kumar, R.J. Choudhary, D.M. Phase X-ray photoemission and spectral investigations of Dy3+ activated magnesium pyrophosphate phosphors, Journal of Alloys and Compounds 777 (2019) 562-571	Elsevier, Netherland
19.	2019	Sumara Khursheed, Pankaj Biswas, Vivek K. Singh, Vinay Kumar, H.C. Swart, Jitendra Sharma, Synthesis and optical studies of KCaVO4:Sm3+/PMMA nanocomposites, Vacuum 159 (2019) 414–422	Elsevier, Netherland
20.	2018	Neharika, V.K. Singh, J. Sharma, A.K. Bedyal, Vinay Kumar, H.C. Swart, Surface and spectral studies of Sm3+ doped Li4Ca(BO3)2 phosphors for white light emitting diodes , Journal of Alloys and Compounds 738 (2018) 97-104	Elsevier, Netherland
21.	2018	Neharika, J. Sharma, Vishal Sharma, A.K. Bedyal, H.C. Swart, Vinay Kumar, Synthesis and thermoluminescence studies of UV-C exposed Li4Ca(BO3)2:Dy3+ phosphors, Vacuum 156 (2018) 370–374.	Elsevier, Netherland
22.	2018	A.K. Bedyal, D.D. Ramteke, Vinay Kumar, H.C. Swart, Blue photons excited highly chromatic red light emitting K3La(PO4)2:Pr3+ phosphors for white light emitting diodes, Materials Research Bulletin 103 (2018) 173–180	Elsevier, Netherland
23.	2018	Vishal Sharma, Raj Kumar, Karan Devgan, Pawan Kumar Mishra, Adam Ekielski, Vijay Kumar & Vinay Kumar, Multivariate analysis for forensic characterization, discrimination, and classification of marker pen inks, Spectroscopy Letters, 2018, 51(5), 205–215	Taylor and Francis
24.	2018	Pankaj Biswas, Vinay Kumar, A potential amber-emitting KCaVO4:Sm3+ nanophosphor for near-UV LEDs, AIP Conference Proceedings 1953, 030206 (2018)	AIP, USA
25.	2018	Rubby Mahajan, Sandeep Kumar, Ram Prakash, and Vinay Kumar, Synthesis and luminescent properties of Sm3+ doped zinc aluminate phosphor, AIP Conference Proceedings 1953, 030209 (2018)	AIP, USA

26.	2018	Ram Prakash, Sandeep Kumar, Rubby Mahajan, Pooja Khajuria, Vinay Kumar, R. J. Choudhary, and D. M. Phase, Spectral properties of Dy3+ doped ZnAl2O4 phosphor AIP Conference Proceedings 1953, 030040 (2018)	AIP, USA
27.	2017	Vinay Kumar, M Manhas, AK Bedyal, HC Swart, Synthesis, spectral and surface investigation of novel CaMgB2O5: Dy3+ nanophosphor for UV based white LEDs, Materials Research Bulletin, 91,(2017) 140-147	Elsevier, Netherland
28.	2017	A K Bedyal, Vinay Kumar, OM Ntwaeaborwa, HC Swart Investigation of thermoluminescence response and trapping parameters of 120 MeV Ag 9+ and γ-ray exposed NaSrBO 3: Dy 3+ phosphor for dosimetry, Journal of Alloys and Compounds, 691 (2017) 919-928	Elsevier, Netherland
29.	2017	A K Bedyal, Vinay Kumar, HC Swart Charge compensated derived enhanced red emission from Sr 3 (VO 4) 2: Eu 3+ nanophosphors for white light emitting diodes and flat panel displays,Journal of Alloys and Compounds, 709 (2017) 362-372	Elsevier, Netherland
30.	2017	A K Bedyal, Vinay Kumar, HC Swart, Investigation of thermoluminescence characteristics of NaSrBO 3: Sm 3+ phosphor against 120MeV Ag 9+ ion and γ-ray irradiation prepared by different methods, Journal of Luminescence, 187(2017) 499-506	Elsevier, Netherland
31.	2017	Navdeep S Jamwal, Mir Irfan Ul Haq, Ankush Raina, Ankush Anand, Vinay Kumar Synthesis and trobological investigation of Al-SiC based nano hybrid composite,Alexandria Engineering Journal (2017) Published Online http://www.sciencedirect.com/science/article/pii/S1110016817301709	Elsevier, Netherland
32.	2017	Raj kumar, Vinay Kumar, Vishal Sharma Fourier transform infrared spectroscopy and chemometrics for the characterization and discrimination of writing/photocopier paper types: Application in forensic document examinations, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy , Volume 170, 5 January 2017, Pages 19-28	Elsevier, Netherland
33.	2017	Vivek Kumar Singh, Anjana Devi, Surbhi Pathania, Vinay Kumar, Durgesh Kumar Tripathi, Shivesh Sharma, Devendra Kumar Chauhan, Virendra Kumar Singh, Vassilia ZorbagSpectroscopic investigation of wheat grains (Triticum aestivum) infected by wheat seed gall nematodes (Anguina tritici), Biocatalysis and Agricultural Biotechnology, 9 (2017) 58–66	Elsevier, Netherland
34.	2017	P Biswas, Vinay Kumar, N Padha, H. C. Swart, Synthesis, structural and luminescence studies of LiSrVO4:Sm3+ nanophosphor to fill amber gap in LEDs under n-UV excitation" J Mater Sci: Mater Electron 28 (2017) 6159–6168	Springer

35.	2017	A K Bedyal, Vinay Kumar, HC Swart, Charge compensated derived enhanced red emission from Sr3(VO4)2:Eu3+ nanophosphors for white light emitting diodes and flat panel displays Journal of Alloys and Compounds, 709 (2017) 362–372	Elsevier, Netherland
36.	2017	Jigmet Ladol, Heena Khajuria, Rajinder Singh, Vinay Kumar, Haq Nawaz Sheikh Organic additive assisted hydrothermal synthesis and photoluminescence properties of CeF3:Tb3+ and NaCeF4:Tb3+ nanoparticles, J Mater Sci: Mater Electron (2017) 28: 11671.	Springer
37.	2017	Raj Kumar, Vishal Sharma, Neha Verma, Pawan Kumar Diwan, Vinay Kumar & Vijay Kumar Analysis of writing/ printing paper via Thermogravimetric Analysis: Application in forensic science, (2017 online Pub)Australian Journal of Forensic Sciences, final citation Volume 51, 2019 - Issue 1	Taylor and Francis
38.	2017	A. K. Bedyal, Vinay Kumar, H. C. Swart, A potential green emitting citrate gel synthesized NaSrBO3:Tb3+ phosphor for display application, Physica B: Condensed Matter (2017) Available online 18 July 2017 doi : https://doi.org/10.1016/j.physb.2017.07.034	Elsevier, Netherland
39.	2017	P. Biswas, Vinay Kumar,Vishal Sharma, A. K. Bedyal, Naresh Padha, H. C. Swart, Potential of Sm3+ doped LiSrVO4 nanophosphor to fill amber gap in LEDs , Physics B: Condensed Matter (2017) https://doi.org/10.1016/j.physb.2017.07.040	Elsevier, Netherland
40.	2017	Sumara Khursheed, Vinay Kumar, Vivek K. Singh, Jitendra Sharma, H.C.Swart, Optical properties of Sr3B2O6:Dy3+/PMMA polymer nanocomposites, Physica B: Condensed Matter (2017), https://doi.org/10.1016/j.physb.2017.07.033	Elsevier, Netherland
41.	2017	Vishal Sharma, Amrita Das,Vijay Kumar, Vinay Kumar, Kartikey Verma, H. C. Swart, Combustion synthesis and characterization of blue long lasting phosphor CaAl2O4: Eu2+, Dy3+ and its novel application in latent fingerprint and lip mark detection, Physica B: Condensed Matter (2017) https://doi.org/10.1016/j.physb.2017.07.019	Elsevier, Netherland
42.	2017	M. Manhas, Vinay Kumar, Vivek K. Singh, J.Sharma, Ram Prakash, Vishal Sharma, A. K.Bedyal, H. C. Swart ,A novel orange-red emitting Ba2Ca(BO3)2:Sm3+ phosphor to fill the amber gap in LEDs: Synthesis, structural and luminescence characterizations Current Applied Physics, 17 (11) (2017) 1369-1375	Elsevier, Netherland
43.	2016	Palvi Gupta, A.K. Bedyal, Vinay Kumar, Vivek K. Singh, Y. Khajuria, O.M. Ntwaeaborwa, H.C. Swart, "Thermoluminescence and glow curves analysis of ɣ-exposed Eu3+ doped K3Y(PO4)2 nanophosphors", Materials Research Bulletin, 11 (2016) 111-118	Elsevier, Netherland

44.	2016	Vishal Sharma, Amrita Das, Vinay Kumar, Eu2+,Dy3+ codoped SrAl2O4 nanocrystalline phosphor for latent fingerprint detection in forensic applications, Material Research Express, 3(1) (2016) 015004	IOP, England
45.	2016	M. Manhas, Vinay Kumar, O.M. Ntwaeaborwa, H.C.Swart Structural, surface and luminescence properties of Ca3B2O6:Dy3+ phosphors, Ceramics International, 42 (2016) 5743–5753	Elsevier, Netherland
46.	2016	Neharika, Vinay Kumar, J.Sharma ,Vivek K Singh O.M. Ntwaeaborwa, H.C.Swart , Surface and spectral studies of green emitting Sr3B2O3:Tb3+ phosphors, Journal of Electron Spectroscopy, 206 (2016) 52-57	Elsevier, Netherland
47.	2016	Nitin Kumar, Vinay Kumar,Jitendra Sharma, Relaxations in gelatin hydrogels probed by dynamic light scattering, Advance Materials Letter 7(2) (2016) 136-143	VBRI
48.	2016	P.Biswas, Vinay Kumar, G. Agarwal, O.M. Natwaeaborwa, H. c. Swart, NaSrVO4:Sm3+ -A n-UV convertible phosphor to fill the quantum efficiency gap for LED applications, Ceramic International, 42 (2016) 2317-2323	Elsevier, Netherland
49.	2016	A.K. Bedyal, Vinay Kumar, O.M. Ntwaeaborwa, H.C. Swart, Effect of swift heavy ion irradiation on structural, optical and luminescence properties of SrAl2O4:Eu2+, Dy3+ nanophosphor, Radiation Physics and Chemistry, 122 (2016) 48-54	Elsevier, Netherland
50.	2016	B.B.S. Jaswal, Vinay Kumar, J. Sharma, P.K. Rai, M.A. Gondal, Bilal Gondal, and V.K. Singh, “Analysis of heterogeneous gallstones using laser-induced breakdown spectroscopy (LIBS) and wavelength dispersive X-ray fluorescence (WD-XRF)”, Lasers in Medical Science, 31(3) (2016) 573–579	Springer
51.	2016	AK Bedyal, Vinay Kumar, OM Ntwaeaborwa, HC Swart,Thermoluminescence response of 120MeV Ag 9+ and γ-ray exposed LiMgBO 3: Dy 3+ nanophosphors for dosimetry, Ceramics International 42 (16) (2016) 18529-18535	Elsevier, Netherland
52.	2016	M Manhas, Vinay Kumar, OM Ntwaeaborwa, HC Swart, Investigation of thermoluminescence and kinetic parameters of CaMgB2O5: Dy3+ nanophosphor, AIP Conference Proceedings , 1728 (2016) 020651	American Institute of Physics
53.	2016	P Biswas, Vinay Kumar, OM Ntwaeaborwa, HC .Swart, A novel orange-red emitting NaCaVO4:Sm3+ phosphor for solid state lighting , AIP Conf. Proc. 1728 (2016) 020552	American Institute of Physics
54.	2016	P Gupta, AK Bedyal, Vinay Kumar, VK Singh, Y Khajuria, OM Ntwaeaborwa, Thermoluminescence and glow curves analysis of γ-exposed Eu 3+ doped K 3 Y (PO 4) 2 nanophosphors, Materials Research Bulletin, 73 (2016) 111-118	Elsevier, Netherland
55.	2015	Vivek K Singh, Vinay Kumar, Jitendra Sharma, “Importance of laser-induced breakdown spectroscopy for hard tissues (bone, teeth) and other calcified tissue materials”, Lasers in Medical Science, 30 (2015) 1763-1778	Springer

56.	2015	A K Bedyal, Vinay Kumar, R Prakash, O M Ntwaeaborwa, H C Swart, "A near UV-converted LiMgBO3:Dy3+ nanophosphor: surface and spectral investigations", Applied Surface Science 329 (2015) 40–46	Elsevier, Netherland
57.	2015	M Manhas, Vinay Kumar, G Agarwal, O M Ntwaeaborwa , H C Swart, "Crystal structure and kinetic studies of gamma exposed Ca3B2O6:Tb3+Nanophosphor", Indian Journal of Physics, 89 (2015), 899–906	Springer
58.	2015	P Biswas, Vinay Kumar, O M Ntwaeaborwa , H C Swart, "Enhanced orange-red emission from KSrVO4:Sm 3+ nanophosphor for possible applica tion in blue light-emitting diode based white LED", Material Research express, 2 (2015) 025010	IOP, England
59.	2015	U. Gupta, V.K. Singh, Vinay Kumar, and Y. Khajuria, "Experimental and Theoretical Spectroscopic Studies of Calcium Carbonate (CaCO3)," Materials Focus, Materials Focus, 4 (2015) 164-169	American Scientific Publishers
60.	2015	M Manhas, Vinay Kumar, G Agarwal, O M Ntwaeaborwa , H C Swart, "Photo luminescence and thermoluminescence investigations of Ca3B2O6: Sm3+ phosphor", Material Research express, 2 (2015) 075008	IOP, England
61.	2015	P. Gupta, A K Bedyal, Vinay Kumar,Y Khajuria, Vishal Sharma,O M Ntwaeaborwa, H C Swart, "Energy transfer mechanism from Gd3+ to Sm3+ in K3Gd(PO4)2:Sm3+ Phosphor", Material Research Express, 2 (2015) 076202	IOP, England
62.	2015	A K Bedyal, Vinay Kumar, O M Ntwaeaborwa, H C Swart, "Luminescence, optical and surface studies of green emitting KCaBO3:Tb3+ nanophosphors", International Journal of Luminescence and Applications, 5 (2015) 47-50	LSI, India
63.	2015	M Manhas, Vinay Kumar, O M Ntwaeaborwa , H C Swart , "Synthesis and thermoluminescence studies of gamma ray induced Ca3B2O6:Bi3+ nanophosphor", International Journal of Luminescence and Applications, 5 (2015) 89-93	LSI, India
64.	2015	Vinay Kumar, AK Bedyal, OM Ntwaeaborwa, HC Swart Orange-Red Emitting Pr3+ Doped NaSrBO3 Nanophosphors: Luminescence and Optical Studies ,Materials Focus 4 (5), (2015) 362-365	American Scientific Publishers
65.	2015	Neharika, Vinay Kumar, O.M. Ntwaeaborwa H.C. Swart, "Thermoluminescence and kinetic parameters of ɣ-exposed Sr3B2O6 :Sm3+ nanophosphors", ", International Journal of Luminescence and Applications, 5 (2015) 15-20	LSI, India
66.	2015	Raj Kumar, Vinay Kumar, Vishal Sharma, Discrimination of various paper types using diffuse reflectance ultraviolet–visible near-infrared (UV-VIS-nIR) spectroscopy: forensic application to questioned documents", International Journal of Luminescence and Applications, 69 (2015) 714-720	LSI, India

67.	2015	Sandeep Kumar, Ram Prakash , Vinay Kumar, "A novel yellowish white Dy3+ activated α-Al2O3 phosphor: photoluminescence and optical studies", Functional Materials Letters, 8, (2015)1550061	World Scientific
68.	2015	Sandeep Kumar, Ram Prakash , Vinay Kumar , G M Bhalerao, R J Choudhary, D M Phase, "Surface and spectral studies of Eu3+ doped α-Al2O3 synthesized via solution combustion synthesis", Advanced Powder Technology, 26 (2015) 1263-1268	Elsevier, Netherland
69.	2015	B.B.S. Jaswal, J. Sharma, Vinay Kumar, Y. Khajuria, and V.K. Singh, and P.K. Rai, "Elemental and Molecular Analysis of Gallstones using Wave-Dispersive X-Ray Fluorescence and Fourier Transform Infra-red Spectroscopy", Advanced Science Letters, 21 (2015) 2613-2617	American Scientific Publishers
70.	2015	Ujval Gupta, Vivek K. Singh, Vinay Kumar, Yugal Khajuria, Acombined experimental and density functional theory computational studies on curcumin: A bio-active ingredient of rhizome turmeric, Material Focus, 4 (2015) 346-356	American Scientific Publishers
71.	2015	Vinay Kumar, A. K. Bedyal, O. M. Ntwaeaborwa, H. C. Swart, "Orange-Red Emitting Pr3+ Doped NaSrBO3 Nanophosphors: Luminescence and Optical Studies", Material Focus, 4 (2015) 362–365.	American Scientific Publishers
72.	2015	P.P. Mokoena, M.L. Chithambo, Vinay Kumar, H.C. Swart , O.M. Ntwaeaborwa,"Thermoluminescence of calcium phosphate co-doped with gadolinium and praseodymium", Radiation Measurements 77, (2015),26-33	Elsevier, Netherland
73.	2015	M. Manhas, Vinay Kumar, Visha Sharma, O.M. Ntwaeaborwa, H.C. Swart, "Effect of alkali metal ions (Li+, Na+ and K+) on the luminescence properties of CaMgB2O5: Sm3+ nanophosphor", Nano-Structures & Nano Objects, 3 (2015) 9-16	Elsevier, Netherland
74.	2015	Ujval Gupta , Vinay Kumar , Vivek K. Singh, Rajni Kant, Yugal Khajuria ,Spectroscopic studies and quantum chemical investigations of (3,4-dimethoxybenzylidene) propanedinitrile, Spectrochimica Acta Part A: Mole. Bimol. Spectro scopy, 140 (2015) 65-73	Elsevier, Netherland
75.	2015	Brij Bir S. Jaswal, Vinay Kumar, H. C. Swart, Jitendra Sharma,Pradeep K. Rai · Vivek K. Singh,Multi-spectroscopic analysis of cholesterol gallstone using TOF-SIMS, FTIR and UV–Vis spectroscopy,Appl. Phys. B, 121 (2015) 49–56	Springer
76.	2015	Neharika, Vinay Kumar, J.Sharma, O.M. Ntwaeaborwa, H.C. Swart Surface and thermoluminescence study of Dy3+ doped Sr3B2O6 nanocrystalline phosphors, Advance Materials Letter, 6(5) (2015) 402-406	VBRI
77.	2015	A.K. Bedyal , Vinay Kumar, Vivek K. Singh , Fouran Singh, S.P. Lochab , O.M. Ntwaeaborwa, H.C. Swart, "The influence of Ag9+ ion irradiation on the structural, optical and luminescence properties of Sm3+ doped NaSrBO3: Stability of color emission", Nuclear Instruments and Methods in Physics Research B, 531 (2015) 27- 34	Elsevier, Netherland

78.	2014	Vinay Kumar, AK Bedyal, J Sharma, V Kumar, OM Ntwaeaborwa, HC Swart, "Spectral and surface investigations of Ca2V2O7:Eu3+ nanophosphors prepared by citrate-gel combustion method: a potential red-emitting phosphor for near UV light-emitting diodes", Applied Physics A, 116 (2014) 1785–1792	Springer
79.	2014	P Mokoena, Mukut Gohain, Vinay Kumar, B Bezuidenhoudt, Hendrik Swart, O Ntwaeaborwa, "TOF SIMS analysis and enhanced UVB photolumin escence by energy transfer from Pr3+ to Gd3+ in Ca3(PO4)2:Gd3+, Pr3+ phosphor prepared by urea assisted combustion", Journal of Alloys and Compounds , 595 (2014) 33–38	Elsevier, Netherland
80.	2014	Palvi Gupta, A.K. Bedyal, Vinay Kumar, Y. Khajuria, Vinod Kumar, E. Coetsee-Hugo, O.M. Ntwaeaborwa, H.C. Swart, Spectral and surface investigations on Eu3+ doped K3Y(PO4)2 nanophosphor: A promising orange–red phosphor for white light-emitting diodes, Optical Materials 36(5) (2014) 996-1001	Elsevier, Netherland
81.	2014	U. Gupta, V.K. Singh, Vinay Kumar, and Y. Khajuria, "Spectroscopic studies of cholesterol: Fourier transform infrared and vibrational frequency analysis," Materials Focus, 3 (2014) 211-217	American Scientific Publishers
82.	2014	P Gupta, AK Bedyal, Vinay Kumar, Y Khajuria , S P Lochab, SS Pitale, OM Ntwaeaborwa, H C Swart, "Photolum inescence and thermoluminescence properties of Tb3+ doped K3Gd(PO4)2 nanophosphor" , Materials Research Bulletin 60, (2014) 401-411.	Elsevier, Netherland
83.	2014	HC Swart, J J Terblans, OM Ntwaeaborwa, RE Kroon, E Coetsee, I. M. Nagpure, Vijay Kumar, Vinod Kumar, Vinay Kumar, "Applications of AES, XPS and TOF SIMS to phosphor materials", Surface and Interface Analysis, 46 (2014) 1105–1109.	John Wiley & Sons, Ltd
84.	2014	AK Bedyal, Vinay Kumar, OM Ntwaeaborwa, HC Swart, "A promising orange-red emitting nanocrystalline NaCaBO3: Sm3+ phosphor for solid state lightning" Materials Research Express, 1 (1) (2014) 015006	IOP, England
85.	2014	Vivek K. Singh, Vinay Kumar, Jitendra Sharma, Yugal Khajuria, and Kaushal Kumar, "Importance of Laser Induced Breakdown Spectroscopy for Biomedical Applications: A Comprehensive Review", Materials Focus, 3 (2014) 169–182	American Scientific Publishers
86.	2014	Mohit Manhas, Vinay Kumar, OM Ntwaeaborwa, HC Swart, "Synthesis and photoluminescence properties of Ca3B2O6:Tb3+ nanophosphors", AIP Conference Proceedings, 1591 (2014) 502-504	American Institute of Physics
87.	2014	Neharika, Vinay Kumar, OM Ntwaeaborwa, HC Swart, "Synthesis and photoluminescence study of Dy3+ doped Sr3B2O6 Nanophosphors" AIP Conference Proceedings, 1591 (2014) 558-560	American Institute of Physics

88.	2014	Vinod Kumar, S Som, Vijay Kumar, Vinay Kumar, OM Ntwaeaborwa, E Coetsee, HC Swart, " Tunable and white emission from ZnO:Tb3+ nanophosphors for solid state lighting applications", Chemical Engineering Journal, 255 (2014) 541–552	Elsevier, Netherland
89.	2014	V Sharma, A Das, Vinay Kumar, OM Ntwaeaborwa, HC Swart, "Potential of Sr4Al14O25: Eu2+, Dy3+ inorganic oxide-based nanophosphor in Latent fingermark detection", Journal of Material Science 49 (5), (2014) 2225-2234	Springer
90.	2014	PP Mokoena, IM Nagpure, Vinay Kumar, RE Kroon, EJ Olivier, JH Neethling, HC Swart, OM Ntwaeaborwa, "Enhanced UVB emission and analysis of chemical states of Ca5(PO4)3OH:Gd3+, Pr3+ phosphor prepared by co-precipitation", Journal of Physics and Chemistry of Solids, 75 (2014) 998–1003	Elsevier, Netherland
91.	2014	AK Bedyal, Vinay Kumar, V Sharma, Fouran Singh, SP Lochab, OM Ntwaeaborwa, HC Swart, "Swift heavy ion induced structural, optical and luminescence modification in NaSrBO3:Dy3+ phosphor", Journal of Material Science, 49, (2014) 6404–6412	Springer
92.	2014	P Mokoena, Mukut Gohain, Vinay Kumar, B Bezuidenhoudt, Hendrik Swart, O Ntwaeaborwa, "TOF SIMS analysis and enhanced UVB photoluminescence by energy transfer from Pr3+ to Gd3+ in Ca3(PO4)2:Gd3+, Pr3+ phosphor prepared by urea assisted combustion", Journal of Alloys and Compounds, 595 (2014) 33–38	Elsevier, Netherland
93.	2014	Palvi Gupta, A K Bedyal, Vinay Kumar, Y Khajuria, S PLochab, S S Pitale, O M Ntwaeaborwa, H C Swart, "Photoluminescence and thermoluminescence properties of Tb3+ doped K3Gd(PO4)2 nanophosphor", Materials Research Bulletin, 60, (2014) 401-411	Elsevier, Netherland
94.	2013	Vinay Kumar, AK Bedyal, SS Pitale, OM Ntwaeaborwa, HC Swart, "Synthesis, spectral and surface investigation of NaSrBO3: Sm3+ phosphor for full color down conversion in LEDs", Journal of Alloys and Compounds, 554 (2013) 214-220	Elsevier, Netherland
95.	2013	A Vij, S Gautam, Vinay Kumar, R Brajpuriya, R Kumar, N Singh, KH Chae, "X-ray absorption spectroscopy and photoluminescence study of rare earth ions doped strontium sulphide phosphors", Applied Surface Science, 264, (2013) 237-241	Elsevier, Netherland
96.	2013	A K Bedyal, Vinay Kumar, Vishal Sharma, S S Pitale, E Coetsee, M M Duvenhage, O M Ntwaeaborwa, H C Swart, "Spectral and surface investigations of Mn2+ doped SrZnO2 nanocrystalline phosphors", Journal of Materials Science, 48 (9), (2013) 3327	Springer
97.	2013	Vinay Kumar, AK Bedyal, HC Swart, OM Ntwaeaborwa, "Spectral and surface investigations on SrZnO2: Tb3+ nanophosphors", Journal of Integrated Science and Technology, 1 (1) (2013) 19-22	Indian Science

98.	2013	A K Bedyal, Vinay Kumar, V K Singh, S P Lochab, F Singh, OM Ntwaeaborwa, "Thermo-luminescence kinetic parameters of γ-irradiated Sr4Al14O25: Eu2+, Dy3+ phosphors", Radiation Effects & Defects in Solids, 168 (2013) 1022-1029	Taylor and Francis
99.	2013	V K Singh, BBS Jaswal, Vinay Kumar, R Prakash, P Rai, "Application of He-Ne Laser to Study of the Variation of Refra ctive Index of Liquid Solutions with the Concentration", Journal of Integrated Science and Technology,1 (1), (2013) 13-18	Indian Science
100.	2013	A K Bedyal, Vinay Kumar, V Sharma, OM Ntwaeaborwa, HC Swart, "Luminescence and surface properties of Tb3+ doped Sr3(VO4) 2 nanophosphors", Journal of Integrated Science and Technology, 1 (1), (2013) 5-8	Indian Science
101.	2013	A K Bedyal, Vinay Kumar, S P Lochab, F Singh, O M Ntwaeaborwa, H C Swart, "Thermoluminescence Response of Gamma Irradiated SrAl2O4: Eu2+/Dy3+ Nanophosphor", International Journal of Modern Physics, 22 (2013) 365-373	Wiley science
102.	2011	I M Nagpure, S J Dhoble, Manoj Mohapatra, Vinay Kumar, Shreyas S Pitale, O M Ntwaeaborwa, S V Godbole, H C Swart, "Dependence of Eu3+ luminescence dynamics on the structure of the combustion synthesized Sr5(PO4)3 F host", Journal of Alloys and Compounds, 509 (5), (2011), 2544-2551	Elsevier, Netherland
103.	2011	S S Pitale, Vinay Kumar, I M Nagpure, O M Ntwaeaborwa, E Coetsee, H C Swart, "Cathodoluminescent properties and surface characterization of bluish-white LiAl5O8: Tb phosphor", Journal of Applied Physics, 109 (1), (2011) 013105/1-8	American Institute of Physics
104.	2011	S S Pitale, Vinay Kumar, I M Nagpure, O M Ntwaeaborwa, H C Swart, "Luminescence characterization and electron beam induced chemical changes on the surface of ZnAl2O4: Mn nanocrystalline phosphor" , Applied Surface Science, 257 (8), (2011) 3298-3306	Elsevier, Netherland
105.	2011	S S Pitale, I M Nagpure, Vinay Kumar, O M Ntwaeaborwa, J J Terblans, H C Swart, "Investigations on the low voltage cathodoluminescence stability and surface chemical behaviour using Auger and X-ray photoelectron spectroscopy on LiSrBO3: Sm3+ phosphor", Materials Research Bulletin, 46 (7), (2011) 987-994	Elsevier, Netherland
106.	2011	S S Pitale, Vinay Kumar, I Nagpure, O M Ntwaeaborwa, H C Swart, "Luminescence investigations on LiAl5O8: Tb 3+ nanocrystalline phosphors", Current Applied Physics, 11 (3), (2011) 341-345	Elsevier, Netherland
107.	2011	I M Nagpure, Shreyas S Pitale, K G Tshabalala, Vinay Kumar, O M Ntwaeaborwa, J J Terblans, H C Swart, "Luminescence response and CL degradation of combustion synthesized spherical SiO2: Ce nanophosphor", Materials Research Bulletin, 46 (12), (2011) 2359-2366	Elsevier, Netherland

108.	2010	Vinay Kumar, Shreyas S Pitale, I Nagpure, JJ Terblans, OM Ntwaeaborwa and HC Swart, A surface chemical behaviour investigation of a promising low voltage cathodoluminescent LiSrBO3:Sm3+ phosphor, Luminescence: Wiley science 25,(2010), 218–287	Wiley science
109.	2010	Shreyas S.Pitale, Vinay Kumar, I. M. Nagpure, O.M.Ntwaeaborwa, H.C.Swart,Luminescence character ization and electron beam induced chemical changes on the surface of ZnAl2O4:Mn nanocrystalline phosphor, Appl. Surf. Sci. 257 (8) (2010), 3298-3306.	Elsevier, Netherland
110.	2010	Vinay Kumar, Varun Mishra S.S. Pitale, M. M. Biggs, I.M. Nagpure, M.M. Biggs, O.M. Ntwaeaborwa, H.C. Swart, Surface chemical reactions during electron beam irradiation of nanocrystalline CaS: Ce3+ phosphor, J.Appl. Physics, 107, (2010) 123533.	American Institute of Physics
111.	2010	Vinay Kumar, S.S. Pitale, M. M. Biggs, I.M. Nagpure, M.M. Biggs, O.M. Ntwaeaborwa, H.C. Swart, Synthesis of Ce3+ doped SrS nanocrystalline phosphors using a simple aqueous method, Materials Letters, 64 (2010), 752-754.	Elsevier, Netherland
112.	2010	Vinay Kumar, Varun Mishra, M M Biggs, I M Nagpure, O M Ntwaeaborwa, J J Terblans and H C Swart, Electron beam induced green luminescence and degradation study of CaS:Ce nanocry- stalline phosphors for FED Applications , Appl. Surf. Sci.,256 (2010), 1720-1724.	Elsevier, Netherland
113.	2010	H.C. Swart, J.J. Terblans, E. Coetsee, Vinay Kumar, O.M. Ntwaeaborwa and M.M. Biggs, Auger electron spectroscopy and X-ray photoelectron spectroscopy study of the electron-stimulated surface chemical reaction mechanism for phosphor degradation ,Surface and Interface Analysis, Wiley Science, 42, (2010) 922-926.	Wiley science
114.	2010	O. M. Ntwaeaborwa, P. D. Nsimama, Shreyas Pitale, I. M. Nagpure, Vinay Kumar, Photoluminescence properties of SrAl2O4: Eu2+, Dy3+ thin phosphor films grown by pulsed laser deposition , J. Vac. Sci. Technol. A 28(4), (2010) 901-905.	American Vacuum Society
115.	2010	I.M. Nagpure, K.N. Shinde, Vinay Kumar, O.M. Ntwaeaborwa, S.J. Dhoble, H.C. Swart , Combustion synthesis and luminescence investigation of Na3Al2 (PO4)3: RE (RE= Ce3+, Eu3+ and Mn2+) phosphor J. Alloys Comp. 492 , (2010), 384-388.	Elsevier, Netherland
116.	2010	Vinay Kumar, S.S. Pitale, V. Mishra, I.M. Nagpure, M.M. Biggs, O.M. Ntwaeaborwa, H.C. Swart, Luminescence investigations of Ce3+ doped CaS nanophosphors, J. Alloys Comp. 492 (2010), L8-L12.	Elsevier, Netherland
117.	2009	O.M. Ntwaeaborwa, R.E.Kroon, Vinay Kumar, T. Dubroca, J.-P. Ahn, J.-K. Park, H.C. Swart, Ex situ synthesis and optical properties of ZnO–PbS nano composites, J. Phy. Chem. Sol.70(11), 2009, 1438-1442.	Elsevier, Netherland

118.	2009	Amrita saxena, D N S Srivastwa, Suruchi Sharma, Seema Thakur , Vinay Kumar, O. M. Ntwaeaborwa and H. C. Swart, Peculiar feature of KCl+ SbCl3 phosphors: PL and XRD studies, J. Mod. Optics. 56 (17), (2009),1880-1884.	Taylor and Francis
119.	2009	Vinay Kumar, H.C. Swart, O.M. Ntwaeaborwa, Ravi Kumar, S.P. Lochab, Varun Mishra, Nafa Singh, Thermoluminescence response of CaS: Bi 3+ nanophosphor exposed to 200MeV Ag+15 ion beam, Optical Material, 32(1), (2009), 164-168.	Elsevier, Netherland
120.	2007	Vinay Kumar, Ravi Kumar and S. P. Lochab, Nafa Singh, Swift heavy ion induced structural modification and photo-luminescence in CaS: Bi nanophosphors , J. Nanoparticle Research vol. 9 (4) (2007), 661-667.	Springer
121.	2007	Vinay Kumar, Ravi Kumar and S. P. Lochab, Nafa Singh, Effect of swift heavy ion irradiation on nanocrystalline CaS: Bi phosphors: Structural, optical and luminescence studies, Nucl, Instr. and Methd: B, 262 (2007), 194-200.	Elsevier, Netherland
122.	2006	Vinay Kumar, R. Kumar, SP Lochab, N Singh, Thermolumine-scence studies of CaS: Bi nanocrystalline phosphors, Journal of Physics D: Applied Physics, 39 (24), 2006, 5137	Elsevier, Netherland
123.	2006	Vinay Kumar, N Singh, R Kumar, SP Lochab Synthesis and characterization of bismuth doped calcium sulfide nanocrystallites , Journal of Physics: Condensed Matter 18 (22), 2006, 5029	IOP, England
124.	2006	Vinay Kumar, R Kumar, SP Lochab, N Singh Thermo luminescence and dosimetric properties of bismuth doped CaS nanocrystalline phosphor , Radiation Effects & Defects in Solids 161 (8), 2006, 479-485	Taylor and Francis

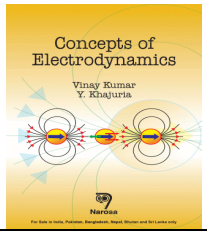
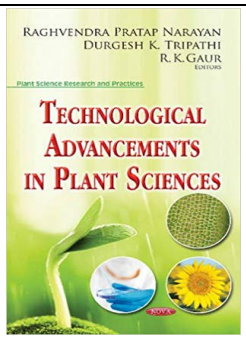
b) Conference paper presented

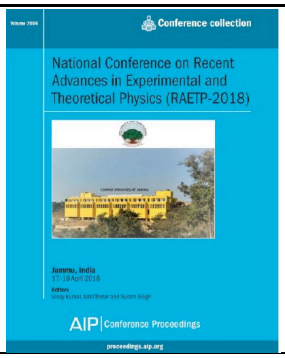
S. No.	Details of Paper Presented In Conferences /Symposium/Workshop
1)	Vinay Kumar, Nafa Singh, Ravi Kumar and SP Lochab, Luminescence and Characterization of bismuth doped calcium sulfide nano-particles, National conference on Advanced Characterization Techniques On Nano-material (ACTON-2005), held at I.I.T. Roorkee, Aug 24-26,2005.
2)	Nafa Singh, Vinay Kumar, Photoluminescence of calcium sulfide nano phosphors doped with bismuth, Proceedings of 50th DAE-Solid State Physics Symposium-2005. vol 50 (2005),p 203.
3)	Vinay Kumar, Ravi Kumar SP lochab and Nafa Singh, Analysis of TL glow curves of bismuth doped CaS nanophosphors exposed to UV- and γ- radiation, National Conference on Recent Advances in Material Science (RAMS-06) held during Sep 27-29, 2006 at Department of Physics Kurukshetra University, Kurukshetra
4)	Vinay Kumar, Ravi Kumar SP lochab and Nafa Singh, Structural modifications by 100MeV O+7 ion irradiation in CaS:Bi nanophosphors, National Conference on Recent Advances in Material Science (RAMS-06) held during Sep 27-29, 2006 at Department of Physics Kurukshetra University, Kurukshetra.
5)	Vinay Kumar, Ravi Kumar, SP lochab and Nafa Singh, Luminescence in swift heavy ion irradiated CaS:Bi nanophosphors, Proceedings of 51 DAE-Solid State Physics Symposium-2006. vol 51 (2006), p 257.

6)	Vinay Kumar, Ravi Kumar, SP lochab and Nafa Singh, swift heavy ion in CaS:Bi nanophosphors: a thermoluminescence study, National conference on Accelerator and low level Radiation Safety, held at Inter-University Accelerator Centre, New Delhi during April 26-27, 2007.
7)	Vinay Kumar, Ravi Kumar, SP lochab and Nafa Singh, UV and PL Study of swift heavy ion irradiated CaS:Bi nanophosphors, proceedings of 52nd DAE-Solid State Physics Symposium-2007 vol 52 (2007), p 397.
8)	Natasha Arora, Vinay Kumar, Swift heavy ion induced modification in alkaline earth sulfide, National Conference on Materials Science, DAV college, Jalandhar during Feb 16-19, 2009
9)	Vinay Kumar, Varun Mishra, H.C. Swart, O. M. Ntwaeaborwa, Preparation and Luminescence of CaS:Ce3+ nanophosphors, South African Institute of Physics (SAIOP), conference held during July 6-10, 2009 at University of Kwazulu Natal, Durban, South Africa.
10)	Vinay Kumar, S Pitale, O M Ntwaeaborwa, H C Swart Luminescence and Electron beam induced degradation in Alkaline earth sulfide based nanophosphors, International Conference on Nanomaterials, held at M. G.University, Kottayaam, Kerala during April 27-29, 2010
11)	S Pitale, Vinay Kumar, O M Ntwaeaborwa, H C Swart Surface chemical reactions on alkali aluminate nanophosphors, International Conference on Nanomaterials, held at M. G.University, Kottayaam, Kerala, India during April 27-29, 2010
12)	Vinay Kumar, Vishal Sharma, "Combustion synthesis of long after glow SrAl2O4:Eu,Dy nanophosphors" in Professor Ram Chand Paul International Conference held on 11-12 February, 2011 at Department of Chemistry, Panjab University, Chandigarh.
13)	Vinay Kumar, Vishal Sharma, "Combustion synthesis of long after glow nanophosphors and their potential application in Latent Fingerprint detection" in International Conference on Advanced and Nano Materials held on 22-26, February, 2011 at Department of Physics , Panjab University, Chandigarh.
14)	Vinay Kumar, Vishal Sharma "Synthesis & Characterization of nano Phosphor for Forensic Application in Fingerprint detection" in 5th Chandigarh Science Congress (CHASCON 2011) focal theme "Building gateways to sustainable green communities" in the section of "Environment, Public health & Forensic Science" on 26-28 February, 2011 at Panjab University Chandigarh.
15)	A K Bedyal, , S P Lochab, F Singh, O M Ntwaeaborwa, H C Swart, "Thermoluminescence response of gamma irradiated SrAl2O4:Eu2+/Dy3+ nanophosphor" in International Conferences on Ceramics held on 12, 13 Dec, 2012 at Govt. Engineering College Bikaner.
16)	Vishal Sharma, A. Das, Vinay Kumar, "Combustion synthesis and characterization of SrAl2O4:Eu, nanophosphors : its applications in detection of latent fingerprint" in international Conference on Nanotechnology in the Service of Health, Environment and Society (NanoSciTech 2014) during Feb 13-15, 2014 at Panjab University Chandigarh.
17)	Pankaj Biswas, Vinay Kumar, O. M. Ntwaeaborwa and H. C. Swart, A Novel Orange-red Emitting NaCaVO4:Sm3+ Phosphor For Solid State Lighting, in International Conferences on Ceramics held on Oct 30-31, 2015 at Govt. Engineering College Bikaner.
18)	M. Manhas, Vinay Kumar, O. M. Ntwaeaborwa and H.C. Swart, Thermoluminescence and kinetic parameters investigation of CaMgB2O5:Dy3+ nanophosphor, in International Conferences on Ceramics held on Oct 30-31, 2015 at Govt. Engineering College Bikaner.

19)	A. K. Bedyal, Vinay Kumar, and H. C. Swart AIP Conference Proceedings, Volume 2006, (2018) 020001, Thermoluminescence response and kinetic parameters of UV irradiated K3La(PO4)2:Pr3+ phosphor.
20)	Rubby Mahajan, Sandeep Kumar, Ram Prakash, and Vinay Kumar Synthesis and luminescent properties of Sm3+ activated lithium zinc borate phosphor, AIP Conference Proceedings, Volume 2006, (2018) 030045.
21)	Spectroscopic analysis of rhizomes of black turmeric (Curcuma caesia) Neha Sharma, Yugal Khajuria, Jitendra Sharma, Mohammad A. Gondal, Vinay Kumar, Y. Dwivedi, and Vivek K. Singh, AIP Conference Proceedings, Volume 2006,(2018) 030036.

c) Books

Title	Name of the Publisher	Year
Concept of Electrodynamics 	Narosa Publishers, New Delhi ISBN: 978-81-8487	2015
Combustion Synthesis and Characterization of Inorganic nano-Crystalline SrAl2O4:Eu3+: Its Application in Detection of Latent Fingerprints , pages 212-218	Nanotechnology: novel perspectives and prospects, Edition: I, Publisher: Tata-McGraw Hill ISBN. (10): 9339221095	2015
Photo luminescent Characteristics of Terbium Doped CaMgB2O5 Green Nanophosphor pages 570-575	Nanotechnology: novel perspectives and prospects, Edition: I, Publisher: Tata-McGraw Hill ISBN. (10): 9339221095	2015
 Chapter 3: Recent Developments and Applications of Novel Analytical Techniques for the Analysis of Plant Materials	Chapter contributed in Technological Advancements in Plant Sciences Nova Publisher, New York ISBN: 978-1-53610-004-4	2017

	**National Conference on Recent Advances in Experimental and Theoretical Physics (RAETP 2018)** **Edited by: Vinay Kumar, Amit Tomar, and Suram Singh** ISBN: **9780735417229**	**2018**

Conference / Workshops/Training Organized:

Name of the Event	Year
National Conference on Recent Advances in Material Sciences (RAMS 2016)	Feb 2016
National Conference on Recent Advances in Experimental and Theoretical Physics (RAETP 2018)	April, 2018
National Workshop on "Imagining the future of the Space Science and its strategic importance (IFSSAISI-2018)"	Oct, 2018
National Science Day 2018	Feb 2018
National Science Day 2019	Feb 2019
National Science Day 2020	Feb 2020
International Conference "Frontiers of Space Technology and Applications for Humanity" in collaboration with Indian Institute of Space Science and Technology, Thiruvananthapuram, during March 12-13, 2022	Mar 2022

Creation of ICT Mediated Teaching Learning Pedagogy and Content:

S. No.	E-content	Program
1.	Textbook Companion and Scilab codes, "Textbook Companion Project" section at the website http://scilab.com Author: P. K. Palanisamy, Title of the Sciences Book: Solid State Physics, Contributor Name: Ankush Kumar Bedyal, Solid State Physics, Physics, Shri Mata Vaishno Devi University, Teacher: Dr. Vinay Kumar	National Mission on Education through ICT, IIT Mumbai,
2.	Textbook Companion and Scilab codes, from the "Textbook Companion Project" section at the website http://scilab.com Author: G. Aruldhas, Title of the Book: Engineering Physics, Publisher: Phi Learning Pvt. Ltd. Year: 2010 Contributor Name: Pankaj Biswas, Modern Physics, Physics, Shri Mata Vaishno Devi University University Teacher: Dr. Vinay Kumar	National Mission on Education through ICT, IIT Mumbai,

Conference/Workshops/Training attended as Faculty Member:

S. No.	Programme	Duration	Organized by
1.	Staff Development Program	2 weeks/	AICTE & SMVDU

		Dec 16-29, 2011	
2	Science Academies' Two week 52nd Refresher Course on Experimental Physics	October 8-24, 2013	IISc, INSA and NASI with School of Physics, SMVD University
3	General Orientation Course	Dec 27, 2013 to Jan 24, 2014	ASC, University of Jammu
4.	Two-Week ISTE STTP workshop on Environmental Studies	June 2 -12, 2015	ISTE & Shri Mata Vaishno Devi University

Invited Lectures/Resource Persons:

S. No.	Title of Lecture/ Academic Session	Title of Conference/ Seminar etc. with dates	International/ National level
1.	Introduction to thermoluminescence and its applications	Lecture organized by Physics Association of Sanatam Dharma college Ambala Cant on May 14, 2022	National
2.	Advances of inorganic oxide-based nanophosphor for forensic and solid state lighting	AICTE sponsored one week Faculty Training Program on Recent Trends in Physics of Engineering Materials organized by Department of Physics, Deenbandhu Chhotu Ram University of Science & Technology, Murthal, Haryana from 7th to 12th June 2021.	National
3.	Recent developments in phosphors for Solid State lighting Applications	Regional e-Symposium on Physics 2020 conducted by Department of Physics, Indian Institute of Technology Jammu from 9th – 11th June, 2020	National
4.	Recent advancement in solid state lighting and Display	National Conference on Applied Physics, Nov 9-11, 2017 organized at Govt. College Kathua, J&K	National
5.	Future of solid state lighting and display	National conference on Recent trends in Materials Science, Feb 7-9, 2018, SMVDU, Katra J&K	National
6.	Luminescence and Electron beam induced degradation in Alkaline earth sulfide based nano-phosphors	International Conference on Nanomaterials, April 27-29, 2010 at M. G. University, Kottayaam	International
7.	Captivating features of alkaline earth based nanophosphors	National Symposium on inter disciplinary Sc. March 2-3, 2013 at GGMC, Jammu	National
8.	Analytical techniques for nanosurface characterization	National Workshop on Nanoscience and nanotechnology (NST-2013) June 3-7, 2013 at Centre of MS E, NIT Hamirpur	National
9.	Introduction to Nanoscience and technology	National Workshop on Nanoscience and nanotechnology (NST-2013) June 3-7, 2013 at Centre of MS E, NIT Hamirpur	National
10.	Regulated Power Supply	Science Academies' 66th Two week Refresher Course on Experimental Physics Dec 10-25, 2014 at School of Physics, SMVD University	National

11.	AC circuits	Science Academies' 66th Two week Refresher Course on Experimental Physics Dec 10-25, 2014 at School of Physics, SMVD University	National
12.	Thermal and Electrical conductivity of Copper	Science Academies' 66th Two week Refresher Course on Experimental Physics Dec 10-25, 2014 at School of Physics, SMVD University	National
13.	Bridge circuits	Science Academies' 66th Two week Refresher Course on Experimental Physics, Dec 10-25, 2014 at School of Physics, SMVD University	National
14.	Series and parallel resonance circuits	Science Academies' 66th Two week Refresher Course on Experimental Physics Dec 10-25, 2014 at School of Physics, SMVD University	National
15.	Nano Biomimicary-introduction to nanoscience	Science Academies' 66th Two weeks Refresher Course on Experimental Physics Dec 10-25, 2014 at School of Physics, SMVD University	National
16.	Development of 19nanomaterials for solid state lighting (Two lecture)	Faculty Development Programme (FDP) on "NANO SCIENCE AND TECHNOLOGY 13th – 17th April, 2015 Beant College of Engineering & Technology, (TEQUIP) – II and PITTTR), Gurdaspur	National
17.	Recent development of nanophosphors in Solid State Lighting and displays	National Conference on Microscopy & Advances in Material Sciences" (NCM AMS – 2015) from March 3-5, 2015 at Department of Physics and Electronics, University of Jammu	National

Research Projects (Major Grants/Research Collaboration): Ongoing and Completed

S. No.	Title of the Project	FUNDING AGENCY	Amount (in Lakhs)
1.	High Temperature Thermal Sensing using Nanophosphors – PI, Dr. Vinay Kumar (2020-2023)	DRDO, Ministry of Defence, Govt. of India	108.13
2.	Fabrication of TiO2 decorated ZnO Nanorods /Conducting Polymer heterojunctions for Flexible Photovoltaic applications– PI, Dr. Vinay Kumar (2020-2023)	DRDO, Ministry of Defence, Govt. of India	53.41
3.	Synthesis and characterization of mixed Borate/phosphate nanophosphors for Solid State Lighting, PI, Dr. Vinay Kumar (2017-2020)	EMR, SERB, Govt. of India	18. 25
4.	Effect of swift heavy ion irradiations on alkali-alkaline earth based oxide: luminescence and related studies, PI, Dr. Vinay Kumar (2011-2014)	IUAC an autonomous centre of UGC, India	6.75

5.	Development of Nanophosphors: Luminescence and related studies, PI, Dr. Vinay Kumar (2012-2015)	DST, Govt. of India	27.60
6.	Alkaline earth based nanophosphors: synthesis, characterization and their luminescence studies, PI, Dr. Vinay Kumar (2012-2015)	BRNS, Department of Atomic Energy (DAE) Govt of India.	20.44

Awards and Distinctions:

Awards:

Name of the Award	Agency/ Institute	Year
C2 Rating Young Scientist Award	National Research Foundation, South Africa	2018
Young Scientist Award	NCPEM, DBCRUST, Sonipat University	2013
Young Scientist Award (under FTP scheme)	DST, Govt. Of India	2011
DSK PDF	UGC, India	2010
PDF	University of Free State, South Africa	2009
SRF	CSIR, India	2007

Distinctions:

Visiting research fellow(VRF)	Awarded with (VRF) by University of Free State, South Africa from 1st Jan 2015 to 31st Dec 2020
Member , Research Assessment Committee	National Research Foundation (NRF) South Africa, Member No.- ER105978.
Section Editor	Elected as an Editorial Member (Nanotechnology section), Journal of Nuclear Physics, Material Science, Radiation and applications, ISSN 2321–8649 (UGC Listed Journal)
Section Editor, (Nanotechnology Section)	Journal of Integrated Science and Technology (An international journal), ISSN 2321–4635

Association with Professional Bodies:

Member	Indian Association of Physics Teachers, Membership No-9367 L 1108.
Life Member	Indian Society of Particle Accelerator, Membership No-215
Life Member	Luminescence Society of India, Membership No-509

Other Activities:

Reviewer of various international Journals as follow:

- Journal of Alloys and Compound(Elsevier)
- Sensors and Actuators: B(Elsevier),
- Optical Materials, (Elsevier)
- Journal of Electrochemical society,
- Bulletin of Material Science, (Elsevier)
- Journal of Material Science(springer)
- Material Research Bulletin (Elsevier)
- Journal of Applied Physics (AIP)
- Journal of Crystal Growth(Elsevier)
- Journal of Luminescence (Elsevier)
- Material Science and Engg B (Elsevier)
- Current Applied Physics (Elsevier)
- Physica B: Physics of Condensed Matter (Elsevier)

- **Material Chemistry and Physics (Elsevier)**

[Dr. Vinay Kumar]