Name : Dr. Anchal Srivastava

Designation : Professor
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1. **Educational Qualification (Degree and onwards)**:

Degree	Year	Division	Name of the University	Subject
B.Sc.	1985	I	University of Lucknow	Physics, Chemistry, Mathematics
B.Sc.(Hons.)	1986	I	University of Lucknow	Physics
M.Sc.(Spl.)	1987	I	University of Lucknow	Physics
Ph.D.	1992	-----	University of Lucknow	Physics
PGDCA	1998	I	University of Lucknow	
Proficiency	1990	I	University of Lucknow	Russian language

Awards/Honours Details
ISCAS -2015 Gold Medal

Professional Experience and Training Relevant to the Project

TEACHING • Thin Films, Materials and devices (post graduate classes) • Solid State Physics (post graduate classes) • Solid State Physics, Laboratory (post graduate classes) • (post graduate classes) • Thin Films, Thin/Thick film post graduate Laboratory, • Optoelectronics post graduate Laboratory, • General Physics post graduate Laboratory •	32 years 32 years
RESEARCH : • Material Science and nanomaterials, thin/thick film sensors • ZnO based nanocrystalline films using Physical deposition methods and wet chemical methods	32 years

• Guided 5 students fot their PhD degree relating metal oxide with special reference to ZnO • Free electron Lasers-theory and simulation, • Optoelectronics Sensors-experimental and computer programming,	
PROGRAMME IMPLEMENTATION • Established M.Sc. (Electronics) SemesterIV thin/thick film Materials Science laboratory	
PATENTS • Developed 'Petrol adulteration measurement sensor' under DST Project • Developed 'Refractometer sensor' under DST Project	TWO
ADMINISTRATIVE • Asst. Coordinator M.Sc. (Electronics) • Provost, Tilak Girls Hostel, University of Lucknow	7years 7years

Research support to the investigator from various funding agencies: Eight Research Projects

S.no.	**Title of the project**	**Name of funding agencies**	**Sanction Letter No.**	**Amount (in Lakhs)**	**Completed/Ongoing**
1.	Band Gap Engineering of Nanocrystalline Zinc Oxide using Group II Metal and Al Dopants	Council of Science & Technology, UP (UPCST)	CST/D-1129	Rs.6.99.	Completed as PI
2.	Synthesis of Divalent/ lanthanide doped Zinc Oxide Nanophosphor Material	Department of Science & Technology, New Delhi (DST)	F.No.SR/S2/CMP-0028/2010	Rs.25.00	Completed as PI
3.	Thermal Optical and Luminescence Studies on Nanostructured SeTe Chalcogenides with Metal Additives	University Grants Commission, New Delhi (U.G.C.)	F-42-773/2013(SR)	Rs.11.54	Completed as PI
4.	Design Fabrication and standardisation of a high precision fiber optical sensor for instant determination of adulteration in petrol	Department of Science & Technology, New Delhi (DST)	DST/JTP/GL5(7)/97 19.3.2002	Rs.5.63	Completed as co-PI
5.	Engineered prototype of compact user friendly petrol adulteration	Department of Science & Technology,	DST/JTP/GL3(6)/03 5.3.2004	Rs.19.71	Completed as co-PI

	measuring system	New Delhi (DST)			
6.	Synthesis and characterisation of conducting organic polymer films for application as ammonia gas sensor	Department of Science & Technology, New Delhi (DST)	SR/S2/CMP-04/2009	Rs.10.63	Completed as co-PI
7.	Study of morphology, electrical, optical and gas sensing properties of pure and doped metal oxide films	University Grants Commission, New Delhi (U.G.C.)	F-10-14/2004(SR) 5.1.2004	Rs.3.45	Completed as co-PI
8.	Fabrication of nanocrystalline semiconducting oxide pellets and films and study of their sensitivity to humidity and their application in humidity sensor	University Grants Commission, New Delhi (U.G.C.)	F-33-25/2007(SR) 28.2.2008	Rs.8.49	Completed as co-PI

Patents: **Two**

S.No.	Title
1.	"A REFRACTOMETER SENSOR" Patent No. 232779 Patent Application No.: 968/DEL/1999 Date of Filing : 13/07/1999 Date of Grant:21/03/2009 Patent granted through National Research Development Corporation (A Govt. of India Enterprise), Anusandhan Vikas 20-22, Zamrudpur, Community Center, Kailash colony Ext., New Delhi-110048.
2.	"AN OPTO-ELECTRONIC REFRACTOMETER FOR MEASURING THE REFRACTIVE INDEX OF LIQUIDS" Patent No. 242376 Patent Application No.: 1100/DEL/2002 Date of Filing: 01/11/2002 Date of Grant: 24.08.2010 Patent granted through National Research Development Corporation (A Govt. of India Enterprise), Anusandhan Vikas 20-22, Zamrudpur, Community Center, Kailash colony Ext., New Delhi-110048

Publications

Research paper	Books
A. International 60	Four

B. National	09	

Selected peer-reviewed Publications

1. Enhancement in NBE emission and optical band gap by Al doping innanocrystalline ZnO thin films, Nishant Kumar, **Anchal Srivastava**; Opto-Electronics Review 26 (2018) 1–10.
2. Green photoluminescence and photoconductivity from screen-printed Mg doped ZnO films, Nishant Kumar, **A. Srivastava**, Journal of Alloys and Compounds 706, (2018) 438-446
3. Tuning NBE emission and optical band gap of nanocrystalline ZnO thin films using Fe dopant; Nishant Kumar, **A. Srivastava;**Materials Today: Proceedings (2017) (Accepted)
4. Optical and CO2 sensing properties of Al doped ZnO nanocrystalline thin films prepared by spray pyrolysis; R. K. Shukla, **A. Srivastava**, Nishant Kumar, A. Pandey, M. Pandey ;Materials Today: Proceedings (2017)
5. Diminution in the optical band gap and near band edge emission of nickel doped zinc oxide thin films deposited by sol-gel method, V. Grace Masih, Nishant Kumar, **Anchal Srivastava**; Journal of Applied Spectroscopy 84(2017)1021
6. Nanoparticles as Biomarkers and Biosensors, **Anchal Srivastava,** R K Shukla, Nishant Kumar and Anu Katiyar, Current Trends in Biomedical Engineering & Biosciences, (2017) 9(3): 555762.
7. Faster photoresponse, enhanced photosensitivity and photoluminescence in nanocrystalline ZnO films suitably doped by Cd, Nishant Kumar, **A. Srivastava,** Journal of Alloys and Compounds 706, (2017) 438-446
8. Optical and sensing properties of Fe doped ZnO nanocrystalline thin films, R.K. Shukla, **A. Srivastava,** Nishant Kumar, A. Pandey, M. Pandey,Materials Science-Poland, 34(2), (2016)354-361
9. Optical and Sensing Properties of Cu Doped ZnO Nanocrystalline Thin Films, R. K. Shukla, **A. Srivastava**, Nishant Kumar, A. Pandey, and M Pandey,J. of Nanotechnology, 25, 172864, (2015) 1-10
10. , Enhanced visible emission from nanocrystalline Nd doped ZnO thin films, Nishant Kumar an**d A. Srivastava** VBRI Press, 1-2(2015) DOI: 10.5185/amwc.2015.
11. Band Gap Control and Photoluminescence Properties of $Ba(Co_{2x}Ti_{1-x})O_3$ Thin Films Prepared by Sol-gel Method, **Anchal Srivastava** and Kamakhya Prakash Misra; Appl. Phys.A117(2014) 917-926.
12. Enhancement of band gap of ZnO nanocrystalline films at a faster rate using Sr dopant, **A. Srivastava,** Nishant Kumar, K. P. Misra, S. Khare; Electron. Mater. Lett. ; 10 (2014) 703-711
13. "Blue-light luminescence enhancement and increased band gap from calcium-doped zinc oxide nanoparticle films, **A. Srivastava,** Nishant Kumar, K. P. Misra, S. Khare Mater. Sci. Semicond. Process. 26(2014)259–266
14. Enhancement in UV emission and band gap by Fe doping in ZnO thin films, **A. Srivastava**, Nishant Kumar, S. Khare; Opto−Electron. Rev. 22(2014) 68.
15. Blue Shift in NBE Emission in Mg Doped Nanocrystalline ZnO Thin Films, **A. Srivastava**, Nishant Kumar; Bull. Laser Spectrosc. Soc. India 20(2013)40-45.
16. Synthesis, spectroscopic and structural evaluation of ethyl 2-cyano-3-{5-[(4-nitro-benzoyl)-hydrazonomethyl]-1< i> H</i>-pyrrol-2-yl}-acrylate using experimental and theoretical approaches, RN Singh, A Kumar, P Rawat, **A Srivastsva**; Journal of Molecular Structure 1049, 419-428 (2013).

17. Blue shift in NBE Emission in Mg Doped Nanocrystalline ZnO Thin Films; **Anchal Srivastava** and Nishant Kumar, Bulletin of Laser and Spectroscopy Society of India, 20 (2012-2013)40-45; ISSN: 2229-3752.
16. Photoluminescence from Screen Printed ZnO Based Nanocrystalline Films; Anchal Srivastava, R. K. Shukla and Kamakhya Prakash Misra, Cryst. Res. Technol. 46, No. 9, 949 – 955 (2011).
17. Emission from Localized States in Co Doped BaTiO3 Films; Kamakhya Prakash Misra, R. K. Shukla and Anchal Srivastava; AIP Conf. Proc. 1349, 643-644 (2011); doi: 10.1063/1.3606022.
18. Polarization Characteristics Variation of Visible Light Reflected from ZnO Based Amorphous Films; Kamakhya Prakash Misra, Atul Srivastava, R. K. Shukla and **Anchal Srivastava**, Jpn. J. Appl. Phys. 49, 062602 (2010).
19. Humidity Response of Polyaniline Based Sensor; Mamta Pandey, Atul Srivastava, **Anchal Srivastava**, Rajesh Kumar Shukla: Sensors & Transducers Journal, Vol.113, Issue 2, Feb.2010, pp.33-40.
20. Heat Treatment of Nanocrystalline ZnO and AZO Films Grown by Pulsed Laser Deposition; K.C. Dubey, Dharmendra Mishra, **Anchal Srivastava** and R.K. Shukla: Sensors & Transducers Journal, Vol.113, Issue 2, Feb.2010, pp.150-157.
21. Blue-shift of Optical Band Gap in Nanocrystalline $Zn_{1-x}Ca_xO$ Films Deposited by Sol-gel Method; Kamakhya Prakash Misra, R. K. Shukla, Atul Srivastava, and **Anchal Srivastava**; Appl. Phys. Lett. 95, 031901 (2009).
22. Reduction in Carrier Concentration by Calcium Doping in ZnO Thin Films; Kamakhya Prakash Misra, K.C.Dubey, R.K.Shukla, and **Anchal Srivastava,** Proceedings of International Conference on Emerging Trends in Electronic and Photonic Devices and Systems (ELECTRO-2009),. ", IEEE Conf. Proc. 495 (2009); Print ISBN: 978-1-4244-4846-3
23. Growth And Characterization Of Nanocrystalline Zno Thin Films By Spray Pyrolysis: Effect Of Molarity Of Precursor Solution; Dharmendra Mishra, K.C. Dubey, R.K. Shukla, **Anchal Srivastava** And Atul Srivastava: Sensors & Transducers Journal, Vol.105, Issue 6, June.2009,pp.119-126.
24. Pulsed laser deposited Zinc Oxide films and their humidity sensing behavior , Shobhna Dixit, **Anchal Srivastava**, R. K. Shukla and Atul Srivastava Journal of Material Science: Material in Electronics Vol. 19 No. 8-9 (Sept 2008) 788-792
25. Bead Structured Nanocrystalline ZnO Thin Films: Synthesis And LPG Sensing Properties; Dharmendra Mishra, R.K.Shukla, **Anchal Srivastava**, Atul Srivastava: Applied Surface Science 255(2008) 2947-2950.