

FACULTY PROFILE PROFORMA

Title (Ms/Mr/Dr/Prof)	DR	FirstName	ARAVIND	LastName	KUMAR	Photograph
Designation	ASSISTANT PROFESSOR					
Department	PHYSICS					
Address (Official)	B-3 FF Kh No -784/3 GALAXY APARTMENT MANDIR WALAI GALI SANT NAGAR BURARI- 110084					
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Education

Subject	Institution	Year	Details
PHYSICS	C.C.S UNIVERSITY MEERUT	2010	Ph.D
PHYSICS	C.C.S UNIVERSITY MEERUT	2005	M.Phill
PHYSICS	C.C.S UNIVERSITY MEERUT	2002	M.Sc
PHYSICS,CHEMISTRY, MATH	C.C.S UNIVERSITY MEERUT	2000	B.Sc

CareerProfile

Organisation/Institution	Designation	Duration	Role
S.G.T.B KHALSA COLLEGE, DU	ASSISTANT PROFESSOR	9 MONTHS	AD-HOC
KALINDI COLLEGE, DU	ASSISTANT PROFESSOR	17 YEARS	PERMANENT

Research Interests/Specialization

My research work entitled “optical properties of Hydrogenated Amorphous silicon thin films deposited by plasma enhanced chemical deposition technique” is related with different optical structural and electrical studies of plasma glow discharge semiconductors thin films. The thin films of undoped a-Si:H and doped a-Si:H films, have prepared by plasma glow discharge deposition technique. In optical properties we have determine the optical band gap with the help of absorption spectra and refractive index and extinction coefficient by using the transmission spectra of undoped a-Si:H and both doped (n-type & p-type) a-Si:H semi conducting thin films. Photoluminescence study observed the recombination process in a-Si:H.. The FT-IR measurement were study the chemically bonding of SiH, SiH₂ and SiH₃ in a-Si:H, and RAMAN spectra study the phase transition in a-Si:H . XRD, SEM, and AFM show the structural properties in a-Si:H. In electrical properties we measured the dark conductivity, photo conductivity with inverse of temperature, and also show the effect of annealing on all properties of the a-Si:H thin films.

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Administrative Assignments / Contribution to corporate life

S.NO.	Name	Designation	Committee Name
1.	Dr. Aravind kumar	Convener	Institute of Bio-resources and sustainable development (IBSD) Center.
2.	Dr. Aravind kumar	Member	Dr B.R Ambedkar Study Center.
3	Dr. Aravind kumar	Co-Convenor	Central admission committee for B.Sc(H) Physics courses of college, 2025
4	Dr. Aravind kumar	Deputy Superintendent	Central examination committee of college for theory exams, 2024-25
5	Dr. Aravind Kumar	Member	Criteria 2
6	Dr. Aravind Kumar	Member	Tent and Shameyana

Teaching Experiences (Subject/Courses taught)

01 YEARS SGTB KHALSA COLLEGE DU IN 2008-2009
17 YEARS KALINDI COLLEGE DU 2009- CURRENT DATE

Research Guidance

NILL

Publication (Peer Reviewed/Indexed Journals)

Year of Publication	Title	Journal (Name of the journal. Vol Issue ISSN)	Co-Author
2006	Optical, Structural and electrical properties of zinc sulphide vacuum evaporated thin films	Indian Journal of Pure & Applied physics	Co Author
2007	Study of optical constants in CdxZn1-	Indian Journal of	Co Author

	xS vacuum evaporated thin films	Engineering & Material science	
2008	High pressure growth of nanocrystalline silicon films	Nano Science and Nanotechnology,	Co Author
2012	Study of Wavelength Dependence of Optical Constant for ZnSe Vacuum Evaporated Thin Films	International Journal of Latest Reserch in Science and Technology	Co Author
2013	Structural & Optical Characterization of $\text{Ge}_x\text{Se}_{80-x}\text{Pb}_{20}$ Thin Films Prepared by Thermal Evaporation Technique	International Journal of Soft Computing and Engineering(IJSCE)	Co Auother
2013	Effect of Post Deposition Annealing on Hydrogenated Amorphous Silicon Thin Films Grown at High Power by PECVD,	International Journal of Soft Computing and Engineering(IJSCE)	Auother
2015	Ellipsometric Analysis $\text{Cd}_x\text{Se}_{1-x}$ thin films prepared by a Thermal Evaporation Technique	International Journal of Engineering Research & Management Technology	Co Author
2016	Spectroscopic Study of Vacuum Evaporated Crystalline Cadmium Zinc Sulphide thin films	International Journal of Scientist & Engineering Reserch	Co Author
2019	Structural Optical and Raman Characterization of Nano- Crystalline Cu Doped Zn Thin films Deposited by Pulse Laser Deposition Technique	Global Journal of Science Frontier Research: A Physics and Space Science,	Co Author
2021	Structural, Thermal and electrical properties of composites electrolytes $(1-X) \text{C}_5\text{H}_2\text{PO}_4/x\text{ZrO}_2$ ($0 \leq x \leq 0.4$) for fuel cell with advanced electrode.	SN Applied Science A Springer Nature Journal,	Co Author
2021	Effect of Post Growth Annealing Process on optical properties of CdSe thin films on Si p-type Substrate Deposited by pulsed Laser Deposition Technique	<i>The International Journal of analytical experimental model analysis,</i>	Co Author
2021	The Influence of TiO_2 on the proton Conduction and Thermal Stability of CsH_2PO_4 Composite Electrolytes.	<i>South African Journal of Chemical Engineering</i>	Co Author
2023	Role of cerium pyrophosphate for improving protonic conduction and stabilization of $\text{SDP} \cdot 2\text{H}_2\text{O}$ composite electrolytes	Inorganic Chemistry Communications	Co Author
2025	Advanced Software Reliability Growth Modeling: Hybrid Metaheuristic Estimation under Stochastic Testing with Dependent and Time-Varying Failure Dynamics	International Journal for Multidisciplinary Research (IJFMR)	Co Author
2025	Annealing- Induced Changes in the Optical Properties of Hydrogenated Amorphous Silicon Thin Films Fabricated by High-Power PECVD	International Journal of Science and Research (IJSR)	Author
Seminar/Workshop/Conferences Presentation/Organisation			

1. "Electrical Properties of microcrystalline silicon films grown using PECVD" by Jhuma Gope, Aravind Kumar A. Prashar, Sushil Kumar, C.M.S. Rautahn and P.N.Dixit, 2nd national conference on condensed matter during 1-3 Feb, 2007 at Jaipur, India.
2. "Properties of high rate deposited amorphous silicon films using PECVD technique" Aravind Kumar, Sushil Kumar, P.N.Dixit and V.K.Rastogi 2nd national conference on condensed matter during 1-3 Feb, 2007 at Jaipur, India.
3. "Estimation of mobility of nano/micro crystalline silicon films using conductivity measurement" by Jhuma Gope, Aravind Kumar, P.N.Dixit and C.M.S. Rauthan, Material Research Society of India, Feb. 12-14, 2007, New Delhi.
4. "Diamond-like carbon coating with silicon prepared by plasma-assisted chemical vapour deposition technique" by Neha Goyal, Sushil Kumar, Aravind Kumar, C.M.S. Rauthan and P.N.Dixit, Material Research Society of India, Feb. 12-14, 2007, New Delhi.
5. "Effect of annealing on the properties of hydrogenated amorphous silicon thin films grown at high power by PECVD technique" by Aravind Kumar, Jhuma Gope, Sushil Kumar, P.N.Dixit and C.M.S. Rauthan, Material Research Society of India, Feb. 12-14, 2007, New Delhi.
6. "Vacuum Thermal Re-crystallization of a-Si:H Thin Films Deposited by PECVD Technique" by Aravind Kumar and P.N.Dixit, 96th Indian Science Congress, January 3-7, 2009, Shillong, Meghalaya.
7. Optical and Structural Properties of ZnSeTe Thin Films Deposited on glass & ITO Substrate, Pawan Kumar, Aravind Kumar, Pravinder Kumar, Kapil Malik, Proceeding of National Conference on Upcoming Trends in Chemical Science UTCS-2013
8. Investigation of optical and Structural Properties of ZnTe thin Films, Pawan Kumar, Aravind Kumar, Pravinder Kumar, Kapil Malik, Proceeding of National Conference on Upcoming Trends in Chemical Science UTCS-2013.
9. Study of Optical Properties of CdSSe Vacuum Evaporated Thin Films Pawan Kumar, Aravind Kumar, Kapil Malik, Parvinder, Innovation in science and Technology for Inclusive development, 22-23 March-2014, Organized by department of Chemistry C.C.S University Meerut with ISCA Haridwar Chapter.
10. Effect of Thickness on the Optical and Electrical Properties of $Cd_{1-x}Zn_xS$ Vacuum Evaporated Thin Films. Pawan Kumar, Aravind Kumar & P.N.Dixit, Advancement of Nano Materials and its Applications, Department of Physics D.A.V. College Kanpur (U.P), Feb. 09-11, 2012.
11. Effect of Annealing on the Optical Properties of Hydrogenated Amorphous Silicon Thin Films Grown at High Power by PECVD Technique, Aravind Kumar, Pawan Kumar, Sushil Kumar, P.N. Dixit and V.K. Rastogi, National Conference on Advancement of Nano Materials and its Applications, Department of Physics D.A.V. College Kanpur (U.P), Feb. 15-16, 2011.
12. Study of Optical Properties of CdSSe Vacuum Evaporated Thin Films Pawan Kumar, Aravind Kumar, Kapil Malik, Parvinder, ISCA Haridwar Chapter National Conference on Innovation in science and Technology for Inclusive development, Jointly Organized by Indian Science Congress Association, Haridwar Chapter & Department of Chemistry C.C.S University Meerut (U.P) India. 22-23 March-2014,
13. Effect of Thickness on Optical Properties of Se-Te Chalcogenide Semiconductor .Pawan Kumar, Kapil Malik, Parvinder, Anubha Gupta and Aravind Kumar, National Conference on Emerging Trend in Engineering & Science, Faculty of Engineering & Technology Gurukul Kangri University Haridwar Uttarakhand India, November 09-10, 2013.

Awards & Distinctions

First Dr B.R Ambaidkar National Teachers Award -2010

Public Service/ University Service/ Consulting Activity				
Sawtthta Abhiyan Nukkad Natak (awareness cleaning)				
Professional SocietiesMemberships				
S.N.	Name	Designation	Years	Committee Name
1	Dr. Aravind kumar	Teacher In-Charge	2025-26	Department of Physics Kalindi college
2	Dr. Aravind kumar	Deputy Superintendent (SEC/VAC/AEC Exams Evaluation)	2025-26	Kalindi college
3	Dr. Aravind kumar	Deputy Superintendent (Regular Sem Exams)	2025-26	Kalindi college
4	Dr. Aravind kumar	Convener(Head Examiner)	2025	Numerical Analysis (SEC Paper)
5	Dr. Aravind kumar	Convener	2024-25	Institute of Bio- resources and sustainable Development (IBSD) Center.
6	Dr. Aravind kumar	Member	2024-25	Dr B.R Ambedkar Study Center.
7	Dr. Aravind kumar	Convener	2024-25	Central admission committee for B.Sc(H) Physics courses of college, 2025
8	Dr. Aravind kumar	Deputy Superintendent	2024-25	Central examination committee of college for theory exams, 2024-25
9	Dr. Aravind Kumar	Member	2024	Criteria 2
10	Dr. Aravind Kumar	Member	2024-24	Tent and Shamiyana
Projects(MajorGrants/ Collaborations)				
OtherDetails NCC 'B' Certificate NSS 240 Hours Work and Two Campus Certificate				

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