BIO-DATA



1. Name and full correspondence address: **Dr. Aniruddha Mondal, Professor, Department of Physics National Institute of Technology, Durgapur P.O.: R.E. College, Dist.: Paschim Bardhhaman, West Bengal, Pin: 713209, India**
2. Email(s) and contact number(s): amondal.phy@nitdgp.ac.in ; aniruddhamo@gmail.com **; (+91)-9434789024**
3. Institution: **National Institute of Technology, Durgapur, W.B., India**
4. Date of Birth: **04-03-1979**
5. Gender (M/F/T): **Male**
6. Category Gen/SC/ST/OBC: **OBC**
7. Whether differently abled (Yes/No): **No**
8. Academic Qualification (Undergraduate Onwards)

S. No.	Degree	Year	Subject	University/Institution
1.	Secondary	1994	General	WBBSE
2.	Higher Secondary	1996	Science	WBCHSE
3.	Bachelor in Science	2000	Physics(H)	Calcutta University
4.	Masters in Science	2002	Physics (Specialization: Electronics)	CSJM University, Kanpur
5.	Ph.D.	2008	Electronic Science	Calcutta University

9. Ph.D. thesis title, Guide's Name, Institute/Organization/University, Year of Award:
   Ph.D. thesis title: **Studies on group III V dilute nitrides**
   Ph.D. Supervisor: **Prof. Sunanda Dhar**
   Institute: **University of Calcutta**
   Year of Award: **2008**
10. **Work experience (in chronological order).**

Sl. No.	Positions held	Name of the Institute	From	To
1.	Post-Doctoral Fellow	Dept.-Electrical Eng., Indian Institute of Technology Kanpur	February, 2008	August, 2009
2.	Research Professor/Assistant Professor	(Millimeter-wave Innovation Technology Research Centre (MINT), Dongguk University, Seoul	August, 2009	February, 2010
3.	Assistant Professor	Dept- Electronics and Communication, National Institute of Technology Agartala	April, 2010	October, 2014
4.	Assistant Professor	Dept. of Physics, National Institute of Technology Durgapur	October, 2014	October 2018
5.	Associate Professor	Dept. of Physics, National Institute of Technology Durgapur	October 2018	March 2026
6.	Professor	Dept. of Physics, National Institute of Technology Durgapur	March 2026	Till Date

11. **Foreign Visit:**

- National Cheng Kung University, Taiwan (June, 2026) [Visited through SPARC Project]

- Queen's University, Canada (June, 2023) [Visited through SPARC Project]
- Frumkin Institute of Physical Chemistry and Electrochemistry, Russia (May, 2023) [Visited through SPARC Project]
- Queen's University, Canada (March, 2023) [Visited through SPARC Project]
- Nottingham University, UK (June, 2016) [Visiting Faculty]
- Thailand (2011) [Paper presentation at conference]
- Singapore (2012) [Paper presentation at conference]

12. **Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.**

- Chairing a Technical Session at the International Conference "Raw Material Security towards Sustainable Development: Bridging Science, Engineering and Policy Interface (RAMSEP 2026)" at Kazi Nazrul University, Asansol.
- Invited Speaker at the 2nd International Conference on Applied Materials, Quantum and Nuclear Sciences (ICAQNS 2026), Manipal University, Jaipur.
- Qualified GATE (Physics) with All India Rank-167, Percentile-92.11, Year 2002, Award agency-MHRD, Govt. Of India.

13. **Publications** ***(List of papers published in SCI Journals, in year wise descending order).***

S. No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Subhasish Chanda, Deepak Kumar, Iman Biswas, Manisha Sharma, Youngmin Lee, Sejoon Lee, Sanjeev Kumar Sharma, **Aniruddha Mondal**	Lead-free inorganic halide perovskite-based synaptic memory for next generation neuromorphic computing	InfoMat	8	e70131	2026
2.	Iman Biswas, Poushali Chatterjee, Subhasish Chanda, Nilanjan Halder, **Aniruddha Mondal**	Bandgap Engineering in $Cs_2AgBiBr_6$ Thin-Film via Indium Alloying: An Efficient Route to Lead-Free Self-Powered UV Photodetector	Journal of Alloy and Compounds	1050	185813	2025
3.	Subrata Saha, Iman Biswas, Subhasish Chanda, Nilanjan Halder, Arjun Dey, **Aniruddha Mondal**	Enhanced NIR Modulation of GLAD-Deposited VO_2 Nanocolumns for Smart Radiative Applications	IEEE Photonics Technology Letters	38(5)	325 - 328	2025
4.	Subrata Saha, Iman Biswas, Arjun Dey, Gunjan Rastogi, **Aniruddha Mondal**, Arka Dey	Thickness-Dependent Thermal, Optical and Electrical Phase Transition in Electron-Beam Deposited VO_2 Films	Transactions of the Indian Ceramic Society	84(3)	196 – 206	2025
5.	Rajeev Gupta, Ajay Kumar, Manoj Kumar, Rajesh Singh, Anita Gehlot, Purnendu Shekhar Pandey, Neha Yadav, Kailash Pandey, Ashish Yadav, Neha Gupta, Ranjeet Brajpuriya, Shalendra Kumar, Ajay Singh Verma, Tanuj Kumar, Yongling Wu, Zheng Hongyu, Abhijit	The integration of microelectronic and photonic circuits on a single silicon chip for high-speed and low-power optoelectronic technology	Nano Materials Science	7	305-315	2025

	Biswas, Ajay Mittal, **Aniruddha Mondal**, Romanov Oleksandr Ivanovich					
6.	Rajib Saha, Soumya Mahapatra, Avijit Dalal, **Anirudhha Mondal**, Subhananda Chakrabarti	Investigation of dual-wavelength selective self-powered photo response of ZnO/Si heterojunction with insertion of thin TiO_2 layer	Applied Physics A	131	11	2025
7.	Iman Biswas, Arka Dey, Jean Michel Nunzi, Nilanjan Halder, **Aniruddha Mondal**	Charge transport properties and variable photo-switching of three-terminal $Cs_2AgBiBr_6$ device	Journal of Semiconductors	45(11)	112801	2024
8.	Ankita Choudhury, Iman Biswas, Rajeev Gupta, Arka Dey, **Aniruddha Mondal**	GLAD synthesized Ga_2O_3 nanowire-based photodiode	Applied Physics A	130(10)	752	2024
9.	Chiranjib Ghosh, Arka Dey, Iman Biswas, Rajeev Kumar Gupta, Vikram Singh Yadav, Ashish Yadav, Neha Yadav, Hongyu Zheng, Mohamed Henini, **Aniruddha Mondal**	CuO–TiO_2 based self-powered broad band photodetector	Nano Materials Science	6(3)	345-354	2024
10.	Rajeev Gupta, Ajay Kumar, Manoj Kumar, Rajesh Singh, Anita Gehlot, Purnendu Shekhar Pandey, Neha Yadav, Kailash Pandey, Ashish Yadav, Neha Gupta, Ranjeet Brajpuriya, Shalendra Kumar, Ajay Singh Verma, Tanuj Kumar, Yongling Wu, Zheng Hongyu, Abhijit Biswas, Ajay Mittal, **Aniruddha Mondal**, Romanov Oleksandr Ivanovich	The integration of microelectronic and photonic circuits on a single silicon chip for high-speed and low-power optoelectronic technology	Nano Materials Science	--	--	2024
11.	Iman Biswas, Arka Dey, Avijit Dalal, Subrata Saha, Jean-Michel Nunzi, **Aniruddha Mondal**	Stable, self-biased $Cs_2AgBiBr_6$ thin-film based photodetector by three-step vapor-deposition	Journal of Alloys and Compounds	976	172903	2024
12.	Faisal S Al Mashary, Joao Paulo De Oliveira Lima, **Aniruddha Mondal**, Sanjib Mondal, Anupam Ghosh, Dler A Jameel, Sultan Alhassan, Maryam M Al Huwayz, Saud Alotaibi, Mohamed Henini, Jorlandio Francisco Felix	Effect of erbium-doping concentration on the electrical, structural and morphological properties of heterostructures based on TiO_2 thin films	Bulletin of Materials Science	47(1)	42	2024
13.	Taposhree Dutta, Neha Yadav, Yongling Wu, Gary J Cheng, Xiu Liang, Seeram Ramakrishna, Aoussaj Sbai, Rajeev Gupta,	Electronic properties of 2D materials and their junctions	Nano Materials Science	6(1)	1-23	2024

	Aniruddha Mondal, Zheng Hongyu, Ashish Yadav					
14.	Ajay Kumar, Rajib Saha, Avijit Dalal, **Aniruddha Mondal**, Subhananda Chakrabarti	Investigation of highly efficient self-powered photo-detector performance of all inorganic lead-free halide perovskites ($CsSnCl_3$) nanocrystals (NCs) decorated Er: ZnO nanowires (NWs)/Si heterojunctions	Optical Materials	147	114671	2024
15.	Madhuri Mishra, Rajib Saha, Archishman Saha, Avijit Dalal, Ankita Sengupta, **Aniruddha Mondal**, Sanatan Chattopadhyay, Subhananda Chakrabarti	Investigation of Highly Efficient Dual-Band Photodetector Performance of Spin-on-Doping (SOD) Grown p-Type Phosphorus Doped ZnO (P: ZnO)/n-Ga_2O_3 Heterojunction Device	IEEE Transactions on Electron Devices	71(3)	1433-1440	2023
16.	Sanjib Mondal, Avijit Dalal, **Aniruddha Mondal**	Al nanoparticles decorated Er: TiO_2 thin film based plasmonic photodetector	Ceramics International	49(4)	6289-6298	2023
17.	Ankita Choudhury, Arka Dey, Chiranjib Ghosh, Avijit Dalal, Rajat Mahapatra, Saikat Biswas, Nilanjan Halder, **Aniruddha Mondal**	Positive temperature coefficient of resistance of Mg-GeO_2 nanowire array film	Journal of Applied Physics	133(4)	133	2023
18.	Subhendu Dhibar, Arka Dey, Avijit Dalal, Subham Bhattacharjee, Rajib Sahu, Rupam Sahoo, **Aniruddha Mondal**, Sk Mehebub Rahaman, Sandip Kundu, Bidyut Saha	An organic acid consisted multiresponsive self-healing supramolecular Cu (II)-metallogel: Fabrication and analysis of semiconducting device	Journal of Molecular Liquids	370	121021	2023
19.	Avijit Dalal, Ankita Bebarta, Argha Deep Paul, Rabindranath Barman, Jean-Michel Nunzi, Alexey Tameev, Rajat Mahapatra, **Aniruddha Mondal**	Ion-Sensitive Three-Terminal Device as a Universal Hybrid Platform With TiO_2 Nanowires on the Channel	IEEE Sensors Journal	23(3)	1917-1924	2023
20.	Kripasindhu Karmakar, Arka Dey, Subhendu Dhibar, Rajib Sahu, Subham Bhattacharjee, Priya Karmakar, Priyajit Chatterjee, **Aniruddha Mondal**, Bidyut Saha	A novel supramolecular Zn (II)-metallogel: an efficient microelectronic semiconducting device application	RSC advances	13(4)	2561-2569	2023
21.	Avijit Dalal, Dip Prakash Samajdar, **Aniruddha Mondal**	Hetero-radial MgO capped TiO_2 nanowire arrays as a deep UV and self-powered photodetector	Journal of Alloys and Compounds	928	167120	2022
22.	Avijit Dalal, Madhuri Mishra, Subhananda Chakrabarti, Rajeev	Characteristics of Mg doped TiO_2 thin film based deep UV photodetector	Vacuum	201	111115	2022

	Kumar Gupta, **Aniruddha Mondal**					
23.	AD Paul, S Biswas, A Dalal, **A Mondal**, R Mahapatra	Impact of Stack Engineering on HfO_x/Al: HfO_x-Based Flexible Resistive Memory Devices and Its Synaptic Characteristics	IEEE Transactions on Electron Devices	69(4)	1842-1848	2022
24.	Mohammed Adnan Hasan, Shubham Chavan, Avijit Dalal, Alevoor Rajendra, **Aniruddha Mondal**, Baburao N Sherikar, Arjun Dey	Optical, electronic, and microstructural properties of mixed phase RF magnetron sputtered vanadium oxide thin films on quartz and aluminized quartz	Surface and Interface Analysis	53(10)	844-851	2021
25.	Ankita Choudhury, Avijit Dalal, Shyam Murli Manohar Dhar Dwivedi, Anupam Ghosh, Nilanjan Halder, Soumik Das, **Aniruddha Mondal**	Vapour transport grown photosensitive GeO_2 thin film	Materials Research Bulletin	142	111397	2021
26.	Amitabha Nath, Bikram Kishore Mahajan, **Aniruddha Mondal**, Laishram Robindro Singh, Mitra Barun Sarkar	Synthesis and detailed characterizations of Ag nanoparticles coated In_2O_3 nanostructured devices: An analytical and experimental approach	Journal of Vacuum Science & Technology B	39(5)	052209	
27.	Sanjib Mondal, Anupam Ghosh, Shyam Murli Manohar Dhar Dwivedi, Avijit Dalal, **Aniruddha Mondal**	Detailed experimental and theoretical analysis of the high-temperature current conduction properties of Er-doped TiO_2 thin film based diodes	Materials Science in Semiconductor Processing	130	105834	2021
28.	Avijit Dalal, Shyam Murli Manohar Dhar Dwivedi, Chiranjib Ghosh, Rini Lahiri, Mohamed Henini, **Aniruddha Mondal**	Mg: TiO_2 alloy thin films based MOS capacitors grown on GaAs substrates	Journal of Alloys and Compounds	868	159178	2021
29.	Adyasha Samal, Annu Kumar Lakshya, Shyam Murli Manohar Dhar Dwivedi, Avijit Dalal, Anupam Ghosh, Argha Deep Paul, Rajat Mahapatra, Rajeev Kumar Gupta, Mohammed Adnan Hasan, Arjun Dey, **Aniruddha Mondal**	Stable and reversible phase change performance of TiO_2 coated VO_2 nano-columns: Experiments and theoretical analysis	Ceramics International	47(10)	14741-14749	2021
30.	Sanjib Mondal, Chiranjib Ghosh, SMM Dhar Dwivedi, Anupam Ghosh, Sushama Sushama, Subhananda Chakrabarti, **Aniruddha Mondal**	An experimental and theoretical understanding of a UV photodetector based on Ag nanoparticles decorated Er-doped TiO_2 thin film	Ceramics International	47(10)	14879-14891	2021

31.	AD Paul, S Biswas, P Das, HJ Edwards, A Dalal, S Maji, VR Dhanak, **A Mondal**, R Mahapatra	Improved resistive switching characteristics of Ag/Al: HfO_x/ITO/PET ReRAM for flexible electronics application	Semiconductor Science and Technology	36(6)	065006	2021
32.	Shyam MM Dhar Dwivedi, Anupam Ghosh, Sagarika Deepthy, Moumita Maji, Rini Lahiri, Sanjib Mondal, Chiranjib Ghosh, Avijit Dalal, **Aniruddha Mondal**, Monidipa Ghosh	Detection technique for vitamin D_3 using Er-doped TiO_2 nanowire-based UV photodetector	Journal of Nanophotonics	14(4)	046001-046001	2020
33.	Anupam Ghosh, Rini Lahiri, Shyam Murli Manohar Dhar Dwivedi, **Aniruddha Mondal**	Experimental and theoretical study of capacitive memory of metal-oxide-semiconductor devices based on Er-doped In_2O_3 nano-column arrays	Journal of Applied Physics	128(9)	095704	2020
34.	Bikram Kishore Mahajan, Bijit Choudhuri, Debkalpa Goswami, Ajitabh Kumar Tiwari, Mitra Barun Sarkar, **Aniruddha Mondal**	Enhanced photodetection with crystalline Si nanoclusters	Journal of Nanoscience and Nanotechnology	20(4)	2344-2350	2020
35.	Md Jawaid Alam, Punam Murkute, Hemant Ghadi, Sushama Sushama, Shyam Murli Manohar Dhar Dwivedi, Anupam Ghosh, Chiranjib Ghosh, **Aniruddha Mondal**, Sritoma Paul, Shubham Mondal, Subhananda Chakrabarti	Enhancing responsivity and detectivity in broadband UV–VIS photodetector by ex-situ UV–ozone annealing technique	Superlattices and Microstructures	137	106333	2020
36.	Chiranjib Ghosh, Shyam Murli Manohar Dhar Dwivedi, Anupam Ghosh, Avijit Dalal, **Aniruddha Mondal**	A novel Ag nanoparticles/TiO_2 nanowires-based photodetector and glucose concentration detection	Applied Physics A	125	1-9	2019
37.	Anupam Ghosh, Kundan Kumar, Shyam Murli Manohar Dhar Dwivedi, Chiranjib Ghosh, Sushama Sushama, Punam Murkute, Hemant Ghadi, Subhananda Chakrabarti, **Aniruddha Mondal**	Bipolar analog memristive switching of In_2O_3 using Al nanoparticles	Journal of Nanoscience and Nanotechnology	19(12)	8126-8134	2019
38.	Shyam Murli Manohar Dhar Dwivedi, Avijit Dalal, Anupam Ghosh, Punam Murkute, Hemant Ghadi, Chiranjib Ghosh, Subhananda Chakrabarti, Satyaban Bhunia, **Aniruddha Mondal**	InN nanowires based near-infrared broadband optical detector	IEEE Photonics Technology Letters	31(18)	1526-1529	2019

39.	Rini Lahiri, **Aniruddha Mondal**	Improved capacitive memory of Er: TiO_2 TF based MOS device	Journal of Alloys and Compounds	792	679-683	2019
40.	Anupam Ghosh, Punam Murkute, Rini Lahiri, Subhananda Chakrabarti, Kalyan Kumar Chattopadhyay, **Aniruddha Mondal**	GLAD synthesised erbium doped In_2O_3 nano-columns for UV detection	Journal of Materials Science: Materials in Electronics	30	12739-12752	2019
41.	Md Jawaid Alam, Punam Murkute, Hemant Ghadi, Sushama Sushama, Shyam Murli Manohar Dhar Dwivedi, Anupam Ghosh, Chiranjib Ghosh, **Aniruddha Mondal**, Subhananda Chakrabarti	Enhancement of photocurrent and responsivity of $_{Zn1-x}Mg_xO$ (x= 15%)-based ultraviolet detector by UV-ozone treatment	Oxide-based Materials and Devices X	10919	272-279	2019
42.	Sanjib Mondal, Anupam Ghosh, M Rizzo Piton, Joaquim P Gomes, Jorlandio F Felix, Y Galvão Gobato, HV Avanço Galeti, B Choudhuri, SMM Dhar Dwivedi, M Henini, **Aniruddha Mondal**	Investigation of optical and electrical properties of erbium-doped TiO_2 thin films for photodetector applications	Journal of Materials Science: Materials in Electronics	29	19588-19600	2018
43.	Shyam Murli Manohar Dhar Dwivedi, Anupam Ghosh, Hemant Ghadi, Punam Murkute, P Chinnamuthu, Shubhro Chakrabartty, Subhananda Chakrabarti, Satyaban Bhunia, **Aniruddha Mondal**	Oblique angle deposited InN quantum dots array for infrared detection	Journal of Alloys and Compounds	766	297-304	2018
44.	Rini Lahiri, **Aniruddha Mondal**	Superior Memory of Er-Doped TiO_2 Nanowire MOS Capacitor	IEEE Electron Device Letters	39(12)	1856-1859	2018
45.	Hemant Ghadi, Punam Murkute, Anupam Ghosh, Shyam Murli Manohar Dhar Dwivedi, **Aniruddha Mondal**, Subhananda Chakrabarti	Ultrasensitive zinc magnesium oxide nanorods based micro-sensor platform for UV detection and light trapping	Sensors and Actuators A: Physical	278	127-139	2018
46.	Rini Lahiri, Anupam Ghosh, Bijit Choudhuri, **Aniruddha Mondal**	Investigation on improved performance of Erbium doped TiO_2 nanowire based UV detector	Materials Research Bulletin	103	259-267	2018
47.	Chitralekha Ngangbam, Naorem Khelchand Singh, **Aniruddha Mondal**	Effect of Ag Doping on the Glancing Angle Deposition Synthesized TiO_2 Nanowire for Enlarged Photodetection	Journal of Nanoscience and Nanotechnology	18(7)	5059-5062	2018
48.	Anupam Ghosh, Shyam Murli Manohar Dhar Dwivedi, Hemant Ghadi, Paulsamy Chinnamuthu, Subhananda Chakrabarti, **Aniruddha Mondal**	Boosted UV Sensitivity of Er-Doped In_2O_3 Thin Films Using Plasmonic Ag Nanoparticle-Based Surface Texturing	Plasmonics	13	1105-1113	2018

49.	Anupam Ghosh, Shyam Murli Manohar Dhar Dwivedi, Shubhro Chakrabartty, Mohamed Henini, **Aniruddha Mondal**	Detailed investigation of defect states in Erbium doped In_2O_3 thin films	Materials Research Bulletin	99	211-218	2018
50.	Shyam Murli Manohar Dhar Dwivedi, Shubhro Chakrabartty, Hemant Ghadi, Punam Murkute, Vinayak Chavan, Subhananda Chakrabarti, Satyaban Bhunia, **Aniruddha Mondal**	Pine shaped InN nanostructure growth via vapour transport method by own shadowing and infrared detection	Journal of Alloys and Compounds	722	872-877	2017
51.	Rini Lahiri, Anupam Ghosh, Shyam Murli Manohar Dhar Dwivedi, Shubhro Chakrabartty, P Chinnamuthu, **Aniruddha Mondal**	Performance of Erbium-doped TiO_2 thin film grown by physical vapor deposition technique	Applied Physics A	123	1-7	2017
52.	Bijit Choudhuri, **Aniruddha Mondal**, Shyam Murli Manohar Dhar Dwivedi, Mohamed Henini	Fabrication of novel transparent Co_3O_4-TiO_2 nanowires pn heterojunction diodes for multiband photodetection applications	Journal of Alloys and Compounds	712	7-14	2017
53.	Noor Alhuda Al Saqri, **Aniruddha Mondal**, Jorlandio Francisco Felix, Yara Galvao Gobato, Vanessa Orsi Gordo, Hind Albalawi, Dler Jameel, Haifa Alghamdi, Faisal Al Mashary, David Taylor, Mahmmoud S Abd El-Sadek, Mohamed Henini	Investigation of defects in indium doped TiO_2 thin films using electrical and optical techniques	Journal of Alloys and Compounds	698	883-891	2017
54.	Anupam Ghosh, **Aniruddha Mondal**, Avishek Das, Sanatan Chattopadhyay, Kalyan Kumar Chattopadhyay	Removal of oxygen related defects from chemically synthesized In_2O_3 thin film doped with Er by spin-on technique	Journal of Alloys and Compounds	695	1260-1265	2017
55.	S Chakrabartty, **A Mondal**, AK Saha	Effect of annealing on optical, electrical and charge trapping properties of TiO_2 NPs arrays	Journal of nanoscience and nanotechnology	17(2)	1300-1306	2017
56.	S Chakrabartty, **A Mondal**, P Chakrabarti, SK Singh, AK Saha, P Singh	Synthesis of biocompatible TiO_2 nanodots: Glancing angle deposition technique	Journal of Nanoscience and Nanotechnology	16(8)	8705-8710	2016
57.	Bijit Choudhuri, **Aniruddha Mondal**, Ardhendu Saha	Enhanced Photodetection from TiO2–SiO x –TiO2 One-Dimensional Device	Journal of electronic Materials	45	4208-4214	2016
58.	S Saha, **A Mondal**, B Choudhuri, T Goswami, MB Sarkar, KK Chattopadhyay	TiO_2 Nanowires/Poly (Methyl Methacrylate) Based Hybrid Photodetector: Improved Light Detection	Journal of Nanoscience and Nanotechnology	16(3)	2737-2741	2016

59.	Mitra Barun Sarkar, **Aniruddha Mondal**, Bijit Choudhuri	Presence of capacitive memory in indium doped TiO_2 alloy thin film	Journal of Alloys and Compounds	654	529-533	2016
60.	S Chakrabartty, **A Mondal**, AK Saha	Retention of Charge in TiO_2 Nanoparticles/SiO_x Thin Film System	Advanced Science Letters	22(1)	141-144	2016
61.	JC Dhar, **A Mondal**	Nitrogen Doped TiO_2 Nanowires Based Schottky Detector: High Internal Gain	Advanced Science Letters	22(1)	226-228	2016
62.	Tamal Goswami, **Aniruddha Mondal**, Pankaj Singh, Bijit Choudhuri	$In_{2-X}O_{3-Y}$ 1D perpendicular nanostructure arrays as ultraviolet detector	Solid State Sciences	48	56-60	2015
63.	Chitralekha Ngangbam, **Aniruddha Mondal**, Bijit Choudhuri	Efficient photon management with Ag nanoparticles coated TiO_2 nanowire clusters for photodetector application	Electronic Materials Letters	11	758-763	2015
64.	Naorem Khelchand Singh, **Aniruddha Mondal**	High Internal Gain Axial SiO_x-$In_{2-x}O_{3-y}$/Au Heterostructure Nanocolumnar Array Based Schottky Detector for Broad Band Recognition	Journal of nanoscience and nanotechnology	15(8)	6098-6102	2015
65.	AK Tiwari, **A Mondal**, BK Mahajan, B Choudhuri, T Goswami, MB Sarkar, S Chakrabartty, C Ngangbam, S Saha	Improved photo-detection using zigzag TiO_2 nanostructures as an active medium	Journal of Nanoscience and Nanotechnology	15(7)	5099-5104	2015
66.	**A Mondal**, A Ganguly, A Das, B Choudhuri, RK Yadav	The Ag Nanoparticles/TiO_2 Thin Film Device for Enhanced Photoconduction and Role of Traps	Plasmonics	10	667-673	2015
67.	JC Dhar, A Mondal, S Bhattacharya, NK Singh, C Ngangbam, KK Chattopadhyay	Band gap tailoring of TiO_2 nanowires by nitrogen doping under N_2/Ar plasma environment	Journal of Nanoscience and Nanotechnology	15(5)	3951-3955	2015
68.	Paulsamy Chinnamuthu, **Aniruddha Mondal**, Jay Chandra Dhar, Naorem Khelchand Singh	Visible light detection using glancing angle deposited TiO_2 nanowire arrays	Japanese Journal of Applied Physics	54(6S1)	06FJ01	2015
69.	Kishan Bhowmik, **Aniruddha Mondal**	Si NW network by Ag nanoparticle assisted etching and TiO_2/Si NWs as photodetector	Electronic Materials Letters	11	180-186	2015
70.	B Choudhuri, **A Mondal**, A Ganguly, AK Saha, KK Chattopadhyay	Glancing angle synthesized indium nanoparticles covered TiO_2 thin film and its structural, optoelectronic properties	Applied Physics A	118	373-379	2015

71.	Mitra Barun Sarkar, **Aniruddha Mondal**, Bijit Choudhuri, Bikram Kishore Mahajan, Shubhro Chakrabartty, Chitralekha Ngangbam	Enlarged broad band photodetection using Indium doped TiO_2 alloy thin film	Journal of alloys and compounds	615	440-445	2014
72.	Naorem Khelchand Singh, Bijit Choudhuri, **Aniruddha Mondal**, Jay Chandra Dhar, Tamal Goswami, Saptadip Saha, Chitralekha Ngangbam	2D like photonic crystal using In_2O_3-SiO_x heterostructure nanocolumn arrays and humidity sensing	Electronic Materials Letters	10	975-980	2014
73.	A Ganguly, **A Mondal**, B Choudhuri, T Goswami, K Kumar Chattopadhyay	Ag nanoparticles patterned TiO_2 thin film plasmonic detector for enlarged light detection	Advanced Science, Engineering and Medicine	6(7)	797-801	2014
74.	**A Mondal**, K Bhowmik, JC Dhar, NK Singh, T Goswami	TiO_2 embedded Si nanowire network based Schottky detector for enlarged light detection	Journal of Nanoscience and Nanotechnology	14(7)	5390-5394	2014
75.	**A Mondal**, B Shougaijam, T Goswami, JC Dhar, NK Singh, S Choudhury, KK Chattopadhay	Structural and optical properties of glancing angle deposited In_2O_3 columnar arrays and Si/In_2O_3 photodetector	Applied Physics A	115	353-358	2014
76.	Shubhro Chakrabartty, **Aniruddha Mondal**, Mitra Barun Sarkar, Bijit Choudhuri, Apu Kumar Saha, Anirban Bhattacharyya	TiO_2 Nanoparticles Arrays Ultraviolet-A Detector With Au Schottky Contact	IEEE Photonics Technology Letters	26(11)	1065-1068	2014
77.	NK Singh, **A Mondal**, JC Dhar, S Chakrabartty, KK Chattopadhyay, A Bhattacharyya	Improved photo-detection from annealed SiO_x–$In_{2-x}O_{3-y}$ axial heterostructure nanocolumns	Journal of Physics D: Applied Physics	47(10)	105106	2014
78.	A Ganguly, **A Mondal**, B Choudhuri, T Goswami, KK Chattopadhyay	Ag Nanoparticles Patterned TiO2 Thin Film Plasmonic Detector for Enlarged Light Detection	Advanced Science, Engineering and Medicine	6	1-5	2014
79.	**Aniruddha Mondal**, Bikram Kishore Mahajan, Bijit Choudhuri, Ajitabh Kumar Tiwari, Santanu Chakrabarty, Kalyan Kumar Chattopadhyay	SiO_x nanodots as a ‘green gap’ solution	Journal of Nanophotonics	8(1)	083069-083069	2014
80.	JC Dhar, **A Mondal**, NK Singh, S Chakrabartty, A Bhattacharyya, KK Chattopadhyay	Effect of annealing on SiO_x-TiO_2 axial heterostructure nanowires and improved photodetection	Journal of Applied Physics	114(24)	244310	2013
81.	Aparna Ganguly, **Aniruddha Mondal**, Jay Chandra Dhar,	Enhanced visible light absorption by TiO_2 film	Physica E: Low-dimensional	54	326-330	2013

	Naorem Khelchand Singh, Sushabhan Choudhury	patterned with Ag nanoparticles arrays	Systems and Nanostructures			
82.	Jay Chandra Dhar, Aniruddha Mondal, Naorem Khelchand Singh, P Chinnamuthu	Low-Leakage TiO_2 Nanowire Dielectric MOS Device Using Ag Schottky Gate Contact	IEEE transactions on nanotechnology	12(6)	948-950	2013
83.	B Choudhuri, **A Mondal**, JC Dhar, NK Singh, T Goswami, KK Chattopadhyay	Enhanced photocurrent from generated photothermal heat in indium nanoparticles embedded TiO_2 film	Applied Physics Letters	102(23)	233108	2013
84.	JC Dhar, **A Mondal**, NK Singh, KK Chattopadhyay	Enhanced photoemission from glancing angle deposited SiO_x-TiO_2 axial heterostructure nanowire arrays	Journal of Applied Physics	113(17)	174304	2013
85.	**Aniruddha Mondal**, Jay Chandra Dhar, P Chinnamuthu, Naorem Khelchand Singh, Kalyan Kumar Chattopadhyay, Sanat Kumar Das, Santosh Ch Das, Anirban Bhattacharyya	Electrical properties of vertically oriented TiO_2 nanowire arrays synthesized by glancing angle deposition technique	Electronic Materials Letters	9	213-217	2013
86.	**A Mondal**, NK Singh, P Chinnamuthu, JC Dhar, TD Das, PK Bose	Ordered Si/Si–O nanowire array and its optical properties	Applied Physics A	110	479-485	2013
87.	**A Mondal**, K Bhowmik, JC Dhar, NK Singh, T Goswami	Embedded Si Nanowire Network Based Schottky Detector for Enlarged Light Detection	Nanoscience and Nanotechnology	13	1-5	2013
88.	**Aniruddha Mondal**, Naorem Khelchand Singh, P Chinnamuthu, Jay Chandra Dhar, Anirban Bhattacharyya, Sushabhan Choudhury	Enlarged Photodetection Using SiO_x Nanowire Arrays	IEEE Photonics Technology Letters	24(22)	2020-2023	2012
89.	P Chinnamuthu, **A Mondal**, NK Singh, JC Dhar, KK Chattopadhyay, Sekhar Bhattacharya	Band gap enhancement of glancing angle deposited TiO_2 nanowire array	Journal of Applied Physics	112(5)	054315	2012
90.	P Chinnamuthu, **A Mondal**, NK Singh, JC Dhar, SK Das, KK Chattopadhyay	Structural and optical properties of glancing angle deposited TiO_2 nanowires array	Journal of Nanoscience and Nanotechnology	12(8)	6445-6448	2012
91.	P Chinnamuthu, JC Dhar, **A Mondal**, A Bhattacharyya, NK Singh	Ultraviolet detection using TiO_2 nanowire array with Ag Schottky contact	Journal of Physics D: Applied Physics	45(13)	135102	2012
92.	**Aniruddha Mondal**, Paul Samy Chinnamuthu	Synthesis of indium nanowires by oblique angle deposition	Journal of Nanophotonics	5(1)	053522-053526	2011

93.	Jin-Koo Rhee, **Aniruddha Mondal**, Mi-Ra Kim, Yeon-Sik Chae, Sunanda Dhar, Tushar Dhabal Das	Optical Absorption Studies of Liquid Phase Epitaxy Grown GaSbN	Journal of the Korean Physical Society	56(4)	1167-1171	2010
94.	**Aniruddha Mondal**, Mira Kim, Yeonsik Chae, Jinkoo Rhee, Sunanda Dhar, Tushar Dhabal Das	Optical absorption studies of GaSbN grown by using liquid phase epitaxy	Journal of the Korean Physical Society	56	1167-1171	2010
95.	**A Mondal,** U Das	Optical quality SiC nano-structures by spin-on technique and anneal on Si	Journal of Physics D: Applied Physics	42(23)	234002	2009
96.	S Dhar, **A Mondal**, TD Das	Hall mobility and electron trap density in GaAsN grown by liquid phase epitaxy	Semiconductor science and technology	23(1)	015007	2007
97.	S Dhar, N Halder, **A Mondal**	Investigation of deep level traps in dilute GaAsN layers grown by liquid phase epitaxy	Thin solid films	515(10)	4427-4429	2007
98.	**A Mondal**, TD Das, N Halder, S Dhar, J Kumar	Growth of dilute GaSbN layers by liquid-phase epitaxy	Journal of crystal growth	297(1)	4-6	2006
99.	S Dhar, N Halder, **A Mondal**, Bhavtosh Bansal, BM Arora	Detailed studies on the origin of nitrogen-related electron traps in dilute GaAsN layers grown by liquid phase epitaxy	Semiconductor science and technology	20(12)	1168	2005

13. Detail of patents.

S. No	**Patent Title**	**Name of Applicant(s)**	**Patent No.**	**Award Date**	**Agency/ Country**	**Status**
1.	Amorphous Silicon Monoxide Based Nanowire Electrode Biosensor	**A. Mondal (PI)**, M. Ghosh, S. M. M. D. Dwivedi, C. Ghosh, S. Deepthy, R. Lahiri	Patent No. 452651	28-02-2019	India	Granted
2.	An Axial SiO_x-TiO_2 Heterostructure Nanowire Array useful for Simultaneous Multi-band Detection	**A. Mondal (PI)**, J. C. Dhar, C. Ngangbam, K. K. Chattaopadhyay	Application Number: 448/KOL/2 Journal No. 21/2014014	23-05-2014	India	Granted
3.	A unique set up for temperature dependent reflectance measurement of substrates/thin film samples including stable VO_2 thin film	**A. Mondal (PI)**, S. Saha, A. Dey, A. Dey, G. Rastogi, N. Sridhara	Patent No. 575883	16-12-2025	India	Granted
4.	A Lead-Free $Cs_3Bi_2I_9$-Based Resistive Switching Memory Device Fabricated Using a Sequential Spin-Coating Method	S. Chanda, I. Biswas, R.N. Barman, **A. Mondal (PI)**	Application No. 202531059314	20-06-2025	India	Published
5.	Flexible High-Sensitivity Capacitive Pressure Sensor Using PVDF–Silver–Kapton Architecture for Wearable Pulse Monitoring	S. Ghosh, I. Biswas, **A. Mondal**, R.N. Barman	Application No. 202531060339	24-06-2025	India	Published

14. Books/Reports/Chapters/General articles etc.

S. No	Title	Author's Name	Publisher	Year of Publication
1.	TiO_2 Nanowire-Based Optical Sensor", Photonics and Fiber Optics	**Aniruddha Mondal**, Anupam Ghosh	CRC Press, 249-274	2019
2.	Group III—Nitrides and Other Semiconductors for Terahertz Detector	**Aniruddha Mondal**, Bijit Choudhuri	Springer, Singapore	2020
3.	Advances of the Material Science and Engineering	**Aniruddha Mondal**, Rabindra Nath Barman, Tushar Kanti Bera, Arindam Biswas	New Delhi Publishers	2023
4.	Hybrid Nanostructures as Solid-State Sensors for IoT	**Aniruddha Mondal**, Arindam Biswas	Taylor and Francis	2024

15. Any other Information (maximum 500 words):

a Research Projects / Sponsored project/ Consultancy activities:

Sponsoring Agency	Title of the Project	Period	Amount (Rs.)	Status (Completed/ongoing)
DST (SERB)	Synthesis of In_2O_3 Nano-Wire assembly and UV detector **(PI)**	3 years	53,96,000/-	Completed
AICTE	High-Efficiency In_2O_3/Si Nano-wire based heterojunction solar cell **(PI)**	2 years	15,30,000/-	Completed
AICTE	Modernization of Computer Laboratory **(PI)**	1 year	15,00,000/-	Completed
DAE (BRNS)	A unique technique for Synthesis of InN Nano-Wire assembly for the application of optical sensor **(PI)**	3 years	33,23,900/-	Completed
CSIR	To develop and fabricate an efficient TiO2 nanowire array-based UV detector using plasmonic nanoparticles array **(PI)**	3 years	17,00,000/-	Completed
DST (SERB)	Evaluation of the role of Vitamin D in obesity, cardiovascular diseases, and diabetes using SiO_x/TiO_2 nanowire-based sensor **(PI)**	3 years	48,64,000/-	Completed
SPARC (MoE)	Universal advanced low-cost nano-hybrid platform for air pollution, water, and bio-fluids **(PI)**	3 years	58,46,065/-	Completed
DST (SERB)	Titanium dioxide (TiO_2)/Vanadium oxide (VO_2) NWs heterostructure as a stable optical switch **(PI)**	3 years	49,19,992/-	Completed
ISRO	Thermo-Chromic Variable Emittance Coating **(PI)**	2 years	21,78,000/-	Completed
DST, Govt. of India	FIST Physical Sciences – Project **(Core member)**	5 years	1,78,00,000/-	Ongoing
SPARC (MoE)	Hybrid Nano-Pillar Dielectric Stacks for III–V & III-N MOS Platforms: A Pathway to Next-Generation High-Speed Multifunctional Devices **(PI)**	2 years	1,13,12,000/-	Ongoing

b Details of Ph.D. Students (Guided and Ongoing):

Sl. No	Name of Student	Year	Title of the Dissertation	Status (Completed/Ongoing)

1.	Chinnamuthu P	2013	Synthesis of Metal and Metal Oxide Nanowires and Its Characterization	Completed
2.	Mrs. Aparna Ganguly	2013	Studies on Ag Nanoparticles covered TiO_2 Thin Film based optical detector	Completed
3.	Jay Chandra Dhar	2016	SiO_x/TiO_2 heterostructure nanowire based Optoelectronic devices	Completed
4.	Naorem Khelchand Singh	2016	SiO_x/In_2O_3 nanowire-based Photodetector	Completed
5.	Subhro Chakrabarty	2016	Application of TiO_2 nanoparticle in optoelectronics and bio-medical field	Completed
6.	Bijit Choudhuri	2017	Studies on glancing angle synthesized low dimensional TiO_2 and its heterostructures based optical detector	Completed
7.	Mitra Barun Sarkar	2018	Properties of Indium (In) doped TiO_2 and its application in optoelectronics	Completed
8.	Chitralekha Ngangbam	2018	Studies on metal doped oxide semiconductor nanowires Ag nanoparticle coated nanowires for photodetector application	Completed
9.	Rini Lahiri	2019	Studies on Optoelectronic and Electronic Performance of Glancing Angle Deposited Low Dimensional Erbium Doped TiO_2 Material	Completed
10.	Anupam Ghosh	2020	Studies on Optoelectronic properties of low dimensional Erbium doped Indium Oxide film and its porous structure	Completed
11.	Shyam Murli Manohar Dhar Dwivedi	2021	Synthesis of InN nanostructure by unique vapour transport method and development of infrared optical sensor	Completed
12.	Sanjib Mondal	2023	Studies on metal nanoparticles covered Erbium doped TiO2 thin film based plasmonic Photodetectors	Completed
13.	Avijit Dalal	2024	Electrical and optoelectronic applications of MgO/TiO_2 and V_xO_y/TiO_2 heterostructure nanowires	Completed
14.	Ankita Chaudhuri	2024	Studies on the opto-electronic properties of low dimensional GeO_2 and Ga_2O_3 materials	Completed
15.	Iman Biswas	--	Studies on optoelectronic properties of lead-free $Cs_2AgBiBr_6$ double perovskite	Ongoing
16.	Subrata Saha	--	Synthesis of phase transition metal oxide thin film and nanostructures for emittance and optical switching applications	Ongoing
17.	Subhasish Chanda	--	Investigation of Low-Dimensional Lead-Free Inorganic Halide Perovskites for Optoelectronic and Next-generation Memory Device Applications	Ongoing
18.	Brijesh Chaudhuri	--	Not yet decided	Ongoing

c. Seminars/Short Term Courses/Summer Schools/ Winter Schools organized:

Sl. No.	From	To	Name of the course	Sponsored/ Self-financed	No. of Participants
1.	28.02.2014	28.02.2014	Recent trends on Semiconductor devices	TEQIP	86
2.	27.02.2015	03.04.2015	Experiment Techniques: Material and Characterization	Self	37
3.	07.05.2016	11.05.2016	Nano materials and devices (NMD-2016)	TEQIP	25
4.	16.05.2016	20.05.2016	Foundations in Photonics and Applications (FiPA-2016)	TEQIP	41
5.	27.10.2016	06.11.2016	Molecular beam Epitaxy (MBE) technology in the field of material synthesis and device fabrication	GIAN	30
6.	22.012017	26.01.2017	Development of microstructure and nanostructure by physical vapor deposition and its electrical, optical characterization	GIAN	33
7.	12.02.2018	16.02.2018	Smart Materials and its Applications in Engineering	TEQIP	50
8.	05.11.2018	09.11.2018	Polymers and hybrid composites for the application in electronic and photonic devices	GIAN	30
9.	10.07.2019	12.06.2019	1st International Conference on Clean and Renewable Energy (ICCARE 2019)	TEQIP and CSIR	45
10.	26.08.2020	28.08.2020	Sustainable Materials for Optoelectronics & Bio-Sensors	SPARC	186
11.	26.11.2021	28.11.2021	International webinar on “Advanced Hybrid Materials for Sustainability”	SPARC	108
12.	09.12.2022	09.12.2022	A One-day Seminar On “Emerging Photoconductors: Organic and Perovskite Materials”	SPARC	73
13.	14.03.2023	26.03.2023	A Seven Day Online Course on “Advanced Photonic Devices”	SPARC	159
14.	22.09.2023	24.09.2023	Workshop on “Advances of the Material Science and Engineering”	SPARC	60
15.	09.12.2024	10.12.2024	Workshop on “Advancements on Semiconductor Materials and Devices”	SERB	40
16.	09.03.2026	10.03.2026	International workshop on “Advancements of Material Science and Engineering, 2026”	SPARC	96