Title	Professor	First Name	Arijit	Last Name	Chowdhuri	Photograph

Designation	**Professor in Physics**
Address	**Department of Physics, Acharya Narendra Dev College (University of Delhi), Govindpuri, Kalkaji, New Delhi – 110 019 INDIA**
Phone No. Office	**+91 – 11 – 26294542, +91 – 11 – 26293224**
Residence / Mobile	
Email / Web page	**arijitchowdhuri@andc.du.ac.in https://www.andcollege.du.ac.in/uploads/departments/Physics/Arijit-November%202021-Faculty_Proforma.pdf**

Educational Qualifications

Degree	Institution	Year
Post-Doctoral study	**Department of Electronic Materials Engineering, Research School of Physics and Engineering, The Australian National University, ACT – 0200, Canberra, Australia**	**2009**
Ph.D. Material Sciences (Experimental)	**Department of Physics & Astrophysics, University of Delhi**	**2003**
M.Sc. Physics (Electronics)	**Hindu College, University of Delhi**	**1997**
B.Sc. (Hons.) Physics	**Shivaji College, University of Delhi**	**1995**

Career Profile

Dr. Arijit Chowdhuri is a Professor in the Department of Physics at Acharya Narendra Dev College, University of Delhi. He has a Ph.D. in experimental semiconducting thin film based sensors and has postdoctoral work experience in Australian National University, Canberra, Australia. He has research collaborations with Jozef Stefan Institute (JSI), Ljubljana, SLOVENIA and Norwegian Institute of Air Research (NILU), Kjeller, NORWAY. He has 120 scientific research publications/papers with 47 presentations in International conferences. He has research interests in Resistive Switching, Electronic Nose for Artificial Olfaction, Integrated semiconductor gas/chemical sensors, Quartz Crystal Microbalance (QCM) & Surface Plasmon Resonance (SPR) based gas/biosensing, Ambient air pollution detection & mitigation. He also has interests in Thin film deposition of electronic materials – RF Sputtering, E-Beam evaporation, Pulsed LASER Deposition, Atomic Layer Deposition. So far as PI/Co-PI he has completed 10 research projects and 04 are ongoing with an aggregate funding of Rs. 3.40 crores from agencies including Department of Science & Technology, University of Delhi and Department of Information Technology (now DeitY) out of which one has been a bilateral with Slovenia. He is recognized for independent Ph.D. guidance by University of Delhi since November 2019 and has 04 students currently registered under his

guidance. He has delivered 06 Invited Talks and has been Scientific Chair at 6th Int'l Conf. on Education 2020 (ICEDU – 2020) at Bangkok, Thailand and has been Session Chair for two tracks at the 5th Int'l Conf. on Education 2019 (ICEDU – 2019) at Kuala Lumpur, Malaysia. He has been winner of Best Innovative Idea award for DU Innovation project and recognized for Teaching Excellence and Innovation by University of Delhi.

Research Guidance and related visits

Recognized for independent Ph.D. guidance by University of Delhi since November 2019. Currently, four students are registered under my supervision for their doctoral thesis work. They are Mr. Ajay Sao, Mr. Jatinder Pal Singh, Mr. Shiva Lamichhane and Mr. Rohit Miglani

Norway: To deliver an Invited Talk at Norwegian Institute of Air Research (NILU), Lillestroem, Norway on 27 October 2017. Topic - "Particulate Matter (PM) concentration level monitoring and exposure assessment"

Hungary: Presented paper at ICOEST 2017 Conference, Budapest 19 – 23 October 2017

Slovenia:(i) Research visit under bilateral project from 03 - 12 May 2017. Presented papers at (ii) ISEB 2015 conference September 2015 Piran-Portoroz and (iii) OCWC Global 2014 conference April 2014, Ljubljana

USA: Presented papers in the following conferences (i) SPIE-DSS 2011; Orlando FL, (ii) IEEE Sensors 2002; Orlando FL, (iii) Nano-2002; Orlando FL, and (iv) IMCS – 9 (2002), Boston MA

Australia: Visiting Fellow at Dept. of Electronic Materials Engineering, Research School of Physical Sciences, The Australian National University, Canberra, 2009

New Zealand: Presented papers in IEEE Sensors 2009 conference, October 2009 at Christchurch

Canada: Presented a paper at IEEE Sensors 2003 conference, October 2003 at Toronto

Malaysia: Presented a paper and Chaired a Session at International Conference on Education (ICEDU) 2019, Kuala Lumpur held from 5 – 7 April 2019

Research Projects

S. No.	Sponsoring Agency	Title of the Projects	Position	Tenure	Budget (Rs. Lakh)
1.	Council of Scientific Industrial Research (CSIR)	Growth of crystalline single phase Ga2O3 thin film for Broadband Deep UV Photodetector [Proposal ID:22571]	Co – PI	Accepted	29.40
2.	Defence Research & Development Organization	Fabrication of packaged high frequency SAW devices of given specification [1115/TS/SPL/CARS-98/2022]	Co – PI	Nov. 2022 – April 2024	36.29

	(DRDO)				
3.	Department of Science and Technology (DST)	Development of thermoelectric energy harvester using Indium Selenide thin films [CRG/2022/005474]	Co – PI	Jan. 2023 – 2026	32
4.	Defence Research & Development Organization (DRDO)	Development of process and evaluation of electron suppression coating on the grids used in TWTs [MTRDC / MMG / 20206 / CARS / LPO/125/2021-22/BUP]	Co – PI	December 2021 – 2022	23.58
5.	Department of Science and Technology (DST)	Exposure-response assessment of Ambient Air Pollution (AAP) and Hg contamination in affected cities of India and Slovenia: A comparative study	PI	May 2015 – November 2018	16.11
6.	University of Delhi	Development of portable Electronic Nose prototype with autonomous & stand-alone operation for quantified Ambient Air Pollution (AAP) measurement using wireless data transfer protocol on Android® enabled mobile phones (ANDC-304)	PI	September 2015 – November 2016	5.10
7.	University of Delhi	Artificial Olfaction using E-NOSE – mimicking human nose for gas sensing applications (ANDC - 204)	PI	November 2013 – March 2015	5.00
8.	IEDC, Department of Science and Technology	Development of compact water purifier system	PI	2013 – 2014	1.00
9.	University of Delhi	"CO2 Gas Sensing – an ICT based investigation for pollution control" (ANDC-102)	PI	July 2012 – 2013	10.00
10.	University of Delhi	"Glucose Detection – a Biosensing approach" (ANDC-101)	PI	July 2012 – 2013	10.00
11.	IEDC, Department of Science and Technology	Development of sensor module for gas sensing applications	PI	2012 – 2013	1.00
12.	DIT (Min. Inf. Tech. & Commn.), Govt. of India	Development of low cost real time monitoring system for detection of harmful gases	Co – PI	April 2010 – 2012	112.25

13.	National Programme on Micro and Smart Systems (NPMASS), Govt. of India	Growth and characterization of composite matrices of SnO2 thin film and nanocatalysts for automotive gas sensors	Co – PI	December 2010 – 2012	33.93
14.	Department of Science & Technology, Govt. of India	Development of magnetron source for Plasma assisted growth of Metal-oxide films for sensor applications	Co – PI	March 2009 – 2012	24.81

Invited Talks, Scientific Reviewer and Session Chair

1. Low temperature NO_2 gas sensors with high efficiency – 2nd International Conference on "Advanced Functional Materials and Devices" (AFMD-2023), 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, **INDIA**

2. Low temperature operated highly efficient NO_2 gas sensors – International Conference on Electron Microscopy (EMSI – 2023), 8 – 10 February 2023 organized by Electron Microscopy Society of India and University of Delhi at Conference Centre, University of Delhi, Delhi, **INDIA**

3. Measuring pollution at Spodnja Šiška Elementary School, Ljubljana, **SLOVENIA** – 26 September 2019 under the aegis of CitieS - Health H2020 project

4. Session Chair for the track 'Mathematics Education' at the 5th International Conference on Education 2019 (ICEDU 2019) held from 5 – 7 April 2019, Kuala Lumpur, **MALAYSIA**

5. "Particulate Matter (PM) concentration level monitoring and exposure assessment" - on 27 October 2017 at Norwegian Institute of Air Research (NILU), Kjeller, **NORWAY**

6. "Detection of trace-level H_2S, SO_2 and H_2 gas concentrations using nanocrystalline SnO_2 thin films loaded with CuO nanoparticles" at the 16th National Seminar on Physics and Technology of Sensors (NSPTS-16) held from 11 – 13 February 2011 at Department of Physics, University of Lucknow, Uttar Pradesh – 226 007, **INDIA**

7. "Nanostructured Metal oxide gas sensors" at the 2nd National Conference on Nanomaterials and Nanotechnology held from 21 – 23 December 2009 at Department of Physics, University of Lucknow, Uttar Pradesh – 226 007

Publications Profile

Papers in International Refereed Journals

1. "Impact of Laser energy on Resistive Switching Properties of BiFeO3 thin films" – Shiva Lamichhane, Savita Sharma, Monika Tomar and Arijit Chowdhuri – Journal of Materials Chemistry and Physics 293 (2023) 126824 **[DOI: 10.1016/j.matchemphys.2022.126824]**

2. "Boost in the electromagnetic shielding effectiveness of polystyrene-polyaniline

composites by addition of carbon nanofibres" – Amit Kumar, Arijit Chowdhuri, Monika Tomar, Mahipal Singh, Arabian Journal for Science and Engineering 48(1) (2023), pp. 1009 – 1019 **[DOI: 10.1007/s13369-022-07289-0]**

3. "Mildly Reduced Graphene Oxide (MRGO) Membranes for Water Purification Applications" Shani Kumar, Amit Garg and Arijit Chowdhuri – Nano Express 3(4) (2022) 045003 **[DOI: 10.1088/2632-959X/aca7d6]**

4. "Advantageous effect of variation in Glancing Angle deposition (GLAD) on Resistive Switching (RS) property of WO_3 nanostructured thin films for RRAM device applications" - Shiva Lamichhane, Savita Sharma, Monika Tomar and Arijit Chowdhuri – J. Appl. Phys. 132 (13) (2022), 134102 **[DOI: 10.1063/5.0103236]**

5. "Studies on energy storage properties of BFO/WO3 bilayer thin film capacitor" - Shiva Lamichhane, Savita Sharma, Monika Tomar and Arijit Chowdhuri, J. of Energy Storage (2022) **[DOI: 10.1002/est2.342]**

6. "Room temperature SO_2 and H_2 gas sensing using hydrothermally grown GO-ZnO nanorod composite films" - Vishal Dhingra, Shani Kumar, Ravi Kumar, Amit Garg and Arijit Chowdhuri, J. of Material Research Express, (2020) Vol. 7 (6) 065012 IOP Publishing [ISSN: 2053 – 1591] **[DOI: 10.1088/2053-1591/ab9ae7]**

7. "Sonication Effect on Graphene Oxide (GO) Membranes for Water Purification Applications" - Shani Kumar, Amit Garg and Arijit Chowdhuri, J. of Material Research Express Vol. 6, No. 8 **(2019)** 085620 IOP Publishing [ISSN: 2053 – 1591] **[DOI: 10.1088/2053-1591/ab1ffd]**

8. "A Novel Method of Electrochemically Growing ZnO Nanorods on Graphene Oxide as Substrate for Gas Sensing Applications" - Chetna, Shani Kumar, Amit Garg, Arijit Chowdhuri, Amit Jain, and Avinashi Kapoor, J. of Material Research Express Vol. 6, No. 7 **(2019)** 075039 IOP Publishing [ISSN: 2053 – 1591] **[DOI: 10.1088/2053-1591/ab16f8]**

9. "Comparison of water purification properties of Graphene Oxide (GO) Membranes with tuned interlayer spacings"- Shani Kumar, Amit Garg and Arijit Chowdhuri, J. of Material Research Express Vol. 6, No.1 **(2019)** 015604 IOP Publishing [ISSN: 2053 – 1591] **[DOI: 10.1088/2053-1591/aae416]**

10. "Structural and Optical Properties of Electrochemically Deposited ZnO Nanorods by Using Graphene Oxide and ITO as Substrate Material: A Comparative Study" – Chetna, Shani Kumar, Amit Garg, Arijit Chowdhuri, Amit Jain, and Avinashi Kapoor, J. of Material Research Express Vol. 5, No. 9 (2018) 095024 IOP Publishing [ISSN: 2053 – 1591] **[DOI: 10.1088/2053-1591/aad7a5]**

11. "Assessment of particulate matter (PM) concentrations at a typical construction site in Bangalore, India" – Arijit Chowdhuri and Charu K. Gupta - **International Research Journal of Environmental Sciences** Vol. 6(2), pp 1 - 5, February (2017) [ISSN: 2319 – 1414]

12. "Diminishing public health due to Particulate Matter in the ambient" – Charu K. Gupta and Arijit Chowdhuri – **International Journal of Engineering Research and Allied Sciences (IJERAS)** Vol. 1, Issue 9 November 2016 pp 1 – 5 [ISSN: 2455 - 9660]

13. "Low cost 'Smart' switch for designing Electronic Nose (E-Nose) for gas sensing applications" - Nikhil Kumar, Saptarshi Chakrabarty, Shobha Badola, Sunita Narang, Charu K. Gupta and Arijit Chowdhuri, Journal of **Advanced Research in Electrical and Electronic Engineering (AREEE)** 1 (1) **(2014)** pp 35 – 37 [Print ISSN: 2349-5804 Online ISSN: 2349-5812]

14. "Using mobile phones with android OS for measuring hazardous gas concentrations detected using Electronic Nose (E-Nose)" - Prayas Tiwari, Ashish Pokhriyal, Pankaj Rawat, Charu K. Gupta, Sunita Narang and Arijit Chowdhuri, Journal of **Advanced Research in Electrical and Electronic Engineering (AREEE)** 1 (1) **(2014)** pp 25 – 27 [Print ISSN: 2349-5804 Online ISSN: 2349-5812]

15. "Enhanced room temperature response of SnO_2 thin film sensor loaded with Pt catalys clusters under UV radiation for LPG", Divya Haridas, Arijit Chowdhuri, K. Sreeniva and Vinay Gupta, **Sensors & Actuators B,** 153 (**2011**) 152 – 157 **[DO 10.1016/j.snb.2010.10.024]**

16. "Effect of thickness of Platinum catalyst clusters on response of SnO_2 thin film sensor for LPG", Divya Haridas, Arijit Chowdhuri, K. Sreenivas and Vinay Gupta, **Sensors & Actuators B,** 153 (**2011**) 89 – 95 **[DOI: 10.1016/j.snb.2010.10.013]**

17. "Comparison of H_2S sensing response of hetero-structure sensor (CuO – SnO_2) prepare by rf sputtering and Pulsed Laser Deposition", Manish Verma, Arijit Chowdhuri, K Sreenivas and Vinay Gupta, **Thin Solid Films** 518 (**2010**) 181-82**.[DO 10.1016/J.TSF.2010.03.162]**

18. "Contribution of adsorbed oxygen and interfacial space charge for enhanced response SnO_2 sensors having CuO catalysts for H_2S gas", Arijit Chowdhuri, Sushil K. Singh, Sreenivas and Vinay Gupta, **Sens. Actuators B** 145 (**2010**) 155-66. **[D 10.1016/j.snb.2009.11.050]**

19. "Mechanism of trace level H_2S gas sensing using rf sputtered SnO_2 thin films with C catalytic overlayer, Arijit Chowdhuri, Divya Haridas, K. Sreenivas and Vinay Gupta, **I J. Smart Sensing & Intelligent Syst**., 2 (**2009**) 540-08 (ISSN 1178-5608)

20. "Enhanced LPG response characteristics of SnO_2 thin film based sensors loaded with P clusters", Divya Haridas, Arijit Chowdhuri, K.Sreenivas and Vinay Gupta, **Intl.** J **Smart Sensing & Intelligent Syst**., 2 (**2009**) 503-14 (ISSN 1178-5608)

21. "Response speed of SnO_2 based H_2S gas sensors with CuO nanoparticles" Arijit Chowdhuri, Vinay Gupta, R. Kumar, P. K. Patanjali, S. Mozumdar and K. Sreenivas **Applied Physics Letters** 84 (7) **(2004)** pp 1180-1182. **[DOI: 10.1063/1.1646760]**

22. "Fast response H_2S gas sensing characteristics with ultra-thin CuO islands on sputtered SnO_2" Arijit Chowdhuri, Vinay Gupta and K. Sreenivas, **Sensors &**

Actuators B, 93, **(2003)** 572 - 579. **[DOI: 10.1016/S0925-4005(03)00226-0]**

23. "Thickness dependence effects of CuO islands on SnO_2 in the nano-scale range for H_2S gas sensing applications" Arijit Chowdhuri**,** Vinay Gupta and K. Sreenivas **Reviews on Advanced Materials Science (RAMS)** 4 (1) **(2003)** pp 75-78. [ISSN: 1605-8127]

24. "Enhanced catalytic activity of ultra-thin CuO islands on SnO_2 thin films for fast response H_2S gas sensors"Arijit Chowdhuri, Vinay Gupta and K. Sreenivas, **IEEE Sensors Journal,** Vol. 3 (6) **(Dec. 2003)** 680-686. **[DOI: 10.1109/JSEN.2003.820554]**

25. "H_2S gas sensing mechanism of SnO_2 films with ultrathin CuO dotted islands" Arijit Chowdhuri, Parmanand Sharma, Vinay Gupta, K. Sreenivas and K.V. Rao **Journal of Applied Physics**, 92 (4) **(2002)** 2172 - 2180. **[DOI: 10.1063/1.1490154]**

Book Chapters

1. CdS-SnO_2 Nanocomposite Sensor for Room Temperature Detection of NO_2 Gas. – Ajay Kumar Sao, Jatinder Pal Singh, Babita Sharma, Sandeep Munjal, Anjali Sharma, Monika Tomar and Arijit Chowdhuri – In: Suryadevara, N.K., George, B., Jayasundera, K.P., Roy, J.K., Mukhopadhyay, S.C. (eds) Sensing Technology. Lecture Notes in Electrical Engineering, vol. 886. **(2022)** pp 283 – 289 Springer, Cham. https://doi.org/10.1007/978-3-030-98886-9_22

Papers in refereed International Conference Proceedings

1. "SAW Multi Sensor Array for the Detection of Different Vapors by Applying Artificial Neural Network" – Sanjeeta Rani, Manisha Verma, V. Bhasker Raj, Arijit Chowdhuri and A. T. Nimal – Proceedings of 8th International Conference on Sensors Engineering and Electronics Instrumentation Advances (SEIA' 2022), 21 – 23 September 2022, Corfu Holiday Palace, Corfu, Greece, pp 91 – 92 **[ISBN: 978-84-09-43854-9]**

2. "Varying sonication conditions to tailor surface morphology of GO thin films for enhanced gas sensing performance" – Vishal Dhingra, Shani Kumar, Arijit Chowdhuri, Amit Garg – AIP Conference Proceedings (2021); 2369, 020109 **[DOI: 10.1063/5.0060996]**

3. "Effect of Concentration Variation in Graphene Oxide (GO) Membranes For Water Flux Optimization" Shani Kumar, Amit Garg and Arijit Chowdhuri – AIP Conference Proceedings 1953, 030280 (2018); **[DOI: 10.1063/1.5032615]** Published by AIP Publishing. ISBN: 978-0-7354-1648-2

4."Investigating gas sensing mechanism of Graphene Oxide (GO) thin films through cross-selectivity to various gases" - Shani Kumar, Vishal Dhingra, Amit Garg and Arijit Chowdhuri - AIP Conference Proceedings 1728, 020672 (2016); **[DOI: 10.1063/1.4946723]**, Published by AIP Publishing. ISBN: 978-0-7354-1375-7

5. "Zinc oxide doped graphene oxide films for gas sensing applications" - Chetna, , Shani Kumar, A. Garg, Arijit Chowdhuri, V. Dhingra, S. Chaudhary, and A. Kapoor - AIP Conference Proceedings 1728, 020579 (2016); **[DOI: 10.1063/1.4946630]**, Published by AIP Publishing. ISBN: 978-0-7354-1375-7

6. “Detection of TATP precursor acetone at trace levels using rf sputtered SnO_2 thin film-based sensors”, Arijit Chowdhuri, Anjali Sharma, and Vinay Gupta, Proceedings of SPIE 8018, Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) Sensing XII, 80181V (4 June 2011); **[DOI: 10.1117/12.883761]**

7. “Fabrication of SnO2 thin film based electronic nose for industrial environment”, Divya Haridas, Arijit Chowdhuri, K. Sreenivas and Vinay Gupta, Proc. of IEEE Sensors Applications Symposium (SAS), 2010, held in Limerick, Ireland from 23 – 25 February 2010 Art. no. 5439413, pp. 212-15

8. “Enhanced Response Characteristics of SnO2 Thin Film Loaded with Nanoscale Catalytic Clusters for Methane Gas” - Divya Haridas, Arijit Chowdhuri, K. Sreenivas and Vinay Gupta; under Symposium Y: Nanomaterials Integration for Electronics, Energy, and Sensing at MRS 2010 Fall Meeting held from 29th Nov. – 03 December 2010, Boston, MA, USA

9. “Bi-layered sensor structures (SnO2 film-CuO nanolayer) with improved response characteristics for H_2S gas” - Manish Verma, Arijit Chowdhuri, K Sreenivas, Vinay Gupta, Proceedings of International conference IEEE Sensors 2009, held at Christchurch, New Zealand from 25 – 28 October 2009, pp 1132 – 1134

10. “Enhanced photo-response of thermally treated zinc oxide ultra-violet photo detector with furnace method and pulsed laser irradiation” Rashmi Menon, Arijit Chowdhuri, Monika Tomar, K. Sreenivas, and Vinay Gupta, Proc. of International conference IEEE Sensors 2009, held at Christchurch, New Zealand from 25 – 28 October 2009, pp 437 – 440

11. “Enhanced oxygen adsorption activity by CuO catalyst clusters on SnO_2 thin film based sensors” Arijit Chowdhuri, Divya Haridas, K. Sreenivas and Vinay Gupta Proc. of Int’l Conf. on Sensing Technology (ICST) 2008, Tainan, Taiwan Nov 30 - Dec 03, 2008, pp 147.

12. “Enhanced LPG response characteristics of SnO_2 thin film based sensors loaded with Pt clusters” Divya Haridas, Arijit Chowdhuri, K. Sreenivas and Vinay Gupta Proc. of Int’l Conf. on Sensing Technology (ICST) 2008, Tainan, Taiwan Nov 30 - Dec 03, 2008, pp 119.

13. “Improved response of H2S gas sensors with CuO nanoparticles on SnO2 film” Arijit Chowdhuri, Vinay Gupta, R. Kumar, P. K. Patanjali, S. Mozumdar and K. Sreenivas, Proc. of IEEE Sensors 2003 Intl. Conference held in Toronto, Canada from 22 - 24 October 2003.

14. “Enhanced catalytic activity of ultra-thin CuO islands on SnO_2 thin films for fast response H2S gas sensors” Arijit Chowdhuri, Vinay Gupta and K. Sreenivas, Proc. of IEEE Sensors 2002 Conference, Orlando, Florida, USA, 11-14 June 2002, pp 430-434

Papers in refereed National Journals

1. ‘Gauging the nature and magnitude of Particulate Matter (PM) concentrations in Bengaluru, the IT capital of India - Charu K. Gupta, Jatinder Pal Singh, Priya Chopra, V. Bhasker Raj and Arijit Chowdhuri – **DU Journal of Undergraduate Research and Innovation** Volume 3, Issue 2, **(2017)** pp 71-81 **[ISSN: 2395-2334]**

2. ‘A particulate Matter Based Real-Time Analysis of Odd-Even Car Experiment in Delhi’ -

Charu Khosla Gupta, Shweta Singh, Abhishek Singh, Pragya Yagnik, Bishal K. Das and Arijit Chowdhuri – **DU Journal of Undergraduate Research and Innovation** Volume 2 , Issue 1 **(2016)** pp 31- 39 **[ISSN: 2395-2334]**

3. "Assuaging Human Health Concerns Through Analysis of Physicochemical Parameters of Potable Water Samples in Delhi" – Arijit Chowdhuri, Bishal K. Das, Shweta Singh and Charu K. Gupta, Journal of **Innovation for Inclusive Development (JIID),** 1 (1) **(2016)** 20 – 25. **[ISSN: 2456 - 4478]**

4. "Influence of CuO catalyst in the nano-scale range on SnO_2 surface for H_2S gas sensing applications" Vinay Gupta, S. Mozumdar, Arijit Chowdhuri and K. Sreenivas, **Pramana** Vol. 65 No. 4, **October 2005,** pp 647-652.

Abstracts in International Conferences (refereed):

1. "Estimating air pollution tolerance index of some native tree species in Delhi using UV-Vis spectroscopy" – Nitin Joshi, Arijit Chowdhuri and Charu Khosla Gupta, 2nd Int'l Conference on Advanced Functional Materials and Devices" **(AFMD-2023)**, 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, INDIA pp 143

2. "Correlation between Pulsed Laser Energy and magnetic property of BiFeO3 thin films" – Shiva Lamichhane, Savita Sharma, Monika Tomar, Arijit Chowdhuri, 2nd Int'l Conference on Advanced Functional Materials and Devices **(AFMD-2023)**, 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, INDIA pp 159

3. "Estimation of particulate matter exposure experienced by an undergraduate student in Delhi on a daily basis" – Sruthi S. Kumar, Jay Kumar Sirmoria, Arijit Chowdhuri and Charu Khosla Gupta, 2nd Int'l Conference on Advanced Functional Materials and Devices **(AFMD-2023)**, 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, INDIA pp 162

4. "Room temperature NO2 sensing performance of WO3 coated Quartz Crystal Microbalance (QCM)" – Jatinder Pal Singh, Ajay Kumar Sao, Anjali Sharma, Monika Tomar and Arijit Chowdhuri, 2nd Int'l Conference on Advanced Functional Materials and Devices **(AFMD-2023)**, 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, INDIA pp 230

5. "CdS thin film based QCM sensor for the efficient detection of NO2 gas at room temperature" – Ajay K. Sao, Jatinder Pal Singh, Anjali Sharma, Monika Tomar and Arijit Chowdhuri, 2nd Int'l Conference on Advanced Functional Materials and Devices **(AFMD-2023)**, 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, INDIA pp 242

6. "Development of triboelectric Nanogenerator based on Lead Free KNN-PVDF Composite" – Babita Sharma, Anjali Sharma, Reema Gupta, Arijit Chowdhuri and Monika Tomar, 2nd Int'l Conference on Advanced Functional Materials and Devices

(AFMD-2023), 13 – 15 March 2023, organized by Atma Ram Sanatan Dharma College (University of Delhi) Dhaula Kuan, New Delhi – 110 021, INDIA pp 257

7. Correlation between Pulsed Laser Energy and magnetic property of BiFeO3 thin films - Shiva Lamichhane, Savita Sharma, Monika Tomar and Arijit Chowdhuri – International Conference on Electron Microscopy **(EMSI – 2023)**, 8 – 10 February 2023 organized by Electron Microscopy Society of India and University of Delhi at Conference Centre, University of Delhi, Delhi, INDIA pp 338

8. "Microbes as natural crusader for pollutants in air" - Aishwary Kumar Chaturvedi, Mayank Yadav, Arijit Chowdhuri and Charu Khosla Gupta, 7th Annual International Conference of Indian Network for Soil Contamination Research **(INSCR)**, 7 – 11 November 2022 pp 140

9. "Enhanced thermal stability of bio-degradable polymer and graphene oxide blend with inverse spinel iron oxide nanomaterial" – Manisha Verma, Drashya Gautam, Geetu Gambhir, Sanjeeta Rani, Arijit Chowdhuri and Sunita Hooda, International Conference on Nanotechnology: Opportunities & Challenges (ICNOC – 2022), 28 – 30 November 2022, Jami Milia Islamia, New Delhi , INDIA pp-C 153

10. "Air Pollution Tolerance Index (APTI) – a tool to measure pollution tolerance in some native trees of Delhi" - Sruthi S. Kumar, Jay Kumar Sirmoria, Yash Mangla, Arijit Chowdhuri and Charu Khosla Gupta, 7th Annual International Conference of Indian Network for Soil Contamination Research **(INSCR)**, 7 – 11 November 2022 pp 159

11. "Enhanced resistive switching characteristics in BFO/WO3 bilayer thin film structure" – Shiva Lamichane, Savita Sharma, Monika Tomar and Arijit Chowdhuri - International Online Conference on Nano Materials **(ICN 2022)** 12 – 14 August 2022 organized by Mahatma Gandhi University, P.D Hills P.O, Kottayam, Kerala, India

12. "Integrated Miniaturized Biosensor for detection of Uric Acid" – Jatinder Pal Singh, Kajal Jindal, Monika Tomar and Arijit Chowdhuri, at International Conference on Recent Advances in Nano Medical Sciences **(RANMS-2022)** held from 22 – 23 June 2022 at Vallabhbhai Patel Chest Institute
University of Delhi pp 150

13. "Enhancing water filtration capacities by tailoring interlayer spacings of Graphene Oxide (GO) membranes" – Amit Garg, Arijit Chowdhuri and Shani Kumar – 3rd International Conference on Materials Science and Materials Chemistry, 14 – 15 October 2019, Vienna, AUSTRIA, pp 40.

14. "Room temperature detection of H_2 and H_2S gases by Graphene oxide (GO) films using Surface Plasmon Resonance (SPR) technique" – Anshuman Tripathi, Yogesh Shukla, Akash Gupta, Shani Kumar, Amit Garg and Arijit Chowdhuri – **International Conference on Advanced Materials Energy & Environmental Sustainability (ICAMEES-2018)** 14 – 15 December 2018, University of Petroleum & Energy Studies, Dehradun, Uttarakhand, INDIA pp 37

15. "Preliminary studies on estimating the composition and concentration levels of

dangerous metals in fine dust at Dariba Kalan, Delhi: human health concerns" - Charu Khosla Gupta, Jatinder Pal Singh, Priya Chopra and Arijit Chowdhuri – **International Symposium on Ciliate Biology (ISCB 2018)** 4 – 6 April 2018, India Habitat Centre, New Delhi, INDIA pp 108

16. "Potential health risks arising from Ambient Air Pollution (AAP) due to variation in PM10, SOx, NOx and CO concentration levels in New Delhi, Bengaluru (India) and Ljubljana (Slovenia): A spatio-temporal study" - Arijit Chowdhuri, Priya Chopra, Jatinder Pal Singh, Anju Gupta and Charu Khosla Gupta – **International Symposium on Ciliate Biology (ISCB 2018)** 4 – 6 April 2018, India Habitat Centre, New Delhi, INDIA pp 111

17. "NiO-SnO_2 heterostructure thin films based low temperature SO_2 gas sensor" – P. Tyagi, A. Sharma, Arijit Chowdhuri, Monika Tomar and Vinay Gupta – **6th International Symposium on Integrated Functionalities (ISIF - 2017)** 10 - 13 December 2017, Hotel Shangri-La Eros, New Delhi, INDIA pp 99

18. "Measuring ambient air pollution using data envelope analysis with principal components: an exposure – response assessment" - Arijit Chowdhuri, Charu Khosla Gupta, V. Bhasker Raj, and Vineet Kumar Singh - **3rd International Conference On Environmental Science and Technology (ICOEST - 2017)** 19 – 23 October 2017, Budapest, HUNGARY pp 46 **[ISBN 978-605-83575-6-3]**

19. "Preliminary assessment of simultaneous emission of $PM_{0.5}$, $PM_{2.5}$ and CO from incense and mosquito repellents contributing to non-discernible pollution within Asian households" - Charu Khosla Gupta, V. Bhasker Raj, Arijit Chowdhuri - **3rd International Conference On Environmental Science and Technology (ICOEST - 2017)** 19 – 23 October 2017, Budapest, HUNGARY pp 47 **[ISBN 978-605-83575-6-3]**

20. "Comparison of water purification properties of Cu and Ag nanoparticles decorated Graphene Oxide (GO) membranes" - Shani Kumar, Amit Garg and Arijit Chowdhuri - **2nd International Conference on Recent Advances in Nanoscience and Nanotechnology-2016 (ICRANN-2016)**, 19 – 20 December, 2016, Special Centre for Nano Sciences, Jawaharlal Nehru University, New Delhi-110067 pp 44

21. "Graphene Oxide (GO) thin films loaded with Cu and Ag nanoparticles for gas sensing applications"
    - Vishal Dhingra, Shani Kumar, Amit Garg and Arijit Chowdhuri - **2nd International Conference on Recent Advances in Nanoscience and Nanotechnology-2016 (ICRANN-2016),** 19 – 20 December, 2016, Special Centre for Nano Sciences, Jawaharlal Nehru University, New Delhi-110067 pp 107

22. "Comparison of atmospheric mercury (Hg^0) concentration levels in air at Hg mine area in Idrija, Slovenia and wholesale gold market in Dariba Kalan, Delhi, India" – Charu K. Gupta, David Kocman and Arijit Chowdhuri, **International Conference on Strategies for Environmental Protection and Management (ICSEPM - 2016)** held from 11 – 13 December 2016 at Jawaharlal Nehru University, New Delhi – 110 067, INDIA pp O3 – O4

23. "Remote monitoring of landfill gas concentrations in real-time from MSW landfills in Delhi using portable and autonomous Electronic Nose" – Arijit Chowdhuri and Charu K. Gupta, **International Conference on Strategies for Environmental Protection and Management (ICSEPM - 2016)** held from 11 – 13 December 2016 at Jawaharlal Nehru University, New Delhi – 110 067, INDIA pp ES 2 – ES 3

24. "Development of Graphene Oxide (GO) membrane embedded with Cu nanoparticles for water purification applications" - Shani Kumar, Amit Garg and Arijit Chowdhuri, **International Conference on Advances in Nanomaterials and Nanotechnology (ICANN - 2016)** held from 4 – 5 November 2016 at Jamia Milia Islamia, New Delhi – 110 025, INDIA pp 401 [ISBN: 978-93-85000-94-2]

25. "Investigating gas sensing mechanism of Graphene Oxide (GO) thin films through cross-selectivity to various gases" - Shani Kumar, Vishal Dhingra, Amit Garg and Arijit Chowdhuri - Proc. of **International Conference on Condensed Matter and Applied Physics (ICC 2015)**, 30 – 31 October 2015, Bikaner, Rajasthan INDIA pp 928

26. "Detection of trace-level H_2S, SO_2 and H_2 gas concentrations using nanocrystalline SnO_2 thin films loaded with CuO nanoparticles" – Charu K. Gupta and Arijit Chowdhuri, Proc. of **22nd International Symposium on Environmental Biogeochemistry (ISEB 2015)** 28th September – 2nd October 2015 Piran-Portoroz, SLOVENIA pp 91

27. "Real-time measurement of gaseous emissions from unrestrained MSW landfills located in Delhi, India using Electronic-Nose (E-Nose)" – Arijit Chowdhuri, Shubham Raj and Charu K. Gupta, Proc. of **22nd International Symposium on Environmental Biogeochemistry (ISEB 2015)**, 28th September – 2nd October 2015 Piran-Portoroz, SLOVENIA P - 49, pp 142

28. "Significant amount of Carbon Monoxide (CO) generation with heater operation within the microenvironment of a closed car cabin" – Charu K. Gupta, Nikhil Kumar, Saptarshi Chakrabarty and Arijit Chowdhuri, Proc. of **22nd International Symposium on Environmental Biogeochemistry (ISEB 2015)** 28th September – 2nd October 2015 Piran-Portoroz, SLOVENIA P – 50, pp 143

29. "Carbon monoxide (CO) generation within the micro-environment of households through regular usage of popular incense and anti-mosquito repellants" – Shweta Singh, Pragya Yagnik, Charu K. Gupta and Arijit Chowdhuri, Proc. of **3rd Indo-UK seminar on Recent Advances in Chemical Sensor (IUCRACS 2015)**, 25 – 26 August 2015, Gargi College (University of Delhi) INDIA pp 21

30. "An investigation of the physico-chemical parameters of water samples in Delhi: estimating potable quality and assuaging human health concerns" - Arijit Chowdhuri and Charu K. Gupta, Proc. of **7th Int'l Congress of Environmental Research (ICER – 2014),** 26 – 28 December 2014, RVC College of Engineering, Bengaluru, INDIA pp 266 **[ISBN : 978-81-909379-7-9]**

31. "Indoor and outdoor pollutant gas sensing using ultra low-cost electronic nose" - Charu K. Gupta and Arijit Chowdhuri - Proc. of **7th Int'l Congress of**

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32. "Gas sensing characteristics of graphene oxide loaded with nanocrystalline ZnO clusters" – Shani Kumar, Vishal Dhingra, Amit Garg and Arijit Chowdhuri, Proc. of **Int'l Conference on Recent Advances in Nanoscience and Nanotechnology (ICRANN 2014),** 15 – 16 December 2014 Special Centre for Nanoscience Jawaharlal Nehru University, New Delhi – 110 067, INDIA pp 91

33. "Low cost 'Smart' switch for designing Electronic Nose (E-Nose) for gas sensing applications" - Nikhil Kumar, Saptarshi Chakrabarty, Shobha Badola, Sunita Narang, Charu K. Gupta and Arijit Chowdhuri, Proc. of **2nd Int'l Conference on Innovative Trends in Applied Physical, Chemical, Mathematical, Statistical Sciences and Emerging Energy Technology for Sustainable Development" (APCMSET-2014)**, 19 – 20 July 2014, Jawaharlal Nehru University, New Delhi – 110 067, INDIA

34. "Using mobile phones with android OS for measuring hazardous gas concentrations detected using Electronic Nose (E-Nose)" - Prayas Tiwari, Ashish Pokhriyal, Pankaj Rawat, Charu K. Gupta, Sunita Narang and Arijit Chowdhuri, Proc. of **2nd Int'l Conference on Innovative Trends in Applied Physical, Chemical, Mathematical, Statistical Sciences and Emerging Energy Technology for Sustainable Development" (APCMSET-2014)**, 19 – 20 July 2014, Jawaharlal Nehru University, New Delhi – 110 067, INDIA

35. "Effect of spinner rotation speed and post-annealing on the optical constants of ZnO thin film" - Arijit Chowdhuri, Pinky Rehman, V. Bhasker Raj and Amit Garg, Proc. of **Int'l Conf. on Innovative Trends in Applied Physical, Chemical, Mathematical Sciences and Emerging Energy Technology for Sustainable Development (APCMET-2014),** 19 – 20 April 2014, Jawahar Lal Nehru University, New Delhi, INDIA

36. "Evaluation of physico-chemical parameters of potable water in Delhi: human health concerns" Abdul Jafar, Abhishek Srivastava, Amit Dubey, Arijit Chowdhuri and Charu K. Gupta, Proc. of **1st Indo – UK seminar on Recent Advances in Chemical Sensors (UGC-UKIERI IUCRACS-2014)** 10 -11 February 2014, Gargi College, New Delhi-110 049, INDIA pp 28

37. "An investigation of CO_2 generation characteristics of commercially available antacid (ENO) of different flavours (Cola, Orange and Lemon)" Sandal Azhar, Prithvi Singh, Sunita Narang, Subhash Kumar, Charu K. Gupta, Arijit Chowdhuri, Proc. of **1st Indo – UK seminar on Recent Advances in Chemical Sensors (UGC-UKIERI IUCRACS-2014)** 10-11 February 2014, Gargi College, New Delhi-110 049, INDIA pp 28

38. "Surface Plasmon Resonance Study on Effect of Momordica Charantia L. (Bitter gourd on Glucose", Shibu Saha, Arijit Chowdhuri, Navina Mehan, K. Sreenivas and Vina Gupta Proc. of **Intl. Conference Nanophotonics Downunder 2009: Devices an Applications (SMONP 2009)** Melbourne, Australia 21 – 24 June 2009, pp 251

39. "Photo-conductive studies of Zinc oxide Nanowires grown by Vapour-Liquid-Soli

method", Rashmi Menon, Arijit Chowdhuri, H.H. Tan, C. Jagadish, K. Sreenivas an Vinay Gupta Proc. of **Intl. Conference Nanophotonics Downunder 2009: Device and Applications (SMONP 2009)** Melbourne, Australia 21 – 24 June 2009, pp 249

40. "Trace level H_2S gas detection with sputtered SnO_2 thin films loaded with CuO nanoparticles" Arijit Chowdhuri, Vinay Gupta and K. Sreenivas Proc. of **Indo-Australia Symposium on Multifunctional Nanomaterials, Nanostructures and Applications (MNNA 2007)**, University of Delhi, Delhi – 7, INDIA, 19 - 21 Dec. 2007, P – 133

41. "Ultra-thin CuO film on SnO_2 in the nano-scale range for H_2S gas sensing" Arijit Chowdhuri, P. Sharma, Vinay Gupta, K. Sreenivas and K. V. Rao Proc. of **NANO-2002 Intl. Conference,** Orlando, Florida, USA 16-20 June, 2002, No. PC4.6

42. "Fast response H_2S gas sensing characteristics with ultra-thin CuO islands on sputtered SnO_2" Arijit Chowdhuri, Vinay Gupta and K. Sreenivas, **Intl. Meeting on Chemical Sensors 9 (IMCS-9)**, Boston, USA, 7-10 July, 2002, pp 149.

Abstracts in National Conferences

1. "Carbon Dioxide (CO_2) detection at room temperature using Graphene Oxide (GO) coating on Quartz Crystal Microbalance (QCM)" – Jatinder Pal Singh, Siddharth Das, Priya Chopra, Shani Kumar, Amit Garg, Charu Khosla Gupta and Arijit Chowdhuri – **2nd National Conference on New Trends in Nanotechnology and Applications (NTNA – 2020)**, 06 – 07 February 2020 held at Atma Ram Sanatan Dharma College (University of Delhi) – OT 11 – **This work received best Oral Presentation award**

2. "Investigating carbon dioxide gas sensing characteristics of Graphene oxide (GO) films using a Quartz Crystal Microbalance (QCM) based device" – Siddharth Das, Jatinder Pal Singh, Akash Gupta, Shani Kumar, Amit Garg and Arijit Chowdhuri - **National Seminar on New Trends in Nanotechnology and Applications (NTNA - 2018)**, 27 – 28 September 2018 held at Atma Ram Sanatan Dharm College (University of Delhi) pp 03

3. "Investigating H_2 and H_2S gas mechanism of Graphene oxide (GO) films using Surface Plasmon Resonance" – Anshuman Tripathi, Yogesh Shukla, Shani Kumar, Amit Garg and Arijit Chowdhuri – **National Seminar on New Trends in Nanotechnology and Applications (NTNA-2018),** 27 – 28 September 2018 held at Atma Ram Sanatan Dharm College (University of Delhi) pp 05

4. "Investigating the effect of Cadmium and ethidium bromide on DNA using Surface Plasmon Resonance (SPR) technique" – Charu Khosla Gupta, Chaitanya Raj, Senjuti Sengupta, Ravi Toteja, Seema Makhija, and Arijit Chowdhuri – **National Seminar on New Trends in Nanotechnology and Applications (NTNA-2018)**, 27 – 28 September 2018 held at Atma Ram Sanatan Dharm College (University of Delhi) pp 17 – **This work received Best Paper Award**

5. "Study of Particulate Matter Pollution in Different Modes of Public Transport in New Delhi, India" Charu Khosla Gupta, Medha Jha, Manohar S. Bisht and Arijit Chowdhuri – **4th National Symposium on Environment: Green Technology for**

Environmental Sustainability, 25 September 2018 held at Deshbandhu College (University of Delhi) pp 48

6. "Gauging the Comprehension about Environmental Awareness, Conservation and Sustainability Amongst Primary, Secondary and Undergraduate Students for Precisely Defining Exposure–Response Relationships of Pollution on Health" – Arijit Chowdhuri, Sakshi Saraswat, and Charu Khosla Gupta – **4th National Symposium on Environment: Green Technology for Environmental Sustainability**, 25 September 2018 held at Deshbandhu College (University of Delhi) pp 54

7. "Ambient air pollution (AAP) measurements using Electronic Nose at unrestrained MSW landfills located in Delhi" - Arijit Chowdhuri, Priya Chopra, Jatinder P. Singh, V. Bhasker Raj and Charu K. Gupta, Innovation Conclave - 2016 , 25 – 26 October 2016 held at Acharya Narendra Dev College (University of Delhi) pp 04

8. "Biological contamination in groundwater-an impending disaster" - Mayuri Mathuria, Pratyaksh Singh, Sarita Kumar, Arijit Chowdhuri and Charu Khosla Gupta, Innovation Conclave - 2016, 25 – 26 October 2016 held at Acharya Narendra Dev College (University of Delhi) pp 51

9. "Synthesis and characterization of metallic nanoparticles for water filtration units" - Harveen Kaur*, Manoj Kumar, Arijit Chowdhuri, Charu K Gupta and Sarita Kumar, Innovation Conclave - 2016, 25 – 26 October 2016 held at Acharya Narendra Dev College (University of Delhi) pp 67

10. "Addressing posteriori environmental concern 21st century – Clean potable drinking water in households" – Charu Khosla Gupta, Shweta Singh, Pragya Yagnik, Bishal K. Das, Sarita Kumar and Arijit Chowdhuri, National Seminar on Water and Air quality in urban ecosystem, 22 March 2016 held at Shivaji College (University of Delhi) pp 35.

11. "Synthesis and characterization of copper nanoparticles (CuNPs) for water – purification" - Rahul Roy, Gayatri Rai, Aarti Sharma, Arijit Chowdhuri, Charu K Gupta and Sarita Kumar 2016 **Second National Symposium on Environment: Greener Future and Awareness,** Deshbandhu College, University of Delhi, March 19, 2016, pp 20.

12. "Carbon monoxide (CO) pollution within micro-environment of households from hidden and non-discernible sources" - Charu Khosla Gupta, Pragya Yagnik, Shweta Singh and Arijit Chowdhuri, **National Conference on Recent Advances in Materials and Field Theory (NCRAMFT – 2K15),** 28 – 29 December 2015**,** held at Bhagwan Parashuram Institute of Technology (I. P. University) pp 28 **[ISBN 978-93-5254-054-9]**

13. "Particulate matter emissions from coal fired barbeque ovens – a potential source for pulmonary and cardiovascular diseases" - Charu Khosla Gupta, Shweta Singh, Pragya Yagnik, and Arijit Chowdhuri **National Conference on Recent Advances in Materials and Field Theory (NCRAMFT – 2K15),** 28 – 29 December 2015**,** held at Bhagwan Parashuram Institute of Technology (I. P. University) pp 36 **[ISBN 978-93-5254-054-9]**

14. "Heater operation within the closed confines of a car during winter months in Delhi: evidence of toxic CO generation" – Bishal K. Das, Arvind Mamgain, Charu K. Gupta and Arijit Chowdhuri, **National Conference on Climate Change: Impacts, Adaptation, Mitigation scenario and Future challenges in Indian perspective,** 02 – 03 March, 2015, held at University of Delhi, Delhi – 110 007 INDIA pp 32 **(ISBN: 978-93-5235-339-2)**

15. "Health effects of exposure to ambient carbon monoxide within closed office space as a result of room heater operation during winter months in Delhi" – Abhishek Singh, Shiwani Katiyar, Arijit Chowdhuri and Charu K. Gupta, **National Conference on Climate Change: Impacts, Adaptation, Mitigation scenario and Future challenges in Indian perspective**, 02 – 03 March, 2015, held at University of Delhi, Delhi – 110 007 INDIA pp 33 **(ISBN: 978-93-5235-339-2)**

16. "Unbalanced magnetron sputtered SnO_2 and SnO_2-CuO thin films for trace level H_2S gas sensing", Pawan Kumar, Subhash Kumar and Arijit Chowdhuri, **27th PSSI National Symposium on Plasma Science and Technology (PLASMA 2012)**, Pondicherry University, Puducherry, 10 – 13 December 2012, pp 237 - 239

17. "Influence of nanosized catalysts on trace level H_2S sensing characteristics of SnO_2 thin film based novel heterostructures", Arijit Chowdhuri, K. Sreenivas, and Vinay Gupta **7th National Conference on Physics (PANE 2010)**, Manipur University, Imphal, 05 – 06 December 2010, pp - 81.

18. "Integration of nano-scale catalysts with SnO_2 films for enhanced H_2S and LPG sensing", D. Haridas, M. Verma, Arijit Chowdhuri, K. Sreenivas, and Vinay Gupta **NANO SENSORS 2008, National Workshop on Nano Sensors and Devices**, IIT Delhi, 22 – 23 December 2008, Delhi pp - 81.

19. "Role of CuO nanoparticles in enhanced H_2S gas sensing characteristics on SnO_2 thin films" Arijit Chowdhuri, Vinay Gupta and K. Sreenivas **National Seminar on Multifunctional Nanomaterials, Nanostructures and Applications (MNNA 2006)**, Dept.of Physics & Astrophysics, Univ. of Delhi, Delhi – 110 007, INDIA, 22 - 23 December 2006**,** P – 79

20. "$LiNbO_3$ thin film SAW devices with zero TCD" Monika Tomar, Arijit Chowdhuri, Vinay Gupta and K. Sreenivas, **National Symposium on Ferroelectrics and Dielectrics (NSFD-XII)**, Poster presentation, Indian Institute of Science (I.I.Sc), Bangalore, INDIA in Dec 2003.

21. "Studies on catalyst-semiconductor interaction mechanisms using CuO-SnO_2 thin films" Arijit Chowdhuri and K. Sreenivas, **8th National Seminar on Physics and Tech. of Sensors (NSPTS-8)** held at IGCAR, Kalpakkam, Tamil Nadu, 27th Feb-1st March 2001, C 33.1 to C 33.3.

22. "Swift Heavy Ion bombardment effects on the micro-structure of CuO-SnO_2 films used for gas sensing applications" Arijit Chowdhuri and K. Sreenivas, **Mini-user workshop on Swift heavy Ions** held at Nuclear Science Centre, Delhi on 16th June 2000.

23. "Sensing of corrosion rates of Ag in H_2S using surface plasmon resonance technique" - N. Mehan, P. Sharma, Arijit Chowdhuri and A. Mansingh, **Proc. of 6th National seminar on Phys. and Tech. of Sensors (NSPTS-6)**, Thapar Institute of Engg. and Tech., Patiala, Punjab, 4-6th March 1999, C 19-1 to C 19-6.

24. "Sensing properties of evaporated and sputtered SnO_2-CuO thin films" Arijit Chowdhuri, P. Sharma, Vinay Gupta & K. Sreenivas, **Proc. of 6th National Seminar on Physics and Tech. of Sensors (NSPTS-6)**, Thapar Institute of Engg. and Tech., Patiala, Punjab, 4-6th March 1999, C 18-1 to C 18-7.

25. "Role of interstitial oxygen on the orientation of sputtered ZnO thin films" Vinay Gupta, Arijit Chowdhuri and Abhai Mansingh, **Xth National Symposium on Ferroelectrics and Dielectrics (NSFD-X)** held in IIT Madras from 16-18th December 1998.

Papers in Education / Open Education Research (OER) / E-learning course modules

Papers in International Refereed Journals in Education

1. "Virtual Learning Environment (VLE) - A platform to enhance quality education"- Charu K. Gupta and Arijit Chowdhuri, **International Journal on Education Growth and Research** Vol. II (I) 2017

2. "A novel OER initiative under University of Delhi's new Four Year Undergraduate Programme: an investigation into the Pedagogical Impact" (April 2014) – Arijit Chowdhuri and Charu Khosla Gupta - Video Journal of Open Education Abstracts Volume 1 (http://videolectures.net/arijit_chowdhuri/)

Papers in National Refereed Journals in Education

1. "Inclusion of environmental awareness as basic tenet of education in India for realization of sustainable practices"- Arijit Chowdhuri, Sakshi Saraswat, and Charu Khosla Gupta- Research Journal of Educational Sciences Volume 9 (2021) pp 1-8 [ISSN: 2321-0508]

Abstracts in International Conferences on Education (refereed)

1. The New Face of Education Beyond the Realms of the Regular Classroom: Innovation in Practice - Charu Khosla Gupta and Arijit Chowdhuri, **International Conference on Education 2023 (ICEDU 2023)** 16 – 17 March 2023, Bangkok, Thailand pp 106 **[ISBN 978-624-5746-34-7]**

2. The New Education Policy (NEP) – a Step Towards Equity in Education in India - Arijit Chowdhuri and Charu Khosla Gupta, **International Conference on Education 2023 (ICEDU 2023)** 16 – 17 March 2023, Bangkok, Thailand pp 24 [**ISBN 978-624-5746-34-7**]

3. "Investigating the role of ICT infrastructure in influencing the uptake of educational innovation and development of digital competencies amongst students in primary-education classrooms of Government funded schools in Delhi, INDIA" – Arijit Chowdhuri, Charu Khosla Gupta and Divya Mann – **International Conference on**

Education 2019 (ICEDU 2019) 5 – 7 April 2019, Kuala Lumpur, Malaysia pp 85 **[ISBN 978-955-3605-28-3]**

4. "Addressing issues of environmental pollution by initiating a paradigm shift in scientific temperament at the grass-root level of primary school education" Charu Khosla Gupta and Arijit Chowdhuri – **International Conference on Education 2019 (ICEDU 2019)** 5 – 7 April 2019, Kuala Lumpur, Malaysia pp 11**[ISBN 978-955-3605-28-3]**

5. "A novel OER initiative under University of Delhi's new Four Year Undergraduate Programme: an investigation into the Pedagogical Impact" – Arijit Chowdhuri and Charu K. Gupta, Proc. of **OCWC Global 2014: Open Education for a Multicultural World,** 23 – 25 April 2014, Ljubljana, SLOVENIA

Abstracts in National Conferences on Education (refereed)

1. "Gauging the Comprehension about Environmental Awareness, Conservation and Sustainability Amongst Primary, Secondary and Undergraduate Students for Precisely Defining Exposure–Response Relationships of Pollution on Health" – Arijit Chowdhuri, Sakshi Saraswat, and Charu Khosla Gupta – **4th National Symposium on Environment: Green Technology for Environmental Sustainability**, 25 September 2018 held at Deshbandhu College (University of Delhi) pp 54

Administrative Assignments

- Member, Internal College Complaints committee (July 2019 – 2022)
- Member, Paritantra, Environment Club (July 2018 – 2020)
- Convener, Innovation Conclave – 2016, 25 – 26 October 2016
- Convener, Finance committee (April 2014 – September 2019)
- Member, Finance Committee (January 2010 – March 2014, October 2019 – 2020)
- Convener, Fellowship Committee (April 2016 – July 2018)
- Convener, Professional Development Committee (April 2016 – July 2018)
- Teacher-in-charge, Physical Science (Electronics) (April 2014 – March 2016)
- Teacher-in-charge, Department of Physics (October 2006 – March 2008)
- Member, Alumni committee (April 2014 – March 2016)
- Convener, Editorial Committee (2010 – 2012)
- Member, Admission committee (Dept. of Physics) and IT Committee
- Convener of the NGPE examination at AND College (2004 – 2006) for undergraduate Physics students
- Member college purchase committee (2006 – 2008): IT and Physics Department
- Member of garden committee (2007 – 2009)
- Actively involved in installation of the University supplied Instruments and redesigning of existing laboratory
- Convener IT committee (2006 – 2008); conceptualized and designed the college's new
- dynamic website and initiated the process of online admission

Areas of Interest / Specialization

- Digital Electronics
- Artificial Olfaction & Electronic Nose
- Quartz Crystal Microbalance (QCM) based sensing

- Environment monitoring and exposure assessment
- Electromagnetic Interference (EMI) Shielding
- Developing portable autonomous sensor prototypes
- Experimental Material Science (2-D materials, Nanotechnology, RF Sputtering, Thermal Evaporation, ALD, PLD, HFCVD, maskless lithography, wafer dicing, wire bonding)

Subjects Taught

- Digital Systems and applications
- Analog Systems and applications
- Physics of Materials
- Electronic Instrumentation
- Network Analysis