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Dr. Akash Roy

Objective To endeavour with my skills, intentions, and spirit of learning in the field of education and research.

Education **PhD, Physics, 2011,**
Lucknow University, Lucknow
Guide: Prof. Narendra Kumar Pandey

M.Sc., Physics, Christ Church College, Kanpur, C.S.J.M University,
Kanpur, 67.5%
B.Sc., Physics, Lucknow Christian College, Lucknow, University
of Lucknow

Achievement

- **Membership:** Member of Applied Physics Society (APS) of “International Association of Computer Science and Information Technology”, Singapore.
- **Member** of “Indian Association of Physics Teachers” Life membership No: L9768.
- **Editorial Board member** of “Sensors and Transducers Journal” of IFSA, Barcelona, **Spain**.
- **Editorial Board member** of “International Journal of Materials Science and Applications” of Science Publishing Group, New York, **USA**.
- **Ex-Editorial Board Member** of “American Journal of Nanosciences” of Science Publishing Group, New York, **USA**.
- **Ex-Editorial Board Member** of “International Journal of Engineering, Technology, Science and Research”.
- **Ex-Editorial Board Member** of “International Journal of Materials, Mechanics and Manufacturing”.
- **Advisory member** of “Academics World” membership ID: AW24536C.
- **Organizing Committee member** of “Institute for Scientific and Engineering Research”.
- **Committee member** of “International Academy of Science, Technology, Engineering and Management.”
- **International Program Committee member** of “XII International Conference on Sensors and Electronic Instrumentation Advances (SEIA’ 2026) held in Granada, **Spain** on 30 September – 2 October 2026.
- **Technical Program Committee Member** of “2019 2nd Environment, Climate Change and Sustainable Development’ (ECCDD 2019)” held in Shanghai, **China** during 22-23 September 2019.

- **Technical Committee Member** of “2019 3rd European Conference on Materials, Mechatronics and Manufacturing” (ECMMM 2019) held in **Amsterdam, Netherland** during February 16-18, 2019.
- **Technical Program Committee Member** of “2nd International Conference on Functional Materials and Biomaterials” held in Saina, Hainan, **China** on 23-24 Nov. 2018.
- **International Technical program Committee member** of “The 2nd International Workshop on Material Sciences and Mechanical Engineering” held in Qingdao, Shandong Province, **China** on 26-28 October 2018.
- **Technical Program Committee Member** of “2018 2nd International Conference on Advances in Management Science and Engineering” held in **Xi’an, China** on 24-25 June, 2018.
- **Technical Committee Member** of “2nd European Conference on Materials, Mechatronics and Manufacturing” (ECMMM 2018) held in **Krakow, Poland** during February 10-12, 2018.
- **Technical Program Committee Member** of “European Conference on Materials, Mechatronics and Manufacturing” (ECMMM 2017) held in **Paris, France** during February 15-17, 2017.
- **Technical Program Committee Member** of “2017 International Conference on Energy, Power and Environmental Engineering” (ICEPEE 2017) held in **Shanghai, China** on 23-24 April 2017.
- **Technical Program Committee Member** of “3rd Annual International Workshop on Materials Science and Engineering” held in Guangzhou, **Guangdong, China** on Sep. 8-10, 2017.
- **Technical Program Committee Member** of “International Conference on Functional Materials and Biomaterials” held in Yichang, **Hubei, China** on Nov. 17-19, 2017.
- **Editorial Board member** of “International Conference on Emerging Trends of Engineering, Science, Management and its Applications’ 15” held in JNU convention Centre, New Delhi, India on 1st March 2015.
- **Technical Program Committee Member** of “International Conference on Recent Development in Engineering, Science, Management” (ICRDESM’15) held in YMCA, 1 Jai Singh Road, Connaught Palace, New Delhi on 2nd May 2015.
- **Organizing Committee Member** of “5th National Conference on Nanotechnology and Materials Science” (NATCON NAMTECH) organized by Department of Physics, University of Lucknow on 21-23 Dec 2013.
- **Reviewer** of several International Journals and International conferences.
- **Regular reviewer** of “Advanced Materials Research” (Scopus Indexed Journal) of Trans Tech Publications, **Switzerland**, “Journal of Nano Research” (Scopus Indexed Journal) of Trans Tech Publications, **Switzerland**, “Journal of Porous materials” (SCIE Journal) of Springer Nature, **Netherlands**, “International Journal of Materials Science and Applications” of Science Publishing Group, New York, **USA** and Journal of Materials Science: Materials in Electronics (SCIE Journal) of Springer Nature, **Netherlands**.
- Three papers are accepted/published in Proceedings of International Conferences held in **Italy, New Zealand** and **China**.
- **International Journal Publications:** 14
- **Publication (including Abstract) in International Conference proceedings:** 21, **National Conference Proceedings:** 37
- **Citations:** 283.
- **h-index:** 9; **i10-index:** 9.
- Five days On-Line **FDP** on Universal Human Values in Technical Education organized by All India Council for Technical Education (AICTE) from 19th July 2021 to 23 July 2021 at HETC, Hooghly.

- Participated in IAPT, RC-15 Convention 2026 organized by Indian Association of Physics Teachers (Regional Council 15) held at Victoria Institute (College), Kolkata, 700009 on Jan 11, 2026.

Job Profile

Associate Professor of Physics in Department of Basic Science and Humanities, Dream Institute of Technology.

Computers

Basic knowledge of computer

Experience

August 2022 – Till date	Dream Institute of Technology, ECE, Samali, Thakurpukur-104 Associate Professor of Physics (Department of BSHU)
Jan. 2014 – August 2022	Hooghly Engineering and Technology College, Pipulpati, Hooghly, Assistant Professor of Physics, (Dept. BSH)
June 2012 – January 2014	Inderprastha Engineering College, Ghaziabad, India. Assistant Professor of Physics, (Dept. BSH).
July 2011 – June 2012	Maharana Pratap Engineering College, Kanpur Sr. Lecturer of Physics.
Jan. 2011 – July 2011	Aryavart Institute of Technology and Management, Lucknow, Lecturer.
Jan. 2010 – Jan. 2011	Saroj Institute of Technology and Management, Lucknow Lecturer.

Technical Skills

NA

List of

Publications

International Journal

1. N.K. Pandey, Anupam Tripathi, Karunesh Tiwari, **Akash Roy**, Amit Rai, Priyanka Awasthi, Aradhana Mishra, Alok Kumar, "Morphological and Humidity Sensing Studies Of WO₃ Mixed With ZnO And TiO₂ Powders", *Sensors and Transducers Journal*, Vol 96, Issue 9, pp.42-46, Sept 2008.
2. N.K. Pandey, A. Tripathi, K. Tiwari, **A. Roy**, "Relative Humidity Sensing Studies of WO₃-ZnO nanocomposite", *Advance Materials Research* Vol 79-82 pp.365-368, 2009.
3. N. K. Pandey, **Akash Roy**, Alok Kumar, "Characterization of WO₃-SnO₂ Nanocomposites and Application in Humidity Sensing", *Sensors & Transducers Journal*, Vol. 125, Issue 2, pp. 89-99, February 2011.
4. N.K. Pandey, Karunesh Tiwari, **Akash Roy**, "Moisture Sensing Application of Cu₂O Doped ZnO Nanocomposites", *IEEE Sensors Journal*, Volume: 11 Issue 9 pp.2142 – 2148, September 2011.
5. Narendra Kumar Pandey, Karunesh Tiwari, **Akash Roy**, "Characterization and Humidity Sensing Application of ZnO-TiO₂ Nanocomposite", *Advanced Materials Research* Vol. 304 (2011) pp 48-52.
6. N K Pandey, KaruneshTiwari, **Akash Roy**, Synthesis and characterization of WO₃ nanomaterials, *J Biomed Nanotechnol.* 2011 Feb, 7 (1), 156-7, 21485849._
7. N.K. Pandey, KaruneshTiwari, **Akash Roy**, Ag Doped WO₃ Nanomaterials as Relative Humidity Sensor, *IEEE Sensors Journal*, Volume: 11 Issue 11 pp.2911 – 2918, September 2011.
8. "Ag Loaded WO₃ Ceramic Nanomaterials; Characterization and moisture Sensing Studies", Narendra Kumar Pandey, KaruneshTiwari, **Akash Roy**, and Aradhana Mishra, Anil Govindan, *Int. J. Appl. Ceram. Technol.*, 1–10 (2012).

9. "Humidity Sensor Based on Synthesized $\text{WO}_3\text{-SnO}_2$ Nanocomposites", **Akash Roy**, N. K. Pandey, Vandana Shakya, Alok Kumar, American Scientific Publishers, Energy Environ. Focus Vol. 2, No. 2, pp. 126-132, June 2013.
10. "Application of Undoped and Al_2O_3 -Doped ZnO Nanomaterials as Solid-State Humidity Sensor and Its Characterization Studies", Misra S.K., Pandey, N.K., Shakya, V., **Roy, A.**, *IEEE Sensors Journal*, Vol. 15, Issue 6, Pages 3582 – 3589, 2015.
11. "Characterization of Synthesised and Unsynthesised $\text{WO}_3\text{-SnO}_2$ Nanocomposites", **Akash Roy**, N.K. Pandey, Vandana Shakya, Suneet Kumar Misra, Sanchita Singh, Anoop Kumar and Alok Kumar, J. Sci. and Tech. Res., Vol.3, No.2, Dec. 2013 (4-7) ISSN No. 2278-3350.
12. Characterization of Nanocomposites of $\text{WO}_3\text{-SnO}_2$ and Its Application as a Moisture Sensors, **Akash Roy**, N. K. Pandey, Vandana Sakya, Suneet Misra, Sanchita Singh, Anoop Kumar, and Alok Kumar, Adv. Sci. Lett., Vol. 22, No. 1, pp.188-192, Jan 2016.
13. "ZnO-TiO₂ Nanocomposite; Characterization and moisture Sensing Studies", N.K. Pandey, Karunesh Tiwari, **Akash Roy**, Bull. Mater. Sci., *Springer*, Vol. 35, No. 3, June 2012, pp. 347–352.
14. Electrical and Optical Properties of ZnO- WO_3 Nanocomposites and its Application as Solid State Humidity Sensor, Vandana Sakya, Suneet Kumar Misra, N.K. Pandey and **Akash Roy**, Bull. Mater. Sci., *Springer*, Vol. 40, Issue 2, April 2017, 253-262

International Conferences Proceedings:

1. "Characterization of Nanocomposites of $\text{WO}_3\text{-SnO}_2$ and its Application as a Moisture Sensor" Akash Roy, N.K. Pandey, Vandana Shakya, Suneet Misra, Sanchita Singh, Anoop Kumar, **Alok Kumar**, The First International Conference on Emerging Materials: Characterization & Application, organized by CGCRI, Kolkata, 4-6 Dec, 2014, page-87.
2. "Characteristics of SnO_2 doped WO_3 nanomaterials as a Solid-State Humidity Sensor", N.K. Pandey, Vandana Shakya, Suneet Kumar Misra, **Akash Roy**, International Conference on Nanoscience & Nanotechnology (ICNN-2013), 18-20 November, 2013, Organized by Department of Applied Physics, School for Physical Sciences, BBAU, Lucknow, pp-211.
3. "Humidity Sensor Based on Synthesized Pure WO_3 and $\text{WO}_3\text{-SnO}_2$ Nanocomposite", N. K. Pandey, **Akash Roy**, K. Tiwari, A. Mishra, A. Rai, S. Jayaswal, Rashmi, Madhvendra, A. Govindan, Paper No.67, p. 185-186, 1st International Symposium on Physics and Technology of Sensors (ISPTS-1), 8-10 March, 2012, Pune, India.
4. "NO₂ sensing studies of WO_3 and Ag doped WO_3 prepared through sol-gel route", N. K. Pandey, **Akash Roy**, K. Tiwari, A. Mishra, A. Rai, S. Jayaswal, Rashmi, Madhvendra, A. Govindan, Paper No.189, p. 305-307, 1st International Symposium on Physics and Technology of Sensors (ISPTS-1), 8-10 March, 2012, Pune, India.
5. "Moisture Sensing Studies of $\text{WO}_3\text{-SnO}_2$ Nanocomposites", N.K. Pandey, **A. Roy**, A. Tripathi, K. Tiwari, A. Rai, P. Awasthi, A. Mishra, Alok Kumar, International Conference on Nanotechnology and Biosensors, 20-21, Raghu Engineering College, Visakhapatnam, A.P., p.41, January, 2010.
6. "Humidity Sensor based on Pure ZnO Nanomaterials", N.K. Pandey, K. Tiwari, A. Rai, **A. Roy**, A. Mishra, P. Awasthi, International Conference on Nanotechnology and Biosensors, 20-21, Raghu Engineering College, Visakhapatnam, A.P., p.161, January, 2010.
7. "Morphological and Humidity Sensing Studies of WO_3 mixed with Silver Powder", N.K. Pandey, A. Mishra, K. Tiwari, A. Rai, **A. Roy**, P. Awasthi, International Conference on Nanotechnology and Biosensors, 20-21, Raghu Engineering College, Visakhapatnam, A.P., p.167, January, 2010.
8. "Study of SnO_2 doped TiO_2 as Humidity sensor", N.K. Pandey, Rai Amit, Tiwari Karunesh, **Roy Akash**, Mishra Aradhana, Awasthi Priyanka, Proc. International Conference on Nanoscience and Nanotechnology (ICONN 2010) SRM University, Chennai, India, 2010, pp.147-148, 24-26 February 2010.
9. "Humidity Sensor Based on $\text{WO}_3\text{-SnO}_2$ Nanocomposite", N.K. Pandey, **Roy Akash**, Tiwari Karunesh, Rai Amit, Awasthi Priyanka, Mishra Aradhana, Proc. International Conference on Nanoscience and Nanotechnology (ICONN 2010) SRM University, Chennai, India, 2010, pp.228-229, 24-26 February.
10. "Application of SnO_2 Doped WO_3 Nanocomposites for Humidity Sensing", N.K. Pandey, **A. Roy**, 4th International Conference on Sensor Technology ICST, Lecce, Italy, 03-05 June, 2010.

11. "Comparative Study of Moisture Sensing Properties of $\text{WO}_3\text{-SnO}_2$ Nanocomposites", N.K. Pandey, **Akash Roy**, Karunesh Tiwari, Alok Kumar, S.S.A. Rasool, International Conference on Nanoscience, Nanotechnology and Advanced Materials (NANOS 2010), Gitam University, Visakhapatnam, India, 17-19, pp. 181., Dec. 2010
12. "Relative Humidity Sensing Properties of Cu_2O mixed ZnO Nanocomposite", Pandey N.K., Karunesh Tiwari, Anupam Tripathi, **Akash Roy**, Amit Rai, Priyanka Awasthi, International Conf. on Transport and Optical Properties of Nanomaterials, Allahabad University, India, PO-TU 59, pp.11, January 5-8, 2009.
13. "Study of TiO_2 doped SnO_2 for gas Sensor Application, International Conference on Active/Smart Materials", N. K. Pandey, Priyanka Awasthi, Karunesh Tiwari, Anupam Tripathi, **Akash Roy**, Amit Rai and Aradhana Mishra, ICASM 2009, Thiagarajan college of engineering, Madurai, India, January 7-9, 2009.
14. "Humidity Sensing Application of Cu_2O mixed ZnO Nanocomposite", Pandey N.K., Karunesh Tiwari, Anupam Tripathi, **Akash Roy**, Amit Rai, Priyanka Awasthi, Conf. on Mesogenic and Ferroic Materials (CMFM09), Banaras Hindu University, Varanasi-221005, CPP-25, pp.98, 9-11 January, 2009.
15. "Relative Humidity Sensing Properties of Cu_2O doped ZnO Nanocomposite", N.K. Pandey, K. Tiwari, A. Tripathi, **A. Roy**, A Rai, P Awasthi, 1147 AIP Proc.; ISBN 978-0-7354-0684-1, Issue 1, pp.463-466, July 2009.
16. "Relative Humidity Sensing Studies of $\text{WO}_3\text{-ZnO}$ Nanocomposite, N.K. Pandey", A. Tripathi, K. Tiwari, **A. Roy**, 2nd International Conference on Multi-functional Materials, MF-373, 9-12, Qingdao, China, October, 2009.
17. " Cu_2O Doped ZnO as Moisture Sensor", N.K. Pandey, K. Tiwari, **A. Roy**, (paper number 5387), The 8th Annual IEEE Conference on Sensors, IEEE SENSORS 2009 Conference, Christ Church, New Zealand, 25-28 October, 2009.
18. "Humidity Sensing Studies of $\text{SnO}_2\text{-WO}_3$ Nanocomposites", N.K. Pandey, **A. Roy**, A. Tripathi, K. Tiwari, A. Rai, P. Awasthi, A. Mishra, International Conference on Advanced Nanomaterials and Nanotechnology, 9-11, Centre for nanotechnology, Indian Institute of Technology, Guwahati, E-126, p.351, 8- 10, December, 2009.
19. "Moisture Sensor based on TiO_2 doped SnO_2 ", N.K. Pandey, Awasthi Priyanka, Tiwari Karunesh, **Roy Akash**, Rai Amit, Mishra Aradhana, International Conference on Electroceramics (ICE 2010), University of Delhi, India, LC-194, pp.303, 13-17, December, 2009.
20. Analysis of activation Energy and Humidity Sensing Studies of $\text{Al}_2\text{O}_3\text{-ZnO}$ nanomaterials, Suneet Kumar Mista, Abhishek Panwar, Anoop Kumar Gautam, Vijaya Bharti Rajput, Sanchita Singh, **Akash Roy**, Vandna Shukla, Narendra Kumar Pandey, 2nd International Symposium on Physics and Technology of Sensors, 8-10 March, 2015, C-MET Pune, India, page.180-181.
21. Relative Humidity Sensing Properties of V_2O_5 Doped ZnO Nanocomposite, Abhishek Panwar, Anoop Kumar Gautam, Vijaya Bharti Rajput, Sanchita Singh, Suneet Kumar Mista, Vandna Shukla, **Akash Roy**, Vikas Kumar Verma, Narendra Kumar Pandey, 2nd International Symposium on Physics and Technology of Sensors, 8-10 March, 2015, C-MET Pune, India, page.182-183.

Conferences (paper presented)

- The First International Conference on Emerging Materials: Characterization & Application, organized by CGCRI, Kolkata, 4-6 Dec 2014
- 5th National Conference on Nanotechnology and Materials Science (NATCON NAMTECH), Department of Physics, University of Lucknow, Lucknow, 21-23 Dec. 2013.
- 17th National Seminar on Physics and technology of Sensors, Jamia Millia Islamia, New Delhi, India 11-13 March 2013.
- International Conference on Nanoscience, Nanotechnology and Advanced Materials (NANOS 2010), Gitam University, Visakhapatnam, India.
- International Conference on Nanoscience and Nanotechnology (ICONN 2010) SRM University, Chennai, India.
- International Conference on Nanotechnology and Biosensors - 2010, IACQER, Raghu Engineering College, Visakhapatnam.

- 4th National Conference on Nanomaterials and a Nanotechnology –2011, Department of Physics, University of Lucknow, India.
- 3rd National Conference on Nanomaterials and Nanotechnology - 2010, Amity University, Lucknow campus, Lucknow, India.
- 2nd National Conference on Nanomaterials and Nanotechnology –2009, Department of Physics, University of Lucknow, India.
- National Conference on Nanomaterials and Nanotechnology –2007, Department of Physics, University of Lucknow, India.
- 16th National Seminar on Physics and Technology of Sensors, Department of Physics, University of Lucknow, Lucknow, India, 11-13 Feb. 2011.

Undergraduate Engineering Physics (Mechanics, Optics, Electromagnetism and Dielectric Magnetic
course topics Properties of Materials, Quantum Mechanics, Statistical Mechanics)

References Available upon request.