

CURRICULUM VITAE

DR. KALPANA AWASTHI

Current Position: Assistant Professor, Department of Physics,
K.N. Govt. P.G. College, Gyanpur, Bhadohi 221304, India
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Father's Name: Dr. A.K. Awasthi

Date of Birth: April 11, 1975

Nationality: Indian

Marital status: Unmarried

Education:

- **Ph.D:** Nanoscience and Nanotechnology (2003)
Department of Physics, Banaras Hindu University, Varanasi, India
Topic: Synthesis, Growth and Characterization of Carbon Nanotubes and Related Materials
Thesis Advisor: Prof O. N. Srivastava
- **M. Sc:** Physics, Solid State Physics (1997), (77.2%), Department of Physics, Banaras Hindu University, Varanasi, India
- **B. Sc:** Physics, Math (1994), (79.9%) Agrasen Kanya Degree College, Varanasi, Affiliated with VBS ,Purvanchal University Jaunpur, UP, India



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Citations:832

Work Experience:

- Assistant Professor: Department of Physics, K.N. Govt. P.G. College, Gyanpur, Bhadohi (March 2010- present)
- Research Associate (DRDO, New Delhi), Department of Physics, Banaras Hindu University, Varanasi, (May 2009-March 2010)
- Research Associate (CSIR, New Delhi), Department of Physics, B.H.U., Varanasi (April 2006- March 2009)
- Senior Research Fellow (CSIR, New Delhi) Department of Physics, B.H.U., Varanasi (April 2002- March 2004)
- Project Fellow HTSC, Department of Physics, B.H.U., Varanasi, from 2000-2001
- Jr. Project Fellow (AICTE-Scheme), Department of Physics, B.H.U., Varanasi from 1998 to 2000

Awards and Honours:

- My Academic Profile has been selected for publication in the book entitled “**100 Eminent Academicians of 2021**”, to be published by the International Institute of organized Research (I2OR) which is a registered MSME with the Ministry of Micro, Small and Medium Enterprises, Government of India and is advocating United Nation's Sustainable Development Goals through Academic and Research Programs for API and Career Advancement Scheme.
<https://i2orindia.blogspot.com/2021/08/dr-kalpana-awasthi-eminant-academician.html>
- First Best Poster Presentation Award in the 3rd National Conference on Nanomaterials & Nanotechnology, Amity University, Lucknow(21-23, Dec. 2010)
- Certificate of Merit (2008-09) for the R&D efforts on Carbon Nanotubes and its Applications by Nanoscience center, Department of Physics, B.H.U., Varanasi
- Prestigious **ISCA Young Scientist Award** (Year 2008-09) by the Indian Science Congress Association, Kolkata,
- **GATE** 1998 (Graduate Aptitude Test for Engineering) qualified with 88.56 percentile)
- Silver medals (three) in B.Sc. (1994)
- Certificate of Merit in M.Sc. (Previous) (1996)

Membership of Organizations:

- **Life Member**, Indian science Congress Association ((Membership No.-L13313).
- **Life Member**, Indian Association of Physics Teachers (Membership No.-9113 L-5485).
- **Life Member**, Indian Physics Association (Membership No.-VAR/LM/12713).
- **Member:** International Association of Advanced Materials (IN-041175-291-77)
- **Member:** Organization for Women in Science for the Developing World

- **Life member:** Society for Technologically Advanced Material of India-2020
- **Life member:** Global Academic Society LM-J/GAS/135/2021

Field of Research Interests:

- **Synthesis and Characterization of Carbon Nanomaterials:** Fullerenes, Carbon Nanotubes (Multi-walled and Single-walled), Bamboo shaped carbon nanotubes and Graphene
- **Formation and Characterization of Carbon Nanotubes(CNTs) Architectures:** Hollow carbon cylinder consisting of aligned CNTs & Hollow carbon cylinders consisting of aligned CNTs stacks
- Synthesis, Characterization and Properties (e.g. electrical and mechanical) Measurement of Carbon Nanotubes (CNTs)/ graphene - Polymer Composites
- Functionalization of CNTs(f-CNTs) and its Application in Biomedical & Agriculture fields

Research Project:

- Minor research project entitled “**Preparation, Characterization and Applications of Amino Functionalized Carbon Nanotubes**” funded by UGC, New Delhi (April 2011 to Nov. 2012) (Completed)
- Minor research project entitled “**Efficient Adsorptive Removal of Dye from Textile Wastewater Using Graphene Based Carbon Nanostructures**” funded by Research and Development Grant of Higher Education Department UP (From April 01, 2021; for three years)(ongoing)

Co-supervisor: Guided Master in Environmental Science (Environmental Technology); Institute of Environmental and Sustainable Development, BHU, Varanasi

- Impact of Multi-walled Carbon Nanotubes on the Vegetative Growth and Yield Attributes of Tomato (*Solanum lycopersicum*) of **Dheraj Kumar Tripathi** (2015-17).
- Carbon Nanomaterials as Plant Growth Regulators: A Comparative Effect of Graphene, CNTs, FCNTs and their Combination on Plant Growth and Selected Soil Attributes of **Kritika** (2019-21)

Courses Attended:

- One week Online Faculty Development Programme on Teachers in NEP: Role, Awareness, Orientation, Challenges and Response organized by M.G. K.V. University, Varanasi with Teaching Learning Centre for Social Science, Dr. H.G.V. Centre University, Sagar, from 17-23 March 2021.
- 14th Online Short Term Course on E- Content Development organized by UGC HRDC, Gujrat University, from 28 May-3 June 2020.
- One Week Online Faculty Development Programme on The Global Crisis @ COVID-19:Rethinking Policies organized by Km. Mayawati Govt. Girls P.G. College Badalpur, Gautambudh Nagar, from 06-11 May,2020.
- Faculty Development Programme on Information and Communication Technology, held at M.G. K.V. University, Varanasi from October 24-30, 2018
- 4th Winter Programme held at UGC-HRDC, Banaras Hindu University, Varanasi from February 11- March 03, 2018
- 8th Refresher Course in Environmental Studies held at UGC-HRDC,Banaras Hindu University, Varanasi from December 08- 28, 2015
- 58th Orientation Course held at Academic Staff College of Banaras Hindu University, Varanasi from September1- 28, 2011

Research Publications:

Papers in International Journals (23)

- Impact of Functionalized Multi-Walled Carbon Nanotubes on Growth of Tomato Plant (*Solanum lycopersicum* L.) **Kalpana Awasthi**, Dheerj Kumar Tripathi and Rajani Srivastava, Journal of Experimental Biology and Agriculture Science 8(2020) 469-478.
- Formation of Single-Walled Carbon Nanotube Buckybooks, Graphene Nanosheets and Metal Decorated Graphene, Seema Awasthi, **Kalpana Awasthi**, O. N. Srivastava, Journal of Nano Research 53(2018) 37-53
- Growth of Carbon Nanotubes on Icosahedral Quasicrystalline Al–Cu–Fe Alloy, **Kalpana Awasthi**, T. P. Yadav, and O. N. Srivastava, Advanced Science, Engineering and Medicine 10(2018)778-782
- Microwave Assisted Exfoliation of Graphene and its Application in Enzyme Immobilization Mahe Talat, **Kalpana Awasthi** and O. N. Srivastava, Current Nanomaterials 1(2016) 159-163
- Functionalization of Carbon Nanomaterials (e.g. Carbon Nanotubes and Graphene) Using L-Cysteine,

Mahe Talat, **Kalpana Awasthi**, Shyam Sundar and Onkarnath N Srivastava, Innovations in Corrosion and Materials Science 5(2015)105-112

- Formation of Single and Multi-Walled Carbon Nanotubes and Graphene from Indian Bituminous Coal
Seema Awasthi, **Kalpana Awasthi**, A.K. Ghosh , S.K. Srivastava and O.N. Srivastava, Fuel 147 (2015) 35-42
- Studies on the Dispersion of Carbon Nanotubes and Graphene in Aqueous Solutions with Different Types of Surfactants
Mahe Talat, **Kalpana Awasthi** and O. N. Srivastava, Adv. Sci. Lett. 20 (2014) 1163-1169
- Synthesis of Carbon and Carbon-Nitrogen Nanotubes Using Green Precursor: Jatropha, derived Biodiesel
Rajesh Kumar, R. M. Yadav, **K. Awasthi**, T. Shripathi, A. S. K. Sinha, R. S. Tiwari, and O. N. Srivastava, J. Experimental Nanoscience 8(2013) 606-620
- An Oral Formulation of Amphotericin B Attached to Functionalized Carbon Nanotubes is an Effective Treatment for Experimental Visceral Leishmaniasis
Vijay Kumar Prajapati, **Kalpana Awasthi**, Thakur Prasad Yadav, Madhukar Rai, Onkar Nath Srivastava and Shyam Sundar, J. Infectious Diseases 205(2011) 333-336
- Synthesis of Nano-Carbon (Nanotubes, Nanofibres, Graphene) Materials
Kalpana Awasthi, Rajesh Kumar, Himanshu Raghubanshi, Seema Awasthi, Ratnesh Pandey, Devinder Singh, T P Yadav and O N Srivastava, Bull. Mat. Sci. 34(2011) 607- 614
- A Targeted Killing of Leishmania Donovanii in vivo and in vitro with Amphotericin B Attached to Functionalized Carbon Nanotube
Vijay Kumar Prajapati, **Kalpana Awasthi**, Shalini Gautam, Thakur Prasad Yadav, Madhukar Rai, Onkar Nath Srivastava and Shyam Sundar, J Antimicrob Chemother 66 (2011) 874-87
(This article has been chosen as a new research highlight by Nature India;
<http://www.nature.com/nindia/2011/110530/full/nindia.2011.74.html>)
- Effect of Nitrogen Variation on the Synthesis of Vertically Aligned Bamboo-Shaped C-N Nanotubes Using Sunflower Oil
Rajesh Kumar, R.M. Yadav, **Kalpana Awasthi**, R. S. Tiwari and O. N. Srivastava, Int. J. Nanoscience 10(2011)809-813
- Preparation of Carbon-Nitrogen Nanotubes (CNNTs) Poly ethylene Oxide (PEO) Composites Films and their Electrical Conductivity Measurement
Ram Manohar Yadav, Rajesh Kumar, **Kalpana Awasthi** and O. N. Srivastava, Int. J. Nanoscience 10 (2011) 1091-1094
- Large Scale Synthesis of Bundles of Aligned Carbon Nanotubes Using a Natural Precursor: Turpentine Oil
Kalpana Awasthi , Rajesh Kumar, R.S. Tiwari and O.N. Srivastava, J. Experimental Nanoscience 5 (2010)498-508
- Attachment of Biomolecules with Amino Functionalized Carbon Nanotubes
Kalpana Awasthi, D.P. Singh, Sunil Singh, D. Dash and O.N. Srivastava, New Carbon Materials 24(2009) 301-306
- Functionalization Effects on the Electrical Properties of Multi-Walled Carbon Nanotube-Polyacrylamide Composites
Seema Awasthi, **Kalpana Awasthi**, Rajesh Kumar and O.N. Srivastava, J. Nanosci. Nanotech. 9(2009) 5455-5460
- Investigation on Carbon Nanomaterials: Coaxial CNT-Cylinders and CNT-Polymer Composite
Kalpana Awasthi, T. P. Yadav, P. R. Mishra, S. Awasthi and O.N. Srivastava, Bull. Mat. Sci. 31(2008)313-318
- Formation and Microstructural Characterization of Coaxial Carbon Cylinders Consisting of Aligned Carbon Nanotube Stacks
P.R. Mishra, **Kalpana Awasthi** and O.N. Srivastava, J. Nanosci. Nanotech. 7(2007)1815-1819
- Synthesis and Characterization of Carbon Nanotube- Polyethylene Oxide Composites
Kalpana Awasthi, Seema Awasthi, Anchal Srivastava, R. Kamalakaran, S. Talapatra, P. M. Ajayan and O. N. Srivastava, Nanotechnology 17(2006)5417-5422
[This paper has earned unique distinction of being downloaded 250 times just after 28 days of publication (as informed by Publisher)]
- Formation of Carbon Nanotubes without Iron Inclusion and their Alignment through Ferrocene-Ethylene Pyrolysis,
Kalpana Awasthi, A.K. Singh and O.N. Srivastava, J. Nanosci. Nanotech. 3(2003) 540-544
- Synthesis and Characterization of Lanthanum Carbide Nanotubes
Kalpana Awasthi, A.K. Singh and O.N. Srivastava, J. Nanosci. Nanotech. 2(2002) 67-71
- Ball-milled Carbon and Hydrogen Storage
Kalpana Awasthi, R. Kamalakaran, A. K. Singh and O. N. Srivastava Int. J. Hydrogen Energy 27 (2002) 425-432
- Synthesis of Carbon Nanotubes through Carbon Arc Evaporation Employing Mn, La and Ce Catalysts
Kalpana Awasthi, A.K. Singh and O.N. Srivastava, Fullerene Science and Technology 9 (2001) 397- 407, Now published as: Fullerenes, Nanotubes and Carbon Nanostructures

Submitted Research Articles:

- Studies of Physical Properties of Polyacrylamide-Graphene Oxide-Single-Walled Carbon Nanotube Composite Seema Awasthi and **Kalpana Awasthi**, Journal of Advanced Applied Scientific Research (In review: 2021)
- Selective Growth of Uniform Graphene Films onMetallic (Cu and Au) Substrates” Ch. Ravi Prakash Patel, **KalpanaAwasthi** and Thakur Prasad Yadav Philosophical Magazine Letters (Submitted: July 2021)
- Carbon Nanomaterials: Fullerene to Graphene Thakur Prasad Yadavand **Kalpana Awasthi** (under preparation)

Review Article (02):

- Nanotechnology towards Sustainable Agriculture Rajani Srivastava, **Kalpana Awasthi** and Dheeraj Tripathi, International Journal of Scientific Research in Physics and Applied Sciences 6 (2018) 155-158
- Synthesis of Carbon Nanotubes, **Kalpana Awasthi**, Anchal Srivastava and O.N. Srivastava, Jr. Nanoscience and Nanotechnology 5(2005)1616-1636

Book Chapters (08):

- Environmental Pollution Management Using 2D Carbon Nanomatrial: Graphene **Kalpana Awasthi** and Seema Awasthi
In Book
Editors: Dr. Abhimanyu Yadav ,Dr. Madhu Tiwari, Publisher: Bharti Publications, New Delhi (2020) (Under Press)
- Hydrogen Energy: A Clean and Green Fuel T. P. Yadav and **Kalpana Awasthi**
In Book: Environmental Aspect of Alternative Energy Sources **Editors: Dr. Madhu Tiwari , Dr. Abhimanyu Yadav**, ISBN: 978-93-89657-43-2, pp.30-38 Publisher: Bharti Publications, New Delhi (2020)
- Investigations on Exotic Forms of Carbon: Nanotubes, Graphene, Fullerene, and Quantum Dots, Mahe Talat, **Kalpana Awasthi**, Vikas Kumar Singh, O.N. Srivastava
In Book: Functionalized Nanomaterials I: Fabrications Editors: Vineet Kumar ,Praveen Guleria,Nandita Dasgupta, Shivendu Ranjan, ISBN: 9780815370413,pp.125-132 Publisher: CRC Press Taylor & Francis group (2020)
- Carbon Nanomaterials for Crop Management, **Kalpana Awasthi and** Rahul Awasthi
In Book: Sustainable Practices for Natural Resource Management Through Biological Tools Editor: Dr. Rajani Srivastava, ISBN: 978-81-942473-5-7, pp.1-12 (2019) Publisher: Bharti Publications (New Delhi, India)
- Chirality-Selective Growth of Carbon Nanotubes on Quasicrystalline Alloys, **Kalpana Awasthi**, T. P. Yadav and O. N. Srivastava
In Book: Advances in Chemical Sciences, Vol.2, Editors: Dr. Mridula Tripathi, Dr. S.K. Drivastava, Dr. Roli Srivastava, ISBN: 978-93-88018-17-3, pp.1-12(2019) Publisher: Firstprint Publications, (Allahabad, India) (2019)
- Synthesis and Applications of Carbon Nanotubes, **Kalpana Awasthi** and O.N. Srivastava
In Book: Synthesis and Characterization (Nanotechnology Series) (Vol. Editor: Dr. Shishir Sinha and Dr. Naveen K. Navani) Executive Editor: Dr. J.N. Govil, ISBN: 1-62699-002-6, Vol.2, pages121-171 (2012) **Publisher: Studium Press LLC, USA**
- Use of Ferrocene and Ferrocene Admixed Precursors in Synthesis of Carbon Nanotubes, **Kalpana Awasthi** and O.N. Srivastava **In Book: Ferrocene: Compounds, Properties and Applications,Eds. Elisabeth S. Phillips)** ISBN: 978-1-61761-880-2, pages 1-28, 2010, **Publisher: Nova Science Inc., New York**
- Synthesis of Carbon Nanotubes, **Kalpana Awasthi** and O.N. Srivastava, **In Book: Chemistry of Carbon Nanotubes (Eds. V.A. Basiuk and E.V. Basiuk)** ISBN: 978-1-58883-128-0, Vol. 1, 2008, pp. 1-26, **Publisher: American Scientific Publishers**

Research Book(01)

Synthesis and Characterization of Carbon Nanotubes and Related Materials
Publisher: Lambert Academic Publisher,ISBN: 978-3-659-44559-0, pp.1-173 (2013)

Edited Book:

- Versatile Solicitations of Materials Science in Diverse Science Fields
Editors: Dr. Mridula Tripathi, Dr. Arti Srivastava and **Dr. Kalpana Awasthi**
Publisher: NOVA Science Publisher, USA ISBN: 978-1-53619-798-3 (2021)
- Material Science: Future Aspects
Editors: **Dr. Kalpana Awasthi**, Dr. Arti Srivastava and Dr. Mridula Tripathi,
Publisher: NOVA Science Publisher, USA (2021) (Under preparation)

Paper in Conference Proceedings (06)

- Google Classroom: Interactive Teaching and Learning Tool
Kalpana Awasthi
In Recent Advances & Innovations in Physics Teaching and Research Eds: Dr Akhilesh Tiware & Dr Pramod Kumar, Publisher: LAMBERT Academic Publishing ISBN: 978-620-0-78765-1 pp32-33(2020)
- Synthesis of CNTs by Low Pressure Chemical Vapor Deposition using Ferritin Based Fe Catalyst, **Kalpana Awasthi**, Seema Awasthi and O. N. Srivastava, Emerging Paradigms in Nanotechnology(2013) 104-107, ISBN: 978-81-317-8991-9
- Preparation of Graphene Sheets by Carbon Nanotubes, **Kalpana Awasthi** and O.N. Srivastava, 3rd National Conference on Nanomaterials and Nanotechnology (2010) 135
- Investigations on Electrical Properties of Polyacrylamide-Carbon Nanotube Composites, Seema Awasthi, **Kalpana Awasthi**, and O.N. Srivastava, Int. Conf. on Recent Advance Composite Material (2007) 416
- Carbon Special Forms (Graphitic Nanofibres, Ball-milled Carbon) as Hydrogen Storage Materials, Bipin Kumar Gupta, **Kalpana Awasthi**, A.K. Singh and O.N. Srivastava, Hydrogen Energy Progress 14(2002) A2-9
- New Carbon Variants: Graphitic Nanofibres and Nanotubes as Hydrogen Storage Materials, Bipin Kumar Gupta, **Kalpana Awasthi** and O.N. Srivastava, Hydrogen Energy Progress 13(2000) 487

Conferences/Workshops /School Attended**National Conferences (25)**

- Waste Management Using Nanotechnology
Kalpana Awasthi;(Oral) National Conference on Green Technology:A Roadmap for Sustainable development, Department of Chemistry, HNB Govt. P.G. College, Naini, Prayagraj, February 23-24, 2020
- Google Classroom: Interactive Teaching and Learning Tool (Oral) XXXIV Annual IAPT Convention-2019, National Seminar on Recent Advances & Innovations in Physics Teaching & Research, Department of Applied Sciences, Indian Institute of Information Technology Allahabad, Prayagraj, October 13-15, 2019.
- Allotropes of Carbon-Based Nanomaterials, National Conference on Innovative Frontiers in Applied Sciences, Department of Chemistry, CMP Degree College, Prayagraj, Sept.26-28, 2019
- Nanotechnology in Herbal Drugs (Oral) National Conference on Heal from Greens, Deptt. of Botany, K.N. Govt. P.G. College, Gyanpur, Bhadohi, March 30-31, 2019.
- Raman Spectroscopic Investigation of Carbon Nanomaterials, (Oral) National Symposium on Applied Spectroscopy: Biology and Medical Science, Department of Physics, U.P. College, Varanasi February 19-20, 2019
- Multifunctional Carbon Nanostructures for Energy Applications, (Invited talk) National Conference on Advanced Nanomaterials and their Applications, Department of Physics, MNNIT Allahabad, Prayagraj, December 21-23, 2018.
- Molybdenum Disulfide (MoS_2): Promising Electrocatalyst for Hydrogen Evolution, (Oral) National Conference on Hydrogen Energy in Indian Perspective: Role of Nanomaterials, Hydrogen Energy Centre, Deptt. of Physics, B.H.U., Varanasi, October 31-Nov.02, 2018.
- Functional Two-Dimensional Transition Metal Dichalcogenide Beyond Graphene, (Oral) National Conference on Recent Trends in Condensed Matter Physics and Materials, Deptt. of Physics, B.H.U., Varanasi, September 15-16, 2018.
- Nanotechnology and sustainable agriculture: What are the possibilities? (Oral) National conference on Environmental Issues and Challenges in India Ramabai Govt. Mahila P.G. College, Akbarpur, Ambedkar Nagar, February 04-05, 2018.
- Carbon Nanomaterials for Renewable Energy Generation and Storage, (Oral) National Conf. on Energy, Environment and its Impact on Society, Faculty of Science, K. N. Govt. P. G. College, Gyanpur, Bhadohi, Jan. 19-20, 2017.
- Functionalized Carbon Nanotubes as a Novel Drug Delivery System, (Oral) National Conf. on Scientific approach for Welfare of Society, Deptt. of Botany, K.N. Govt. P.G. College, Gyanpur, Bhadohi, March 30-31, 2016.
- Graphene: Exotic form of Carbon, (Poster Presentation) in National seminar on Recent Advances in Physical Sciences, Deptt. of Physics, U.P. College, Varanasi, Feb.28, 2015.

- Nanomaterials for Waste Water Managements,(Oral) National seminar on Environmental Conservation, Sustainable Development and Industrial Expansion in 21st Century, Deptt. of Botany, ABR P.G. College, Anpara, Sonbhadra, Feb.21-22,**2015**.
- Role of Nanomaterials to Clean up the Environment,(Oral)National Conference on Vistas of Environmental Awareness, K.N. Govt. P.G. College, Gyanpur, Bhadohi, March30-31, **2014**.
- Preparation and Characterization of Amino Functionalized Carbon Nanotubes (Invited Lecture) in National conference on Chemistry and Life,Deptt. of Chemistry, C.M.P. College, Allahabad, Sept.16-17, **2012**.
- Synthesis Carbon Nanotubes by Chemical Method, (Poster) National Conference on Nanomaterials & Applications: Present Position and Road Ahead, Deptt. of Physics, B.H.U., Varanasi, March 16-18, **2011**.
- Investigations on Carbon Nanotubes (Invited talk) National Conference on Advancement of Nanomaterials and its Applications, D.A-V College, Kanpur, Feb.15-16, **2011**.
- Preparation of Graphene from Carbon Nanotube (Poster)3rd National Conference on Nanomaterials and Nanotechnology, Amity University, Lucknow Campus, Lucknow, Dec.21-23, **2010**.
- Functionalization of Carbon Nanotubes and their Application for Polymer Composite (Oral)National Symposium on Synthesis, Characterization and Applications of Technologically Important Materials, Deptt. of Physics, B.H.U., Varanasi, Jan.5-6, **2010**.
- Synthesis of Carbon Nanotubes (Oral)1st One Day Conference on New Trends in Research, Deptt. of Physics, B.H.U., Varanasi, Oct. 27,**2007**
- Synthesis of Carbon Nanotubes by Arc-Discharge Method Symposium on Recent Developments in Nano Materials and their Applications(Participation), Deptt. of Physics, B.H.U., Varanasi, March 13-14, **2007**
- Carbon Nanotubes and CNT-polymer Composite (Oral) One Day Workshop on Nanoscience and Nanotechnology, Deptt. of Physics, B.H.U., Varanasi, March 20, **2006**.
- Ball-milled Carbon and Hydrogen Storage (Poster), 31st National Seminar on Crystallography, BARC, Bombay, June 2001
- Formation and Characterization of Carbon Nanotubes and Carbide Nanorods (Poster), 31st National Seminar on Crystallography, BARC, Bombay, June **2001**
- Formation and Characterization of Carbon Nanotubes (Poster), VISION 2001, Dept. of Physics, B.H.U., Varanasi, May **2001**

International Conferences (20)

- Non Covalent Functionalized Carbon Nanotubes(Oral) International E Conference on Advanced Functional Materials and Optoelectronic Devices, Centre for Renewable Energy, Prof. Rajendra Singh Institute of Physical Sciences for Study and Research, VBS Purvanchal University, Jaunpur, June 13-15,**2020**
- Functionalized Multi-walled Carbon Nanotubes(Oral) International Conference on Ultrasonics and Materials Science for Advanced Technology, Department of Physics, Prof. Rajendra Singh Institute of Physical Sciences for Study and Research, VBS Purvanchal University, Jaunpur, November 16-18,**2019**
- Nanotechnology for Green Energy Management (Oral) International seminar on Recent Trends and experimental approaches in Science, Technology, Agriculture and Management, Footwear Design & Development Institute, Amethi, October 20-21, **2019**
- Growth of Carbon nanotubes on Al-Cu-Fe quasicrystal (Oral) International Conference on Nanoscience and Nanotechnology Department of Applied Physics, School of Physical Sciences, Babasaheb Bhimrao Ambedkar University, Lucknow, September 22-24, **2017**.
- Uniform diameter and high density growth of single- walled carbon nanotubes (Oral) International Conference on Nanomaterials & Nanotechnology, March01-03, **2017**. Vinoba Bhave Research Institute, Saidabad, Allahabad.
- Spectroscopic Investigations on functionalized Carbon nanotubes (Oral) Int Conf on Advances in Light Technologies and Spectroscopy of Materials January 16-18, **2016**
- Synthesis of Aligned Single-Walled carbon Nanotubes (Oral) Int. Conf. on Multifunctional Materials for Future Applications , Oct. 27-29,**2015**
- Synthesis Methods of Carbon Nanotubes (Invited Talk) Int. Conference on Nanoscience and Life, Deptt. of Physics, B.H.U. , Varanasi ,28 Feb.- 2 March, **2015**
- Investigations on Functionalization of Carbon Nanotubes, (Oral presentation) Int. Conference on Advanced Materials and Applications (ICAMA-2014), Centre of Material Sciences, University of Allahabad March 24-26, **2014**
- Applications of Carbon Nanotubes (Oral) Int. Conference on Nanomaterials with Special Reference to Energy Security,Deptt. of Physics, B.H.U.,Varanasi,March 12-14,**2014**

- Studies on the dispersion of Graphene and CNT in aqueous solutions with different types of surfactants (Poster) Int. Conference on Nanoscience and Nanotechnology ,Babasaheb Bhimrao Ambedkar university, Lucknow, Nov.18-20,**2013**
- Synthesis of CNTs by Low Pressure Chemical Vapor Deposition using Ferritin Based Fe Catalyst,(Oral) Frontiers in Nanoscience, Nanotechnology and their Applications Panjab University, Chandigarh, Feb. 16-18, **2012**
- Higher Education and sustainable Development ; Emerging challenges and Mahamana's Vision (Participation) Banaras Hindu University, Varanasi, Dec. 24-25, **2010**
- Attachment of Biomolecules with Amino Functionalized Carbon Nanotubes (Oral)96th Indian Science Congress, Shilong, Jan. 3-7, **2009**
- Higher Education: Global Perspective and Indian Vision(Participation) Banaras Hindu University, Varanasi, Dec. 25-27, **2009**
- **Award Lecturer:** New Studies on Carbon Nanotube-Polyethylene Oxide Composites(Presented in young scientist award lecture programme of physical sciences in 95th Indian Science Congress, Andhra University, Visakhapatnam), Jan.3-7,**2008**
- Nanoscience and Technology(Participation) Chennai Feb. 27-29,2008.
- Synthesis of Carbon Nanotube Using Natural Hydrocarbon Precursors (Bio-diesel, Caster and Sun flower oil) 14 APAM Conferences on State of Materials Research and New Trends in Materials, Science, NPL New Delhi, Nov. 18-20, **2008**
- High Yield Synthesis of Aligned Carbon Nanotubes Bundles Using A Natural Precursor: Turpentine Oil (Poster) Humboldt-Kolleg on Structural Characterization and Spectroscopy of Materials Relevant to Nanotechnology, Biomedical and Geobiology, Deptt. of Physics, B.H.U., Varanasi, Nov. 7-9,**2008**
- Carbon Nanotube-Polyethylene Oxide Composite: Microstructural and Electrical Investigation (Oral)Int. Conf. on Recent Advance Composite Materials, B.H.U.,Varanasi, Dec.17-19, **2004**.

Workshops/ School (8)

- One Day Workshop on NAAC Awareness programme, Mahatma Gandhi Kashi Vidhyapeeth, Varanasi, March 26,2019
- Workshop on MOOCs, E- content Development and Open Educational Resources, UGC-HRDC, B.H.U., August19-25, 2018
- One day workshop on Attaining Sustainable Development Goals in India by 2030: Challenges & Opportunities, Rajiv Gandhi South Campus, Barkachha, November 10,2017
- Workshop on Exotic materials: Synthesis, Characterization and Application, Deptt. of Physics, B.H.U., Varanasi, January . 1-3,**2013**
- Pre - Conference Workshop NanoSciTech-2012.Panjab University, Chandigarh, Febury15, **2012**
- Workshop on Multifunctional Materials, Deptt. of Physics, B.H.U., Varanasi, December 6,**2010**
- DST - Advanced School on Nanoscience and Nanobiology, Indian Institute of Science, Bangalore (5-16 Feb.**2007**)
- One day Workshop on Nanoscience and Technology, Deptt. of Physics, B.H.U., Varanasi, March 20, **2006**

Co-Curricular Activities:

- Organizers of Online Lecture Series on Emergence of Material Science (organized by Physics Department, K.N. Govt. P. G. College, Gyanpur) (December 2020- February 2021).
- Convener, Workshop on Experimental Crystallography, Organized by IQAC and Department of Physics, K.N. Govt. P. G. College, Gyanpur, March 27-28,2019.
- Organizing Secretary, Workshop on E-Literacy organized under Nari Sashaktikaran Sankalp Abhiyan, K.N. Govt. P. G. College, Gyanpur, December 19, 2018.
- Faculty Coordinator of Spoken Tutorial Software Training Programme (2018-2019) - MHRD
- Counselor in conducting the online course on Overview of RS and GIS Applications for Natural Resource Management organized by Indian Institute of Remote Sensing under off-campus outreach certificate programme, November 13- December 01,2017.
- Organizing Secretary, National Conference on Energy, Environment and its Impact on Society, Organized by Faculty of Science, K.N. Govt. P. G. College, Gyanpur, January 19-20,2017
- Convener, Workshop on Current Trend in Material Science, Organized by Department of Physics, K.N. Govt. P. G. College, Gyanpur, February 18-24,2016
- Organizing Committee Member, National Conference on Vistas of Scientific Approach for Welfare of Scoiety, , Organized by Department of Botany, K.N.Govt. P. G. College, Gyanpur, March 30-31,2016
- Organizing Secretary, National Conference on Vistas of Environmental Awareness, K.N.Govt. P. G. College, Gyanpur, March 30-31, 2014

Administrative Responsibilities:

- Centre Incharge (Bhadohi - Dist.) of National Graduate Physics Examination, Conducted by Indian Association of Physics Teachers (2017-till now)
- DBT Star College Scheme: Project Coordinator (2020 – 10 July 2021) & Course Coordinator (2020- till now)
- IQAC Coordinator (2019- 2021)
- NIRF Coordinator (2019-21)
- AISHE Nodal Officer (2019-20)
- Convener, Institution Innovation Council KNPG College-2018-2019
- Vice-President Institution Innovation Council_KNPG KNPG College (2020-21)

**Dr. Kalpana Awasthi**

Assistant Professor

K.N. Govt.P.G College, Gyanpur, Bhadohi