


Department of Physics

Uka Tarsadia University

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| Name | Dr. Abhitosh Kedia (HoD) | | |  |
| Qualification | MSc, PhD | | | |
| Designation | Assistant Professor (HoD) | | | |
| Date of Joining | 21/03/2016 | | | |
| Date of Birth | 02/03/1987 | | | |
| Area of Interest | Material Science | | | |
| Career Profile | | | | |
| Organization/ Institution | Designation | Duration | Role | |
| Swami Sharddhanand College, Delhi University | Assistant Professor | August 2014 to Dec 2015 | UG teaching | |
| UKA Tarsadia University | Assistant Professor | March 2016 to present | UG/PG Teaching | |
| Teaching Experience (Subjects/Courses Taught) | | | | |
| Year | Subjects | | UG/PG/Programme | |
| 2015-16 | Oscillations, Quantum Physics | | UG | |
| 2016-2022 | Mechanics, Quantum Mechanics, Condense matter Physics, Electromagnetic theory | | UG/PG | |
| Conferences/ Seminar/ Workshop/ Training attended | | | | |
| Title | Organization | Place | Date | |
| Workshop on 21 st Century Education Bridge gap between industry and academia | Uka Tarsadia University. | Uka Tarsadia University. | March 2019 | |
| seminar on “exploring funding opportunities to Enhance Research | Nirma University | Ahmedabad | 16 Februrary 2019 | |
| STTP on Role of Physics in technology Development | SVNIT, Surat | Surat | 3-7 th January - 2017 | |
| Workshop on XRD systems and its Applications | Department of Chemistry | University of Delhi, Delhi | December 25-26, 2014 | |
| Orientation course in Nanoscience | Swami Sharddhanand College | University of Delhi, Delhi | 25-26 March 2015 | |
| Advanced Materials for Future Energy Requirements (WAMFER 2012) | Conference centre, | University of Delhi, Delhi | November 29- December 1, 2012 | |
| Indo-Russian workshop on Nanotechnology and Laser Induced Plasma | Conference centre, | University of Delhi, Delhi | November 24-26, 2009. | |
| Paper Presented | | | | |
| Year | Title | | Reference | |
| 22-23 Feb | Plasmonic Response of Anisotropic Gold | | RSC-IW held at Uka Tarsadia | |

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| 2019. | Nanostructures (Oral) | University Surat, |
| December 16-20, 2014 | Polyvinylpyrrolidone Induced Gold Nanostructures; Plasmonic Aspects & Applications (oral/Poster) | 59th DAE-Solid State Physics Symposium at VIT University, Vellore. |
| January 20-22, 2014 | Reshaping and Self-Organization of Gold Nanostructures (Oral) | ISN ² A 2014, at Portugal (Europe) |
| December 16-20, 2013 | Engineering the Plasmonic Response of Gold Nanostars with Halide Ions (oral) | IUMRS-ICA 2013 at Indian Institute of Science, Bangalore |
| December 8-11, 2013 | Self-assembled Colloidal Gold Nanoclusters and Nanoparticles via Monomer Reduction/Passivation (Poster). | 3 rd Nano Today Conference at Singapore |
| February 23-24, 2013 | Bromine Ion Induced Tunable Plasmonic Response of Gold Nanostars (Poster) | International Conference on Emerging Technologies : Micro to Nano 2013 at BITS, Pilani, Goa |
| February 23-24, 2013 | Oligomer coated Gold Nanoclusters through Oxidative Monomer Polymerization- (Poster) | International Conference on Emerging Technologies : Micro to Nano 2013 at BITS, Pilani, Goa |
| December 3 to 7, 2012 | Gold Nanostars Reshaping and Plasmon Tuning Mechanism | 57th DAE-Solid State Physics Symposium, IIT Bombay |
| July 1-6, 2012 | Molecular Aspects of Small Plasmonic Gold Nanoparticle Chain Networks (Poster) | International Conference of Young Researchers on Advanced Materials, Singapore |
| July 1-6, 2012 | Random to Selective Self Organization of Anisotropic Gold Nanostructures – (Poster) | International Conference of Young Researchers on Advanced Materials, Singapore |
| February 24-25, 2012 | Halide Ion Induced Tuning and Self Organization of Gold Nanostars- (Poster) | National Conference on Condensed Matter Physics, BITS–Pilani. |
| December 18-21, 2011 | In-Situ Chemical Synthesis of Pyrrolidone Coated Gold Nanostructures – (poster) | International conference on Nanomaterials & Nanotechnology, Delhi University, Delhi |
| December 14-16, 2011 | Plasmonic Coupling in Anisotropically Self-Organized Gold Nanostructures – (poster) | International conference on Current Developments in Atomic, Molecular, Optical & Nanophysics, Delhi University, Delhi |
| February 23-26, 2011. | Fine tuning of localized Surface Plasmon Resonance in Gold nanostars- (poster) | International conference on Advances in Condensed and NanoMaterials. Panjab University, Chandigarh |
| December 26-30, 2010 | Solvent Induced Kinetic Growth of Shape Controlled Gold Nanostructures- (oral and Poster) | 55 th DAE-Solid State Physics Symposium, Manipal University, Manipal |
| December 7-11, 2010 | Kinetic Growth and Stabilization of Gold nanostars- (Poster) | 3rd International Symposium on Materials Chemistry (ISMC-2010), BARC, Mumbai |
| November | Analysis of Absorbance Spectra of | Inderprastha International |

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| 16-17, 2010 | Anisotropic Gold Nanoparticles (Poster) | Conclave on Nano Science and Technology, GGSIPU, New Delhi | |
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| Publications | | | |
| Year | Title | Reference | Publication Type |
| 2017 | Pertinent Shape Effects of Gold Nanospheres and Nanostellates | IOSR-JAP 2017,9,21-26 2278-4861 | International |
| 2016 | Differential role of PVP on the synthesis of plasmonic gold nanostructures and their catalytic and SERS properties. | RSC Advances , 2016, 6, 80342 ISSN 2046-2069 | International |
| 2015 | Tweaking Anisotropic Gold Nanostars: Covariant control of Polymer solvent mixture complex. | RSC Advances , 2015,5, 5205-5212 ISSN 2046-2069 | International |
| 2014 | Halide ion induced tuning and self Organization of Gold nanostars. | RSC Advances , 2014, 4, 4782 ISSN 2046-2069 | International |
| 2013 | Local Electron Beam Excitation and Substrate Effect on the Plasmonic Response of Single Gold Nanostars. | Nanotechnology , 2013, 24, 405405 ISSN 1361-6528 | International |
| 2013 | Controlled reshaping and plasmon tuning mechanism of gold nanostars. | J. Mater. Chem. C , 2013,1, 4540 ISSN 2050-7526 | International |
| 2012 | Solvent-Adaptable Poly(vinylpyrrolidone) Binding Induced Anisotropic Shape Control of Gold Nanostructures. | J. Phys. Chem. C , 2012, 116, 23721 ISSN 1932-7447 | International |
| 2012 | Precursor Driven Nucleation and Growth Kinetics of Gold Nanostars. | J. Phys. Chem. C , 2012, 116,1679 ISSN 1932-7447 | International |
| 2021 | Synthesis of gold nanoparticles using fruit waste | AIP Conf. Proc., 2369, 020168 | International |
| 2016 | Gold-Copper alloy “nano-dumplings” with tunable compositions and plasmonic properties. | AIP Conf. Proc 2016 , 1728, 020325 | International |
| 2014 | NVP Encapsulated Gold Nanoclusters by In Situ Polymerization of Monomer. | AIP Conf. Proc 2014 , 1591, 600 | International |
| 2014 | Bromide Ion Induced Formation of PVP-capped Anisotropic Gold Nanoplates/Nanotriangles. | AIP Conf. Proc 2014 , 1591, 549 | International |
| 2013 | Gold Nanostars Reshaping and Plasmon Tuning Mechanism. | AIP Conf. Proc. 2013 , 1512, 232-233. | International |

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| 2011 | Solvent Induced Kinetic Growth of Shape Controlled Gold Nanostructures. | AIP Conf. Proc. 2011 , 1349, 321-322. | International |
| Book Published | | | |
| <ul style="list-style-type: none"> • Gold Nanoparticles: Plasmonic Aspects and Applications, Empyreal Publishing House, Nov 2018. • Hitesh Rajput, Abhitosh Kedia, Dimple Shah, Neha Sharma, “Exploiting Reducing Ability of DMF For Assembled Gold Nanostructure” in the book Functional Materials and Applied Physics in 2022. | | | |
| PhD Guided/Dissertations | | | |
| <ul style="list-style-type: none"> • Guiding one PhD student as co-supervisor. • Guided 3 PG students in 2018-19 • Guided 10 PG students in 2019-20 • Guided 06 PG students in 2020-21 • Guided 06 PG students in 2021-22 | | | |
| Invited/Expert Lecture | | | |
| <ul style="list-style-type: none"> • Delivered Invited talk in NBPSE-2017 at SVNIT, Surat on <i>Plasmons in Metal Nanostructures</i>. • Invited Lecture in the Intensive Crash workshop for cracking IIT JAM, JNU-CEEB entrance exam of phase II December 2018 • Invited Lecture in the Intensive Crash workshop for cracking IIT JAM, JNU-CEEB entrance exam of phase II January 2019 | | | |
| Honors and Awards | | | |
| Year | Title | Awarding Body | |
| 2012 | Best poster award in International Conference of Young Researchers on Advanced Materials (ICYRAM 2012), Singapore. | MRS society | |
| December 2008 | Qualified CSIR-JRF | CSIR | |
| Projects (Major/ Minor Grants) | | | |
| Project Grant | Sponsored Agency | Duration | Completed/ On going |
| 5 Lakhs | University of Delhi | 2015-2016 | completed |
| Rs 50000 | UKA Tarsadia University | 2017-18 | completed |
| Rs 60000 | UKA Tarsadia University | 2018-19 | completed |
| Achievements | | | |
| <ul style="list-style-type: none"> ❖ Cleared IIT-JAM (Math) in 2006. ❖ 1st position in intra college Computer Exhibition held in years 2004, 2005 and 2006. ❖ 1st position in state level Science Quiz contest held in 2006. ❖ 1st class in National Mathematics Olympiad in 2002. | | | |

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❖ Topped in Physics in XII in City.

Academic activities/Public Service/ University Service

- Organized Hands-On Training on solar photovoltaic and nanotechnology in May 2017
- Designing the UG and PG Physics curriculum of Uka Tarsadia University, Bardoli.
- Exam coordinator representing Physics Department.
- Designing and setup of UG and PG Laboratory Physics in Uka Tarsadia University, Bardoli.
- Core committee member and coordinator (Literary event) in 35th West Zone Uth Fest 2019
- Member of various club and committees.

The logo of Uka Tarsadia University is a stylized, abstract shape composed of overlapping, curved bands in shades of purple and pink, resembling a flame or a drop.

UKA TARSADIA
u n i v e r s i t y

Imparting Knowledge. Awakening Wisdom. Transforming Lives.