

PATENTS GRANTED BY PATENTS AUTHORITY OF INDIA

Two Indian patents have been granted in collaboration with National Research Development Corporation of India, INDIA

- (i) “A method of depositing thin films of metals and non metals”
Patentee: Prof. M.P.Srivastava, Savita Roy and **Chhaya Ravi Kant**
Patent no. 232763, Dt: 21/03/2009
- (i) “A method of depositing thin films of non metals”
Patentee: Prof. M.P.Srivastava, Savita Roy and **Chhaya Ravi Kant**
Patent no. 218110, Dt: 31/03/2008

RESEARCH PUBLICATIONS IN JOURNALS

1. Investigating the Structural, Electrochemical and Optical Properties of p-type Spherical Nickel Oxide (NiO) Nanoparticles
Ritu Goel, Ranjana Jha, **Chhaya Ravi Kant**
Reference: PCS_109488
Journal of Physics and Chemistry of Solids, Elsevier Publications
Article Number: 109488, Accepted on 4th April, 2020
Impact factor : 2.752
(Indexed in : Scopus, Inspec , MSCI)
2. Tunability of Surface Plasmon Resonance Peaks in CsI:Ag Films by Growth Conditions
Lovkush¹ & Chhaya Ravi kant² & P. Arun³
Volumes14, PP 1-7, Issues 65, 9th December 2019, Plasmonics (Springer US)
DOI .org/10.1007/s11468-019-01061-1
Impact Factor: 2.926, ISSN 1557-1955
(Indexed in: Scopus, Science Citation Index Expanded and Scisearch)
3. From dengue to Zika: the wide spread of mosquito-borne arboviruses
Shivani Sukhralia, mansi verma, Shruthi Gopirajan, P S Dhanaraj, Rup Lal, Neeti Mehla and **Chhaya Ravi Kant**
European Journal of Clinical Microbiology & Infectious Diseases
<https://doi.org/10.1007/s10096-018-3375-7>, Pp 3-14, Sept. 2018
ISSN: 0934-9723, Impact Factor: 2.591
(Indexed in: Scopus, Science Citation Index And Science Citation Index Expanded)
4. Plasmon coupling and aging effect in CsCl–Ag thin films
Lovkush, **Chhaya Ravikant** and P Arun
Materials Research Express, Volume 5, Number 9 , August 2018 • © 2018 IOP Publishing Ltd.
<https://orcid.org/0000-0003-2702-5147>
Impact Factor: 1.449, ISSN: 2053-1591
(Indexed in: Scopus, Science Citation Index Expanded)

5. Reduced graphene oxide-zinc oxide nanocomposites for gas sensing applications
Sitakshi Gupta and **Chhaya Ravikant**
Advanced Materials Proceedings, Vol 3, Issue 4, 193-198 (VBRI Press), April 2018.
ISSN: 2002-4428
DOI: 10.5185/amp.2018/025
6. “SPR sensitivity of silver nanorods in CsBr-Ag nanocomposite thin films”
Lovkush^{1,2}, Chhaya Ravikant², P Arun³ and Kuldeep Kumar³ , Materials Research Express, Volume 3, Number 7, 2016 (IOP Publishing Ltd .), July, 2016
Impact Factor 0.968, ISSN: 2053-1591
<https://doi.org/10.1016/j.optmat.2012.08.007>
(Indexed in: Scopus, Science Citation Index Expanded)
7. “Film thickness controlled photoluminescence emission in ZnO:Si nanocomposites”
Shabnam, **Chhaya Ravi kant** and P.Arun
Optical Materials(Elsevier Science) Vol 35, (314-316) , Dec. 2012.
Impact factor : 2.183, ISSN: 0925-3467
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)
8. “Metal cluster’s effect on the optical properties of Cesium Bromide thin films”
Kuldeep Kumar, P.Arun, **Chhaya Ravi kant*** and Bala Krishna Juluri
Applied Physics Letters (AIP)Vol.100, 243106-1 June 2012.
Impact Factor 3.844 , ISSN: 0003-6951
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)
9. “White light emission from annealed ZnO-Si nanocomposites”
Shabnam, **Chhaya Ravi kant** and P.Arun
Journal of Luminescence (Elsevier) vol.132, 1744-1749, 2012., July 2012
Impact factor:2.693
DOI:10.1016/j.jlumin.2012.01.051
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)
10. “Size and defect related broadening of photoluminescence spectra in ZnO:Si nanocomposite films”
Shabnam, **Chhaya Ravi kant** and P.Arun
Material Research Bulletin (Elsevier) Vol.47, 901-906, March ,2012
<https://doi.org/10.1016/j.materresbull.2011.11.028>
Impact factor: 2.435, ISSN: 0025-5408
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)
11. “Controlling PL of ZnO Si nanocomposites by heat treatment”
Shabnam, **Chhaya Ravi Kant*** and P.Arun ,
Material Research Bulletin, 45, Oct.2010,1368-1374
DOI:10.1016/j.materresbull.2010.06.049
Impact Factor: 2.435, ISSN: 0025-5408
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)

12. "Effect of Cesium metal clusters on optical properties of CsI thin films" Kuldeep Kumar, P.Arun, **Chhaya R. Kant** and Vincent Mathews
Applied Phys. A , Springer Verlag Link Berlin , vol.99, issue 1, April, 2010, 305-310.
DOI 10.1007/s00339-009-5532-4
Impact factor: 1.76, ISSN: 0947-8396
(Indexed in SCI, SCIE, Scopus)

13. "Effect of residual stress on optical properties of CsCl thin films"
Kuldeep Kumar, P.Arun, **Chhaya R. Kant**, N.C.Mehra, L.Makinistian and E.A.Albanesi
Journal of Physics and Chemistry of Solids, Elsevier Pub, Vol.71, Issue 3, March, 2010, 163-169
<https://doi.org/10.1016/j.jpcs.2009.10.013>
Impact factor: 2.048, ISSN: 0022-3697
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)

14. "Characterization of ZnO-Si nanocomposite grown by thermal evaporation"
Shabnam , **Chhaya Ravi Kant**, P.Arun and N.C.Mehra
PHYSICS Letters. A Elsevier Pub, 372 (2008)7068-7072
DOI: 10.1016/j.physleta.2008.10.028
Impact factor: 2.009, ISSN: 0375-9601
(Indexed- in SCI, Scopus, Chemical Abstracts)

15. Mitigating Reasons for the Poor Performance of n-CdS/p-SnS Solar Cells
Yashika Gupta, Chhaya Ravikant, and Arun Palakkandy
Global Challenges 2018, 2, 1800017 (1-8) ,Published by WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim
ISSN: 2056-6646
<https://doi.org/10.1002/gch2.201800017>
(Indexed in: Emerging Sources Citation Index)

16. "Data Acquisition system for acr driven HF/DF Chemical lasers"
Vidya Sagar, **Chhaya Ravi kant***, Mainuddin Siddique, Manish Borkar A.P.Mittal
Instrumentation Science and Technology(Taylor and Francis) Vol.40, pp 262-274, March, 2012. <https://doi.org/10.1080/10739149.2012.673197>
Impact factor 0.525, ISSN: 1525-6030
(Indexed in Scopus, SCIE, Web of Science, INSPEC)

17. "Numerical Modeling of arc plasma generator for chemical laser applications"
Vidya Sagar, **Chhaya Ravi kant***, Gaurav Singhal and A.P.Mittal
Journal of Engineering Physics and Thermophysics (Springer) , Vol.85, No.3 pp 605-613, May 2012
DOI: 10.1007/s10891-012-0691-0
Impact factor: 0.812, ISSN: 1062-0125
(Indexed in Scopus, Inspec,)

18. " Performance and Control of 50 KW arc heater for chemical lasers"
Vidya Sagar, **Chhaya Ravi kant***, Gaurav Singhal, Mainuddin and A.P.Mittal

Journal of Advanced Physics (American Scientific Publishers), Vol.1, pp 37-44, June 2012.

Impact Factor: NA, ISSN: 2168-1996
(SCIE, Web of Science)

19. "Image encryption using NTRU Cryptosystem"
Aayushi, A.K. Mahapatra and **Chhaya Ravi Kant**
International Journal of Latest Trends in Computing, Volume 2, issue 2, June 2011.
ISSN: 2045-5364
Indexed in Scind
20. "TLSCP location tracking strategy of mobiles in GSM network"
Chhaya Ravi Kant, P. Arun and Nupur Prakash
IET Communication. Vol. 1 Dec. 2007, 1224-1229
Impact factor: 0.751, ISSN: 1350-2425
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)
21. "Extremely non-equilibrium synthesis of luminescent ZnO nanoparticles through ion condensation in DPF device"
Y. Malhotra, S. Roy, M.P. Srivastava, **Chhaya R. Kant**, and K. Ostrikov
J. Phys. D, App. Phys., IOP Science 42, (2009) 155202-155209
<https://doi.org/10.1088/0022-3727/42/15/155202>
Impact factor: 2.772, ISSN: 0022-3727
(Indexed in: Scopus, Science Citation Index, Science Citation Index Expanded)
22. "Dense Plasma Focus energetic ion based fullerene films on Si (111) substrate"
Chhaya R Kant, M.P. Srivastava and R.S. Rawat
Phys. Letters A, Elsevier Pub, 239, (1998) 109-114
[https://doi.org/10.1016/S0375-9601\(97\)00953-5](https://doi.org/10.1016/S0375-9601(97)00953-5)
Impact factor: 2.009, ISSN: 0375-9601
(Indexed in Scopus.
(Indexed in Scopus, SCI, Scopus, Chemical Abstracts)
23. "Thin Carbon film deposition using energetic ions of Dense Plasma Focus device"
Chhaya R Kant, M.P. Srivastava and R.S. Rawat
Phys. Letters A, Elsevier Pub, 226, (1997), 212-216
Impact factor: 2.009, ISSN: 0375-9601
(Indexed in Scopus, SCI, Scopus, Chemical Abstracts)

NATIONAL / INTERNATIONAL CONFERENCE PAPERS

1. "Study of Room Temperature Ammonia Vapour Sensing of rGO-ZnO Nanocomposites and Crystallite Size Determination using W-H method"
Sitakshi Gupta, **Chhaya Ravikant**, Amarjeet Kaur
Poster Presentation
International Conference on Advances in Smart Materials & Emerging Technologies

Department of Applied Sciences & Humanities, Indira Gandhi Delhi Technical University for Women, Dates: 23rd-24th January 2020, ISBN No.: 978-81-85255-67-

2. Studying the properties of NiO thin film synthesized in the ammonia evaporated environment.
Ritu Goel, Ranjana Jha, Medha Bhushan, Rekha Bhardwaj, Chhaya Ravikant.
Poster Presentation , International conference on “Advances in Smart Materials and Emerging Technologies- 23rd – 24th January 2020”, Department of applied sciences and humanities, Indira Gandhi Delhi Technical University, India.

3. “Measurement of mobility lifetime product of charge carriers and attenuation in polystyrene-BiI₃ composite”.

Ritu Chaudhari^{at}, **Chhaya Ravi Kant^{*a}** and Alka Garg^b

Poster Presentation at International Conference on Advances in Smart Materials & Emerging Technologies

Department of Applied Sciences & Humanities, Indira Gandhi Delhi Technical University
for Women, Dates: 23rd-24th January 2020, ISBN No.: 978-81-85255-67-5

4. Reduced Graphene Oxide-Zinc Oxide Nanocomposites for Highly Selective Room Temperature Ammonia Vapour Detection
Sitakshi Gupta, **Chhaya Ravikant**, Amarjeet Kaur
Poster, International Conference on Recent Trends in Materials & Devices, Amity Institute of Applied Sciences & Amity Institute for Advanced Research and Studies
Materials & Devices 18th-19th December 2019,
Abstract Book ISBN No.: 978-93-86238-82-5

5. Electrical and optical properties of NiO thin-film synthesized via Hydrothermal technique.
Ritu Goel, Ranjana Jha, Medha Bhushan, Rekha Bhardwaj, Chhaya Ravikant.
National conference on “Recent trends and advancements in chemical sciences- 29th – 31st March, 2019, Department of chemistry and Bhaskaracharya college of applied science, University of Delhi, India.
Publication- Abstract Book

6. Synthesis of Nickel Oxide (NiO) thin-film as counter electrode in solar cell.
Ritu Goel, Ranjana Jha, Medha Bhushan, Rekha Bhardwaj, Chhaya Ravikant
1st International conference on advances in Nanomaterials and Devices for energy and environment- 27th – 29th January 2019, Indian Institute of Information Technology and Management, Gwalior, India.
Poster Presentation.
Publication- Abstract Book, Waiting for acceptance approval for full length paper.

7. “BiI₃-PMMA-MWCNT nanocomposites for radiation Detectors” ,
Oral Presentation by Chhaya Ravi Kant
National Seminar on “New Trends in Nanotechnology and Applications” , ARSD College, University of Delhi, September 27-28, 2018.

8. “Graphene-based Gas/Vapor Sensors for Disaster-Preparedness”,
Oral Presentation by **Chhaya Ravi Kant**
National Conference on Climate Change & Disaster Risk Reduction in Urban System,
Aditi Mahavidyalaya, University of Delhi, March 26, 2018.
9. “Synthesis & Characterization of Nickel Oxide using Co-Precipitation Method”,
Oral Presentation by **Chhaya Ravi Kant**
6th International Conference on Ecotoxicology & Environmental Sciences, jointly
organized by Institute of Ecotoxicology & Environmental Sciences, Kolkata and Netaji
Subhash Institute of Technology, Delhi, 19-21 February, 2018. Publication- Abstract
book with isbn no -978-81-928924-6-7.
10. “Recent Advances in Chemical & Gas Sensors based on Graphene-Metal Oxide
Nanocomposites”
Sitakshi Gupta and **Chhaya Ravi Kant**
6th International Conference on Ecotoxicology & Environmental Sciences, jointly
organized by Institute of Ecotoxicology & Environmental Sciences, Kolkata and Netaji
Subhash Institute of Technology, Delhi, 19-21 February, 2018.
11. Hybrid Perovskite Solar Cells Using Vapor Deposition Techniques.
Ritu Goel, Chhaya Ravikant, Ranjana Jha, Rekha Bhardwaj, Medha Bhushan.
National Conference on “Clean & Green Energy: The Chemical and Environmental
Aspects” (NCGE- 16th – 17th February, 2017), Bhaskaracharya College Of Applied
Sciences, DELHI UNIVERSITY, INDIA.
Publication- Abstract Book, ISBN no- 978-1-63535-362-4.
12. Elimination of Toxicity in Solar Cells
Ritu Goel, Chhaya Ravikant, Ranjana Jha, Rekha Bhardwaj, Medha Bhushan.
International Conference on “Advances in Nanomaterials and Nanotechnology
(ICANN- 4th -5th November, 2016)”, Jamia Millia Islamia, New Delhi, INDIA.
Poster Presentation.
Publication- Abstract Book, ISBN no 978-93-85000-94-2.
13. “Nanocomposites of Reduced Graphene Oxide-Zinc Oxide for Air-Pollution Monitoring
by Toxic Gas Detection: A Review”
Sitakshi Gupta and **Chhaya Ravi Kant**
2nd National Conference on “Environmental Concerns of 21st Century: Indian and Global
Context, Zakir Husain Delhi College (Eve.), University of Delhi, 29-30 March, 2017.
14. Reduced Graphene Oxide-Zinc Oxide Nanocomposites for Gas Sensing Applications “
Sitakshi Gupta and **Chhaya Ravi Kant**
Nanocomposites and Nanoceramics (Chapter 8) in Proceedings on International
Conference on Nanomaterials & Nanotechnology (ICNANO), Vinoba Bhave Research
Institute, Saidabad, Allahabad, 1st-3rd March 2017, ISSN/ISBN No 978-91-8825-05-0.
15. Broad-Band Photoluminescence from thermally grown ZnO:Si Nanocomposites.
Chhaya Ravi Kant, P. Arun and Shabnam

- Recent trends in synthesis of Advanced Materials
 Maharaja Agrasen Institute of Technology, GGSIP University, 5th Dec.-06th Dec11.
16. Morphological and Photoluminescence Studies of ZnO/Si Nanocomposites
 Shabnam and **Chhaya Ravi Kant**
 National Conference of Electron Microscope Society of India, (EMSI-2009)
 17th Jan 09-20Jan,09, University of Bundelkhand, Jhansi.
17. Development of data acquisition and analysis system for HF/DF chemical Lasers
 Vidya Sagar , **Chhaya Ravi kant**, Mainuddin , Manish Borkar ,Alok P Mittal
 International Conference on Communications & Electronic (ICCE-2012).
 Krishna Institute of Engineering and Technology Ghaziabad.

Conferences Attended

1. National Symposium on Recent trends , Development and Methodologies in Biophysics, on 7th Sept. 2019 organized by Department of Biophysics, University of Delhi South Campus.
2. 4th International Interscience Conference on Infection and Chemotherapy, Joint meeting of ICIC & ISAAR, 26-28th Sept. 2019, Gyeongju , Korea.

Papers accepted in International Conferences cancelled due to COVID

1. Bandgap Engineered III-V InAs –GaSb TYPE-II Superlattice (T2SL) Infrared Detectors for multispectral range' Accepted for Oral Presentation by **Chhaya Ravi kant**
 33rd Assembly of Advanced Materials Congress, 23-25 March, 2020, Stockholm. Sweden.
2. Investigations on ZnO-rGO—2D Quantum Nanohybrid for Gas Sensing Applications
 Accepted for Oral Presentation by **Chhaya Ravi Kant**
 MRS Spring Meet, Phoenix, USA, 13-17 April, 2020
3. Bandgap Engineered III-V InAs –GaSb TYPE-II Superlattice (T2SL) Infrared Detectors for Multispectral Range
 Accepted for Poster Presentation by **Chhaya ravi kant**
 MRS Spring Meet, Phoenix, USA, 13-17 April, 2020
4. "Decoding the Oil dependent properties of Soot's composition and optimization strategies for its application in EDLC supercapacitors"
 Accepted for Poster Presentation by Anurag Tyagi , Manish Gupta , Chetna Gola , Surender Kumar Sharma , Vivek Shukla , **Chhaya Ravi Kant (Presenting Author)**
 MRS Spring Meet, Phoenix, USA, 13-17 April, 2020
5. Core-shell Nanoparticle Based Drug Delivery Strategy to Combat Microbial Infections: A Targeted Drug Delivery Approach
 Shaurya Pratap and **Chhaya Ravi Kant**
 Accepted for a Poster Presentation at American Society for Microbiology (ASM),2020 Meet , 18-22nd June, 2020