

Resume of Prof. Savita Roy, Principal, Daulat Ram College, Delhi University

1. Name & Present Designation: Prof. Savita Roy, Principal,
Daulat Ram College,
University of Delhi, Delhi 110007
2. Date of Birth & Age: 13th March 1964; 56Years
3. Educational Qualifications &: M.Sc. Physics; Ph.D.;
Field of Specialization: Electronics and material development
4. Recognition & Awards
 - President's Nominees to Manipur Central University
 - Was awarded 2nd APJ ABDUL KALAM national Dedication Award 2021(Corona Warrior) on Feb4, 2021 in the field of education.
 - Excellence Award for Promoting and inculcating Gandhian values among Youth on Oct 2, 2020 for second consecutive year on the Occasion of Gandhi Jayanti.
 - EXCELLENCE AWARD under the Category: Academic Individuals "For excellence in being a progressive administrator and environmentalist" by Pundit Deendayal Upadhyay Smriti Sansthan (PDUSS) under the guidance of Ministry of Environment Forest and Climate Change (MoEFCC) on September 25th, 2019.
 - Dr S. Radhakrishnan Memorial Award, in recognition of extraordinary service, dedication and contribution in the field of teaching and learning on 6 September 2021 by Respect India.
 - Delivered prestigious Damodar Shree memorial Lecture at Khanna Girls College affiliated to Allahabad University on Oct2, 2019
 - Excellence Award, Gandhi Bhawan, DU, 2nd October 2019
 - Excellence Award for Inculcating Spirit of Reuse, Refuse and Recycle, Ministry of HRD and Pandit Deen Dayal Upadhyay Smriti Manch (Government) 25th September 2019
 - Green Earth Award on the World Environment Day, Pandit Deen Dayal Upadhyay Smriti Manch, Jivitesh Foundation and Ministry of Environment Forest and Climate Change (Government) Contribution to environment upkeep, 3rd June 2019
 - Agroha Vikas Trust felicitation for support and guidance in organising scholarships to Blind Students of University of Delhi.
 - Teaching Excellence Award of University of Delhi for Innovation during academic session 2014-15.
 - 31st Dr. S. Radha Krishnan Memorial National Teachers Award-2015 on 4th September 2015
 - Best Lecturer Award-2010 by Delhi Government
 - Awarded for special contribution to Sanskrit by Delhi Sanskrit Academy in Sept 2017

- Lifetime achievement award by Women's Agency for generating Employment.
- National Skill Resources Development Award by confederation of Indian Universities
- Shaurya Samman by Rashtriya Sevika Samiti for innovation Project in March 2013.
- Motivational Award in Indo-German workshop on Advanced materials for future energy requirements
- Attended Principals' workshop in JNU in October 2015
- Certificate of appreciation in Third National Conference on Innovations in Indian Science, Engineering and technology. Feb 25-27, 2013 CSIR-NPL and IAARI, New Delhi for contribution to Indian science.
- Senior Research Associate (CSIR) 1996-1997 Department of Physics and Astrophysics.
- Research Associate CSIR-1994, Electronics Science Department, South Campus, DU.
- Senior Research Fellowship – 1990 -1991, CSIR
- Junior Research Fellowship – 1988. UGC-CSIR

5. Membership of eminent Societies

- Member, Executive Committee, Plasma Science Society of India. 2013-2015
- Life member semiconductor Society of India
- Life member Plasma Science Society of India
- Swadeshi Science movement of India
- Member of National Consultative Meet on Governance Reforms for Quality Education and Developing Best Teachers at NUEPA, New Delhi

6. Contribution to Delhi University Corporate Life

- Member Court of University of Delhi.
- Member, Committee for University Guest House (2021-24)
- Member oversight committee, empowered committee of Executive Council (Since 2019)
- Member of member of the Academic Council, Jawahar Lal Nehru University (2021)
- Advisory Board, Hindi medium implementation Committee, DU 2021-23
- Member, BA Prog. Committee 2020-2021
- Member Scrutinity Committee for the post of Professor at Kamla Nehru College, DU March 2021
- Appointed member, advisory committee for Celebrating **75th year of excellence in higher education and research**, Deptt of library and information Science 2021-22
- Member, Managing Committee of Teacher's Welfare Committee (DUTWF), 2020
- Member, Managing Committee of Gandhi Bhawan, Univ of Delhi ,2020

- Member, oversight Committee for matters relating to revision of curriculum 2019
- VC Nominee for admission committee of Department of Music 2018-20
- Member, Science Course Admission Committee 2019
- Ex member, Executive Council 2017-19
- Ex member Academic Council

7. Academic/Research Experience

- Teaching Experience of more than 25 years.
- Worked on Mercury Cadmium Telluride Single crystal during early research period of 1988-1992. It has strategic and military importance.
- Developed a method to deposit thin films of metals and non-metals using Dense Plasma Focus Device. This has resulted in **two Patents Indian Patent No.218110 (2008) and 232763 (2009).**
- Developed Multipurpose Electronic work boards for under graduate Electronics Practical while in Kalindi College.
- Developed diamond – like- Carbon (DLC) thin films and now Nano-DLC thin films with unique tribological, Electrical and optical properties.
- Published research papers on variety of materials viz. Zinc Oxide, Germanium, Gold nanoparticles and gold and silver bi-metallic layers.
- Participated in the “National Consultative Meet on Grievance Reforms for Quality Education and Developing Best Teachers organized by Higher and Professional Education, NUEPA, Delhi from Sept 8-9-2015.
- Participated in Principals Workshop from 12-16- Oct 2015 organized by Human Research Development Centre at JNU.
- Two Innovation Projects on conversion of mechanical energy to electrical energy on Metro Tracks & To evaluate the feasibility of installing wind turbines.” awarded by Delhi University in 2012 and 2013 respectively.

8. Contribution to Daulat Ram College as its Principal since 2014

- I. College was accredited ‘A’ grade by NAAC
- II. College got 26th rank in NIRF conducted by MHRD
- III. Bagged more than a dozen Innovation Projects for college and saw to it that they are successfully conducted academically and benefit reach students and faculty.
- IV. One of the seven colleges of Delhi University who bagged Star Innovation Project (~Rs.80 lakhs)
- V. The result of students had shown an improvement by 100%
- VI. Despite non-cooperation of trustees of GB, developed necessary facilities for students and teachers by building Conference Hall, Teachers Study Hall, Toilets and Drinking Water facility in the college
- VII. The College is Zebra fish and Drosophila Resource Center and teachers are training students and faculty of other Delhi University Colleges, Computer Lab for Mathematics department equipped with all licensed software e.g. Matlab, windows and SPSS, TSR, Renovation of eastern wing of college.

- VIII. In past three years college has been able to get sponsorship of more than Rs.50 Lakhs for its various Co-curricular, extra- curricular and cultural activities from such organizations as NSDC, ONGC, IOC, NTPC Canara Bank, IOB and at least 50 other organizations.
 - IX. College is first to have Psychology Resource Centre.
 - X. The college has started two new courses (B.Sc. (Hons) in Physics and Physical Education in B.A.(Prog). Got the Physics (H) lab functional for starting the B. 5'Sc (H)course in the college.
9. Administrative Experience:
- Principal, Daulat Ram College, DU (2014 - Till date)
 - Visitors Nominee for Manipur University since 2018
 - Member, oversight Committee to look into the revised courses on the basis of LOCF 2019-20
 - Member, Committee constituted by Delhi University to look into the operational aspects of UGC regulation on maintenance..... 2018
 - Member University Court, University of Delhi, 2015 to Till date
 - Member to look into the Screening Committee for the post of Assistant Professor, University of Delhi during 2017-18
 - Member Central Admission Committee, University of Delhi, 2016-2017
 - Member committee on revision of courses (UG and PG) of University of Delhi 2018
 - VC Nominee, Faculty of Fine Arts and Music, University of Delhi 2017-19
 - Member Selection Committee for appointment of Principal at IHE 2015
 - Member, Quantum of Punishment in Unfair Means, DU (2017- till date).
 - Member, B.A. Programme Committee, DU (2017 till date)
 - Member, Standing Committee on Academic Matters, DU (2017-2019)
 - Member, Business Advisory Committee of Academic Council, DU (2017)
 - Member, Academic Council, DU (2017-2018)
 - Appointed by V.C, Delhi Univ, to conduct practical examination for the BSc (H)physics course in Sherbutse College, Kanglung, Bhutan 2005

10. List of Research Publications:

1. A study on defect annealing in GaAs nanostructures by ion beam irradiation.
Onkar Mangla, Savita Roy, S. Annapoorni, K. Asokan,Bull. Mater. Sci.(2020) 43:78
<http://doi.org/10.1007/s12034-020-2044-5>

2. Study of Morphological, Structural, Optical and Transport Properties of Gallium Nitride Nanodots Fabricated under Extreme Plasma Conditions
Onkar Mangla and Savita Roy, International Journal of Advances in Science Engineering and Technology (IJASEAT) Vol. 7 (1-S-2), 4-8 (2019), ISSN(p): 2321 –8991, ISSN(e): 2321 –9009, Impact Factor: 3.15 (0.41).
3. Metal-Oxide-Semiconductor Capacitors Fabricated on Zirconium Oxide High-K Gate Dielectric Nano-Layers
Onkar Mangla and Savita Roy, International Journal of Recent Technology and Engineering (IJRTE) Vol. 7 (6S), 868-870 (2019), ISSN: 2277-3878 (Online), Impact Factor: 5.11.
4. Monoclinic Zirconium Oxide Nanostructures Having Tunable Band Gap Synthesized under Extremely Non-Equilibrium Plasma Conditions
Onkar Mangla and Savita Roy, Proceedings Vol. 3, ISSN: 2504-3900, pp. 10 (2019).
5. Zinc Oxide Nanostructures Fabricated under Extremely Non-Equilibrium Plasma Conditions
Onkar Mangla and Savita Roy, Solid State Phenomena Vol. 287, ISSN: 1662-9779, pp. 75-79 (2019), Impact factor: 0.39.
6. Annealing of deep level defects in GaAs nanostructures by ion beam irradiation.
Onkar Mangla, Savita Roy, S. Annapoorni, K. Asokan, Materials Letters Vol. 217, ISSN: 0167-577X, pp. 231-234 (2018), Impact Factor: 2.572.
7. Gallium nitride nanoneedles grown in extremely non-equilibrium nitrogen plasma.
O. Mangla and S. Roy, AIP Conference Proceedings Vol. 1731, ISSN: 0094-243X, 050007 (3 pp.) (2016).
8. Wide band gap gallium arsenide nanoparticles fabricated using plasma method.
D. Jain, O. Mangla, S. Roy, AIP Conference Proceedings Vol. 1731, ISSN: 0094-243X, 050143 (3 pp.) (2016).
9. Gallium arsenide/gold nanostructures deposited using plasma method.
O. Mangla, S. Roy, S. Annapoorni, AIP Conference Proceedings Vol. 1731, ISSN: 0094-243X, 050006 (3 pp.) (2016).
10. Dense Plasma Focus-Based Nanofabrication of III-V Semiconductors: Unique Features and Recent Advances.
Onkar Mangla, Savita Roy, and Kostya (Ken) Ostrikov, Nanomaterials Vol.6, ISSN: 2079-4991, 4 (8 pp.) (2016), Impact Factor: 3.553.
11. A study on aberrations in energy band gap of quantum confined gallium arsenide spherical nanoparticles.

Onkar Mangla and Savita Roy, Material Letters Vol. 143, ISSN: 0167-577X, pp. 48-50 (2015), Impact Factor: 2.572.

- 12.** Synthesis and Characterization of Gallium Arsenide Nanostructured Film for Optoelectronic Applications.

O. Mangla, S. Roy, and M. P. Srivastava, Advanced Science, Engineering and Medicine Vol. 6, Print ISSN: 2164-6627, Online ISSN: 2164-6635, pp. 1200-1204 (2014).

- 13.** Fabrication of Gold Nanostructures and studies of their morphological and surface Plasmon properties.

Naorem Bilasini Devi, Y. Malhotra, Savita Roy and M.P.Srivastava, Plasmonics Vol.8, Print ISSN 1557-1955, Online ISSN 1557-1963, pp1273-1278 (2013).

- 14.** Optical Absorption study of GaAs Nanostructures synthesized using Hot and dense plasma.

Onkar Mangla, Savita Roy and M.P.Srivastava, Proceedings on 27th PSSSI National Symposium(Plasma-2012) on Plasma Science and Technology. ISBN:978-93-82062-82-0. pp 206-211, (2013)

- 15.** Surface Plasmon properties of AG-AU Bi-metallic Nanostructures fabricated by Hot Plasma.

B.D.Naroem, Savita Roy and M.P.Srivastava, 27th PSSSI National Symposium(Plasma-2012) on Plasma Science and Technology on Challenges of Power Generation & lighting 21st Century. Pondicherry University, Dec 10-13, ISBN:978-93-82062-82-0, pp 201-205, (2013)

- 16.** Formation of Iron nanoparticles on quartz substrate using dense plasma focus device

W.P. Singh, Savita Roy, M.P.Srivastava, Journal of Physics: Conference Series 208, ISSN 1742-6588 (Print) ISSN 1742-6596 (Online), pp 012105, (2010)

- 17.** Deposition of Aluminum nanoparticles Using dense Plasma Focus device

B.D.Naorem, S.Roy and M.P.Srivastava, Journal of Physics Conference Series , 208 , ISSN 1742-6588 (Print) ISSN 1742-6596 (Online), 012103, (2010)

- 18.** Deposition and surface characterization of nanoparticles of Zinc Oxide in nitrogen atmosphere

Yashi Malhotra, Savita Roy, M.P.Srivastava, Journal of Physics: Conference Series 208, ISSN 1742-6588 (Print) ISSN 1742-6596 (Online), 012106, (2010)

- 19.** Nucleation of Graphitic Carbon Nanostructures on n-Si <111>.

Yashi Malhotra, Savita Roy, M.P.Srivastava, Proceedings of International workshop on Plasma diagnostics and Applications, 2-3 July 2009 Singapore, ISBN : 978-983-44947-2-8, pp 226-231

- 20.** Dense Plasma Focus assisted formation of Carbon Nanoloops on Quartz substrate
Savita Roy and M.P. Srivastava, Proceedings of International workshop on Plasma diagnostics and Applications, ISBN : 978-983-44947-2-8, pp 97-102, 2-3 July 2009 Singapore
- 21.** Nanoparticles and Nanostructured Cobalt deposition using Dense Plasma Focus Device and their characterization
W.Priyokumar Singh, Savita Roy, M.P.Srivastava, Journal of Plasma and Fusion Research Series, 8, ISSN: 1883-9630, pp 526-539 (2009) .
- 22.** Extremely non-equilibrium synthesis of Luminescent zinc oxide nanoparticles through energetic ion condensation in a dense plasma focus device
Y.Malhotra, S.Roy, M.P.Srivastava, C.R. Kant and K. Ostrikov, Journal of Physics D: Applied Physics, 42, ISSN 0022-3727 (Print), ISSN 1361-6463 (Online), pp155202-155209 (2009).
- 23.** Deposition of Germanium Nanostructures using Dense Plasma Focus Device and their Characterization
Naorem Bilasini Devi, Savita Roy and M.P.Srivastava, Advances in Applied Plasma Science, 7, ISBN:987-4-9900642-6-6, pp 247-250 (2009)
- 24.** Effect of Laser annealing on structural, electrical and optical properties of p-Mercury Cadmium Telluride single crystals.
A.L. Dawar, Savita Roy, R.P.Mall and P.C.Mathur, J.Appl. Phys. 70, ISSN: 0021-8979, pp3516-20, 1 October 1991
- 25.** Effect of Laser annealing on electrical and optical properties of n-Mercury Cadmium Telluride.
A.L. Dawar, Savita Roy, T.Nath, S.Tyagi and P.C.Mathur, J.Appl. Phys. 69(7), ISSN: 0021-8979, pp3849-52 ,1 April 1991
- 26.** Anomalous Hall Effect on Polycrystalline HgTe
T.Nath, Savita Roy, P.Saxena and P.C.Mathur, J.Appl. Phys. 68(7), ISSN: 0021-8979, 3723-25, 1 October 1990
- 27.** Effect of annealing on the electrical properties of polycrystalline intermettalic compound HgTe
T.Nath, Savita Roy, P.Saxena and P.C.Mathur, J. Appl. Phys 67(2), ISSN: 0021-8979, 826-831, 15 Jan 1990
- 28.** Dependence of Fermi level and Coulomb Scattering Centers on mercury annealing in polycrystalline HgTe
T.Nath, Savita Roy, P.Saxena and P.C.Mathur, Journal of material science letters 9, ISSN:

0261-8028, pp 975-977, (1990).