




Shivaji College Faculty Details Proforma

Title	Dr.	First Name	ARUN VIR	Last Name	SINGH	Photograph
Designation	Associate Professor					
Address	Department of Physics Shivaji College (University Of Delhi) Raja Garden, New Delhi-110027.India					
Office Phone No.	91-11-25116644,91-11-25155551					
Residence						
Mobile	9868279792					
Email	arunvir2004@yahoo.com					
Web-Page						
Educational Qualifications						
Degree	University/Institute					Year
Ph.D.	University of Delhi					2003
M.Phil./M.Tech.	Kurukshetra University					1982
PG	Kurukshetra University					1981
UG	University of Delhi					1978
Any Other Qualification						
Career Profile						
<ul style="list-style-type: none"> • Toyohashi University of Technology, Japan, December 1999- November 2000. • Sherubtse College , Royal University Of Bhutan On Deputation (Feb.2008- Feb -2010) • Working as Associate Professor in Shivaji College, University of Delhi 						

Administrative Assignments
Active Involvement in various assignments, projects and committees assigned by the college from time to time.
Areas of Interest/Specialisation
Material Science, Electronics
Subjects Taught
Have been teaching Physics courses (undergraduate B.Sc. Honours/ Applied Physical Sciences)
Innovation Project/Research Projects (Major Grants/Research Collaboration)
Co-principal investigator in the DRDO sponsored project Title: „„Development of ZnO/Si hetrostructures for photodiode applications using Sol-Gel Technique”
Publications Profile (Research Papers/Books)
<ul style="list-style-type: none"> • Sol-gel derived highly transparent and conducting yttrium doped ZnO films, Journal of Non-Crystalline Solids. 352 (2006) 2335 • Sol-gel derived yttrium doped nanostructures, Journal of Non-Crystalline Solids, 352 (2006) 2565 • Physical properties of natively textured yttrium doped zinc oxide films by sol- gel, Journal of Materials Science in electronics, 16 (2005) 649 • Structural, electrical and optical properties of sol-gel derived yttrium doped ZnO films, phys.stat.sol.(a) 1-7 (2005) • Development of highly transparent and conducting yttrium doped ZnO films: Role of sol- gel stabilizers. Materials Science, -Poland, 22 (2004) 201 • Doping mechanism in aluminum-doped zinc oxide thin films, J. Appl. Phys., 95 (2004) 3640. • p-type conduction in codoped ZnO thin films, J. Appl. Phys. 93 (1), (2003) 396. • Highly conducting and transparent aluminum-doped zinc oxide thin films prepared by pulsed laser deposition in oxygen ambient, J. Appl. Phys., 90 (11) (2001)5661-5665. • Al doped Zinc Oxide (ZnO:Al) thin films by pulsed laser ablation, J. Indian Inst. Science, 81 (2001) 527-533. • Study of ZnO:Al thin films prepared by ArF excimer laser ablation, Indian J. Eng. & Mat. Sci., 7 (2000) 259-263. • Optical properties of large bandgap Se- and S-doped amorphous hydrogenated silicon., Journal of Non-Crystalline Solids, 266-269 (2000) 708-712. • Thickness dependence of optical and electrical properties of aluminum doped zinc oxide films Sherub Doenme,9,(2009)76-85.

Proceedings: National/ International Conferences

- Fabrication of p-type ZnO thin films by rf-sputtering International Conference on Electrical Engineering 2001 (July 22-26, Xian-China, 2001) Vol.3(2001)pp-1588.
- Epitaxial growth of Al-doped ZnO films on Si substrate using Al₂O₃ buffer layer, 49th Spring meeting of the Japan society of applied physics and related societies (JSAP), (KobeJapan, 2001), (28p-ZN-7) pp.317.
- Highly conductive and transparent n-and p-type zinc oxide thin films in oxygen ambient Eleventh International Workshop on Physics of Semiconductor Devices (Dec. 11-15, 2001, Delhi) pp-620-626..
- p-type ZnO thin films using R. F. Sputtering, 61th Autumn meeting of JSAP,(Hokkaido- Japan) 4p-E-5 (2000) pp.501.
- Highly conductive and transparent Al doped Zinc Oxide (ZnO:Al) thin films by pulsed laser ablation. Tokai-section joint conference of the eight institutes of electrical and related engineers. (Sept. 2000, Hamamatu-Japan) pp-135.
- Transparent Conducting ZnO:Al Thin Films Prepared By ArF Excimer Laser Ablation, Tenth International Workshop on Physics of Semiconductor Devices(Dec.14-18, 1999, Delhi) pp- 1198.
- p- Type Conduction in ZnO Thin Films by R.F. Sputtering, Indo-Japanese workshop on micro system technology (Nov. 23-25, 2000 Delhi) P-10.
- Al doped Zinc Oxide (ZnO:Al) Thin Films by Pulsed Laser Ablation, Indo-Japanese workshop on micro system technology (Nov. 23-25, 2000 Delhi) P-9.
- Optimization and Characterization of Highly Conductive and Transparent Al-doped ZnO films for Solar Cell Applications. 3rd World Conference on Photovoltaic Energy Conservation (May 14-18, 2003) Osaka, Japan.
- Structural Optical and Electrical Properties of Aluminum doped Zinc Oxide films by Pulse Laser Deposition, Twelfth International Workshop on Physics of Semiconductor Devices (Dec. 16-20, 2003, IIT Chennai, Madras) pp-200-202
- Characterization of Transparent and Conducting Sol-Gel Derived Yttrium Doped Zinc oxide Films, National Conference on Materials and their Applications (NCMA-2004) March 11-13, 2004, Department of Physics, Kurukshetra University, Kurukshetra. pp- 351-354
- Effect of Target-Substrate Distance on the Physical Properties of Al-Doped ZnO Films, National Conference on Materials and their Applications (NCMA-2004) March 11-13, 2004, Department of Physics, Kurukshetra University, Kurukshetra
- Transparent and Conducting Sol-Gel Derived Yttrium Doped Zinc Oxide Films. 19th European Photovoltaic Solar Energy Conference and Exhibition, Paris,France, 7-11 June 2004.,Paris,France.,pp.374
- Development and Characterization of ZnO/Si Hetrostructure.(sol-gel derived) 6, Asia Pacific Microwave Conference (APMC-2004), December 15-18, 2004, New Delhi, APMC/04/C/87

Conference/Seminar/Faculty Development Programme/Workshop

- Regional Workshop on Characterization of semiconductor Nanostructurea and their Applications to Optoelectronic Devices University of Delhi, South Campus, Delhi-21, December 1-4,1998.
- 61th Autumn meeting of JSAP,(Hokkaido-Japan) 4p-E-5 (2000) pp.501.
- Tokai-section joint conference of the eight institutes of electrical and related engineers. (Sept. 2000, Hamamatu-Japan) pp-135.
- International Conference on Advanced materials (ICAM-2000, Dec.26-28,2000) C.C.S University, Meerut.
- National Conference on Materials and their Applications (NCMA-2004) March 11-13, 2004, Department of Physics, Kurukshetra University, Kurukshetra.
- India-Japan Workshop on ZnO Materials and devices (IJW2006) Dec 18-20, University of Delhi, South Campus, New Delhi.
- A National Conference on Relationship between Chemical Science and Society RCSS-2020 from January16-17, 2020.
- A national webinar by Dr. Manoj Kumar Gupta (Scientist at CSIR-AMPRI) on April 22, 2020, at 11 AM IST on “Piezoelectric Flexible Nanogenerator : A New and Renewable Energy Source”.
- An international webinar by Dr. Alireza Farhadizadeh (Scientist at University of West Bohemia, Pilsen, Czech Republic) on April 23, 2020, at 2:30 PM IST on “Mechanical Properties of Thin films”.
- International Webinar organized by Bhaskaracharya College of Applied Sciences on “How Huge is Nano? An Introduction to Nanotechnology” on 29th May, 2020.

Research Guidance (*Supervision of Doctoral Thesis/Dissertations*)

Awards and Distinctions

AIEJ fellowship (Japan), (Dec.1999 – Nov.2000)

Memberships

Life member, Semiconductor Society (India)

Other Academic Activities

- Orientation course (OR-10) March 25- april 20, 1991, conducted by CPDHE, University of Delhi.
- Refresher course in Physics (PH-3) March 29- April 16,1994, conducted by CPDHE, University of Delhi.
- Refresher course in Physics and Electronics, Jan 5-Jan24,2004 conducted byCPDHE, University of Delhi.
- Refresher course in Applications of Modrentechniques in Natural Sciences, Aug.11- Aug.31 2004., conducted by Physics Department Maharishi Dayanand, University Rhotak, Haryana.
- Physics Workshop “Pratibimb” in Shivaji College Delhi University in 2016.
- Physics Workshop “Spectrum” in Shivaji College Delhi University in 12th February 2018.
- The Annual Departmental Festival INVENIO
- Convener of National Conference on Current & Future Perspectives in Nanotechnology “Nanoworld – 2018”, April 12-13, 2018.
- Convener of Committee for preparing the model question bank and model question Paper of B.Sc. (H) even semester (CORE: ELECTROMAGNETIC THEORY), appointed by Committee of Courses in Physics, Department of Physics and Astrophysics, University of Delhi, 2019.
- Member of the committee for preparing the model question bank and model question Paper of B.Sc. (H) odd semester (CORE: DIGITAL SYSTEMS AND APPLICATIONS), appointed by Committee of Courses in Physics, Department of Physics and Astrophysics, University of Delhi, 2019.

Cultural/Extracurricular Activities

Signature of Faculty Member