




DEPARTMENT OF PHYSICS

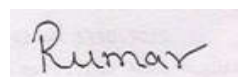
DYAL SINGH COLLEGE, UNIVERSITY OF DELHI

FACULTY DETAIL



Title	Dr.	First Name	ROHTASH	Last Name	KUMAR	Photograph
Designation	Assistant Professor (Ad-hoc)					
Address	Department of Physics, Dyal Singh College Morning University of Delhi, Lodhi Road, New Delhi PIN-110003, India					
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Residence						
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Web-Page						
Educational Qualifications						
Degree	Institution					Year
B.Sc.	Govt. P.G. College Hisar (Kurukshetra University, Kurukshetra)					2007
M.Sc.	Guru Jambheshwar University of Science & Technology, Hisar					2011
Ph.D.	Jawaharlal Nehru University (JNU), New Delhi					2018
Career Profile						
1. 14 August 2019-Present, Assistant Professor (Ad-hoc) at Dyal Singh College, University of Delhi, Lodhi Road, Delhi. 2. 1 August 2019 to 13 August 2019, Assistant Professor (Ad-hoc) at Keshav Mahavidyalaya, University of Delhi, Delhi. 3. 8 May 2019 to 24 May 2019, Counselor for B.Sc. students (IGNOU) at Gargi College, University of Delhi, New Delhi. 4. 11 January 2019 to 24 April 2019, Assistant Professor (Guest) at Keshav Mahavidyalaya, University of Delhi, New Delhi.						
Administrative Assignments (From 1st July 2017 onwards)						
1. Admission committee member for physical science, UG level at Dyal Singh College academic session 2021-22. 2. Student mentor-mentee member for physical science, UG level at Dyal Singh College academic session 2021-22.						
Areas of Interest / Specialization						
1. Material synthesis: solid-state reaction route, and sol-gel method. 2. Thin film deposition using RF sputtering & Pulse Laser Deposition (PLD). 3. Processing, characterization and applications of ferroelectric materials. 4. Dielectric, ferroelectric and energy storage properties. 5. Structure-property correlation in functional materials. 6. Microstructure-physical property relationship in ferroelectric ceramics. 7. Ions irradiation of thick and thin film samples. 8. TEM sample preparation (plan-view & cross-sectional view).						
Subjects Taught						
Elements of modern physics, Solid state physics, Mechanics, Thermal physics, Quantum mechanics, and Basic instrumentation skills						
Research Guidance						
NIL						
Publications Profile (From 1st July 2017 onwards)						
1. Effect of La-doping on dielectric properties and energy storage density of lead-free Ba(Ti _{0.95} Sn _{0.05})O ₃ ceramics, R. Kumar, I. Singh, R. Meena, K. Asokan, B. Birajdar, S. Patnaik, Materials Research Bulletin, (2019) 110694. 2. Combined effect of oxygen annealing and La-doping in broadening the phase transition of Ba(Zr _{0.2} Ti _{0.8})O ₃ , R. Kumar, K. Asokan, S. Patnaik and Balaji Birajdar, Journal of Alloys and Compounds, 737, 561-567 (2018).						

<p>3. Evolution of relaxor properties in La-doped barium zirconate titanate (BZT), R. Kumar, K. Asokan, S. Patnaik, and Balaji Birajdar, <i>Ferroelectrics</i>, 517, 1-6.</p> <p>4. Zr-doped TiO₂ nano-powder via halide free non-aqueous solvent controlled sol-gel route, I. Singh, R. Kumar, and Balaji I. Birajdar, <i>Journal of Environmental Chemical Engineering</i>, 5, 2955-2963 (2017).</p> <p>5. Sonia Rani, Sujata Sanghi, Ashish Agarwal, R. Kumar, Ompal Singh, Crystal structure, magnetic and dielectric properties of Er-doped BiFeO₃ ceramics, <i>Applied Physics A</i> (2022) 128:576.</p>
Conference Organization/ Presentations (From 1 st July 2017 onwards)
NIL
Research Projects (Major Grants/Research Collaboration) (From 1 st July 2017 onwards)
NIL
Awards and Distinctions (From 1 st July 2017 onwards)
NIL
Association With Professional Bodies
NIL
Other Activities like MOOCs, FDP/ Patents etc. (From 1 st July 2017 onwards)
<p>1. Advanced Electron Microscopy for Materials Science, organized by SCNS, JNU New Delhi, 13 March 2018 to 22 March 2018.</p> <p>2. Multifunctional Complex Oxide Thin Film Hetero-structures by Design, organized by SPS, JNU New Delhi, 20 March 2018 to 30 March 2018.</p> <p>3. Interdisciplinary studies and higher education: prospects and challenges, organized by Dyal Singh College/Mahatma Hans raj Faculty Development Centre, University of Delhi, 26 July 2021 to 31 July 2021</p>



Signature of Faculty Member