




DESHBANDHU COLLEGE
(UNIVERSITY OF DELHI)
KALKAJI, NEW DELHI - 110019
Faculty Details Proforma for College Website

Title	Dr.	First Name	Raju	Last Name	Kumar	Photograph																				
Designation		Assistant Professor																								
Address		Physics Department, Deshbandhu College																								
Phone No. Office																										
Residence Mobile		9472993539																								
Email		rajur91@gmail.com																								
Web-Page																										
Educational Qualifications																										
Degree		Institution			Year																					
Ph.D.		Jawaharlal Nehru University, Delhi			2019																					
M.Phil.																										
PG		I.I.T Madras, Chennai			2016																					
UG		St.Stephen's College, Delhi			2014																					
Any other qualification																										
Career Profile																										
<p>Assistant Professor (Ad-Hoc) Deshbandhu College, 9th Jan 2020 – Till Now</p> <p>University of Delhi.</p>																										
Administrative Assignments																										
Areas of Interest/Specialization																										
Nanomaterials, Ferroelectrics, Electrocaloric effect																										
Subjects Taught																										
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 25%; height: 20px;"></td><td style="width: 25%;"></td><td style="width: 25%;"></td><td style="width: 25%;"></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td><td></td></tr> </table>																										
Research Guidance																										

Publications Profile

List against each head (If applicable) (as illustrated with examples)

1. Books/Monographs (Authored/Edited)

Research papers published in Refereed/Peer Reviewed Journals

1. **Kumar, R.** & Singh, S. Giant electrocaloric and energy storage performance of $[(K_{0.5}Na_{0.5})NbO_3]_{(1-x)}-[LiSbO_3]_x$ nanocrystalline ceramics. **Scientific Reports**. 8, 3186 (2018) (impact factor = 4.525) (citation 7).
2. **Kumar, R., Kumar, A. & Singh, S.** Large electrocaloric response and energy storage study in environmentally friendly $(1-x)K_{0.5}Na_{0.5}NbO_3-xLaNbO_3$ nanocrystalline ceramics. **Sustainable Energy and Fuels** 2, 2698–2704 (2018) (impact factor = 4.912) (citation 1).
3. **Kumar, R., Kumar, A. & Singh, S.** Coexistence of Large Negative and Positive Electrocaloric Effects and Energy Storage Performance in $LiNbO_3$ Doped $K_{0.5}Na_{0.5}NbO_3$ Nanocrystalline Ceramics. **ACS Applied Electronic Materials**. 1, 454–460 (2019) (citation 1).
4. **Kumar, R., Khurana, D., Kumar, A. & Singh, S.** Giant negative electrocaloric effect and energy storage response in $0.94(K_{0.5}Na_{0.5})NbO_3-0.06SrMnO_3$ nanocrystalline ceramics. **Ceramics International**. 44, 20845–20850 (2018) (impact factor = 3.450) (citation 2).
5. **Kumar, R. & Singh, S.** Enhanced electrocaloric response and high energy-storage properties in lead-free $(1-x)(K_{0.5}Na_{0.5})NbO_3-xSrZrO_3$ nanocrystalline ceramics. **Journal of Alloys and Compounds**. 764, 289–294 (2018) (impact factor = 4.175) (citation 4).
6. Gupta, A*, **Kumar, R.*** & Singh, S. Coexistence of negative and positive electrocaloric effect in lead-free $0.9(K_{0.5}Na_{0.5})NbO_3-0.1SrTiO_3$ nanocrystalline ceramics. **Scripta Materialia** 143, 5–9 (2018) (impact factor = 4.539) (citation 6).
7. **Kumar, R. & Singh, S.** Enhanced electrocaloric effect in lead-free $0.9(K_{0.5}Na_{0.5})NbO_3-0.1Sr(Sr_{0.5}Nb_{0.5})O_3$ ferroelectric nanocrystalline ceramics. **Journal of Alloys and Compounds** 723, 589–594 (2017) (impact factor = 4.175) (citation 4).
8. Kumar, A., **Kumar, R., Singh, K. & Singh, S.** Enhanced Electrocaloric Effect and Energy Storage Density in Lead-Free $0.8Na_{0.5}Bi_{0.5}TiO_3-0.2SrTiO_3$ Ceramics. **Physica Status Solidi (A) Applications and Materials Science** 216, 1800786 (2019) (impact factor = 1.606).
9. Jamwal, T.*; **Kumar, R.*** & Singh, S., Giant electrocaloric effect in $0.75PbZrO_3-0.25Bi(Mg_{1/2}Ti_{1/2})O_3$ ceramics, **Ceramics International**. 45, 14411–14414 (2019) (impact factor = 3.450).

Conference Organization/ Presentations

List against each head (If applicable)

1. Organization of a Conference: None
2. Participation as Paper/Poster Presenter:

1. International Conference on Advanced Materials (ICAM-2019), Delhi, India (07/03/2019). Title: Electrocaloric response in $(1-x)K_{0.5}Na_{0.5}NbO_3-xLiNbO_3$ nanocrystalline ceramics. (**Raju Kumar**, Satyendra Singh).
2. National Science day 2019 (28/02/2018) in Jawaharlal Nehru University, Delhi, India. Title: Enhanced negative electrocaloric effect in $SrMnO_3$ doped $K_{0.5}Na_{0.5}NbO_3$ nanocrystalline ceramics. (**Raju Kumar**, Satyendra Singh).
3. International Conference on Physics, Society and Technology 2019 (icpst2019), Delhi, India

<p>(17/01/2019). Title: Enhanced negative electrocaloric effect in SrMnO₃ doped K_{0.5}Na_{0.5}NbO₃ nanocrystalline ceramics. (Raju Kumar, Satyendra Singh).</p> <p>4. National Science day 2018 (28/02/2018) in Jawaharlal Nehru University, Delhi, India. Title: Electrocaloric effect study of lead-free ferroelectric (1-x)K_{0.5}Na_{0.5}NbO₃-xLiSbO₃ nanocrystalline ceramics (Raju Kumar, Satyendra Singh).</p> <p>5. National Science day 2017 (28/02/2018) in Jawaharlal Nehru University, Delhi, India. Title: Electrocaloric effect study of ferroelectric 0.9(K_{0.5}Na_{0.5})NbO₃- 0.1Sr(Sc_{0.5}Nb_{0.5})O₃ nanocrystalline ceramics (Raju Kumar, Satyendra Singh).</p> <p>6. 2nd International Conference on Recent Advances in Nanosciences and Nanotechnology-2016 (ICRANN-2016), Delhi, India (19/12/2016).</p>
Research Projects (Major Grants/Research Collaboration)
Awards and Distinctions
CSIR/UGC-NET JRF JUNE 2015 qualified
Association With Professional Bodies
Other Activities



Signature of Faculty Member