







## Personal details

 Dr. SUNDER SINGH


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 7C/93, Boudh Vihar, Phase-2, Avas Vikas, Moradabad 244001 U.P.

 May 15, 1983

 Male

 Indian

## Skills

a) Synthesis and Preparation of Material- well versed with synthesis methods: solid state reactions, sol-gel, and flash pyrolysis method.

b) Processing of Material- Ball Mill, dry grinding, calcination, Pelletization (at different conditions: pressure, time, weight, geometry), Sintering, Electroding.

c) Characterization of Materials- Thermal analysis (DTA/TGA), phase analysis (XRD), Spectral-structural analysis (XPS) d) Electrical Characterization- Capacitance, Dielectric Constant, Impedance measurement

## Languages

Hindi, English

# Dr. SUNDER SINGH

## Education

**M.Sc. in Physics, NET JRF, B.Ed., Ph.D.**

## Employment

**Assistant Professor**

**Mar 2019 - Present**

Dept. of Physics, Hindu College, Moradabad

## Profile

- I did my M.Sc. from Aligarh Muslim University, Aligarh and Ph.D. on Structural and Electrical Properties of  $\text{La}_{0.5}\text{Sr}_{0.5}\text{Bi}_{0.2}\text{Co}_{0.8-x}\text{Fe}_x\text{O}_{3-\delta}$  ( $x = 0, 0.1, 0.2, 0.3, 0.4$ ) Perovskite Cathodes for Intermediate Temperature - Solid Oxide Fuel Cells.
- Four years' experience in teaching and administration
- Thorough understanding of the subject
- Knowledgeable in internal administrative task
- Well skilled in communication and comprehension
- Deep knowledge of subject and always enthusiastic to purvey the knowledge of subject and students.

## Courses

- Orientation program TLC Ramanujan College, University of Delhi dated June 04-July 01, 2020. **Jun 2020**
- Refresher Course in Physics conducted from 09 December, 2021 to 22 December, 2021 by UGC, HRDC, and University of Mumbai **Dec 2021**

## Achievements

### ·Scholastic Achievements

- CSIR NET JRF in PHYSICS JUNE 2008

### ·Major Academic Projects

- **Heavy Ion Reaction Analyzer (HIRA) at IUAC, New Delhi**

**Objective:** To demonstrate the usefulness of heavy ions in field of Nuclear Physics.

**Supervisor:** Dr. R. Prasad, Dept. of Physics, AMU, Aligarh

## RESEARCH PROJECTS

- Environmental remediation through Green Synthesized Titanium Di-Oxide Nanocomposites under "research and development scheme of UP higher education.

## Hobbies

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■ I enjoy reading, debating, writing and tennis though not necessarily in that order. I have been a part of my hostel tennis and quizzing teams and participated in a number of inter and intra college quizzes and debates, in the process losing many quizzes and winning many debate.

## Participation of International/ National conferences and Workshop

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1. Participated and presented paper in International conference on Condensed Matter & Applied Physics, ICC Bikaner, Nov. 24-25 2017
2. Participated and presented paper in national conference NCMTAEP- 2016, Hindu college, Moradabad, 17-18 Oct. 2016
3. Participated and presented paper in International conference on Challenges to Ecosystem & Environment towards Sustainable Development, Govt. PG college, Bilaspur, Rampur, UP, 22 Sept. 2019
4. Participated and presented paper in national conference on Need & Challenges of Intellectual property Rights at Hindu college, Moradabad, 30 Sept. 2019
5. Participated and presented paper in International conference on Emerging Challenges, their Solutions & recent advances in Scienceon 4-5 Oct 2019
6. Participated as organizing secretary and presented paper in International conference on Emerging Advances in Mathematical & Physical Sciences at Hindu College, Moradabad, UP, 28- 30 June 2020
7. Participated and presented paper in International conference on Perspective of interdisciplinary research in Science & Technology in the present scenario at Meerut univ., Meerut on 15-16 May 2020
8. Participated and presented paper in national conference on Challenge and prospect in higher education in Global Pandemic, Bareilly College, Bareilly, 10 May 2020
9. Participated in DST & ACS International Workshop by dept. of science & technology, govt. of India on 28 July, 2020

## Book published

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1. Emerging Advances in Mathematical & Physical Sciences- 2020, Walnutpublication.com, ISBN 9789390261680, 2020
2. Green initiative and Sustainable Development, Learning Media Publication, ISBN 9788194250326, 2020

## List of Publications

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1. Deepash S. Saini, Sunder Singh, Anil Kumar and D. Bhattacharya "Dielectric and Modulus Studies of Polycrystalline BaZrO<sub>3</sub> ceramic" Conference Paper in AIP Conference Proceedings · May 2018
2. Sunder Singh, Anil Kumar, Deepash Shekhar Saini "Structural and Microstructural Study of LaSr<sub>0.5</sub> Bi<sub>0.2</sub>Co<sub>0.5</sub>Fe<sub>0.3</sub>O<sub>3-δ</sub> Cathode Ceramic for Intermediate Temperature Solid Oxide Fuel cell" SolidState Technology, Volume: 63 Issue: 6, 2020
3. Sunder Singh, Manindra Kumar, Anil Kumar, Deepash Shekhar Saini\* Impedance and Electric Modulus Spectroscopy of Polycrystalline La<sub>0.5</sub>Sr<sub>0.5</sub>Bi<sub>0.2</sub>Co<sub>0.4</sub>Fe<sub>0.4</sub>O<sub>3-δ</sub> Cathode Ceramic for Intermediate Temperature SOFCs, Indian Journal of Pure & Applied Physics Vol. 59, August 2021, pp. 549-558.