

## *Curriculum vitae*

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**Dr. Surinder Paul**

### **Personal Details**

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**Address:** Associate Professor, Department of Physics and Astronomical Science,  
Central University of Himachal Pradesh (CUHP), Shahpur Campus,  
Kangra, Himachal Pradesh, India. Pin176206

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**Citizenship** India

### **Professional Qualifications**

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M.Sc. ( 72%, APSU Rewa MP)  
M.Phil. ( B<sup>+</sup>, APSU Rewa MP)  
Ph.D (IKGPTU Jalandhar Pb.)

### **Specialization**

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Condensed Matter Physics, Material Science, Nanotechnology, Solid Oxide Fuel Cell

### **Employment History**

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Surinder Paul is currently working as Associate Professor in the Department of Physics and Astronomical Sciences. He obtained Ph.D. in Physics (Material Science) from IKGPTU Jalandhar Punjab (India). He joined Arni University Indora in 2010, and worked there till March 2022. He performed the duties of Head of Physics department and Dean –Incharge Physical Sciences in Arni University. He worked on the cathode material of solid oxide fuel cell.

### **Personal Distinctions**

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Expertise:

1. Structural properties of the material
2. Thermal Properties of the material
3. Dielectric and conductive properties of the material
4. XRD, SEM, TGA, DTA, Impedance spectroscopy

### **Teaching**

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Eleven Years<sup>+</sup> (UG & PG)

### **Doctoral Thesis Supervision**

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In Progress (02 students, joint supervision)

## Publications

### Research Paper Published in UGC listed and Scopus/SCI indexed journals:

1. **Surinder Paul\***, Manokamna, Arun Kumar, D.K.Sharma, A. Singh and Arvind Kumar, “*Modification of structural, thermal, electrical and dielectric properties of  $La_{0.7}Sr_{0.3}Fe_xMn_{1-x}O_3$  { $x=0.2$  and  $0.3$ } with Fe doping for cathode application in SOFCs*” Rasayan Journal of Chemistry, ISSN 0974-1496, Vol.-15 (1), Pp 210-216 ( 2022) <http://dx.doi.org/10.31788/RJC.2022.1516751>
2. **Surinder Paul\***, Manokamna, Arun Kumar, Shubhpreet Kaur, Anupinder Singh, Arvind Kumar, “ *Structural, thermal, electrical and dielectric properties of  $La_{0.7}Sr_{0.3}Fe_xMn_{1-x}O_3$  ( $x= 0.10$  and  $0.40$ ) cathode for solid oxide fuel cell*” Materials Today: Proceedings, ISSN 2214-7853, Vol. 56, 1684-1690 (2022). DOI: <https://doi.org/10.1016/j.matpr.2021.10.319>
3. **Surinder Paul\***, Manokamna, Shubhpreet Kaur, P.S. Malhi, Anupinder Singh, Arvind Kumar “*Structural, Dielectric and Electrical Properties of Fe Doped  $La_{0.7}Ba_{0.3}MnO_3$  Solid Solutions for Cathode Materials*” International Journal of Recent Technology and Engineering ; ISSN: 2277-3878, Vol.8(3) ,Pp 7313-7317 ( 2019), DOI: [10.35940/ijrte.C6011.098319](https://doi.org/10.35940/ijrte.C6011.098319)
4. **Surinder Paul\***, Manokamna, Shubhpreet Kaur, P.S. Malhi, Anupinder Singh, Arvind Kumar “*Effect of Fe Substitution on the Structural, Electrical and Dielectric Properties of  $La_{0.70}Ca_{0.30}MnO_3$  Cathode for SOFCs*” International Journal of Innovative Technology and Exploring Engineering; ISSN: 2278-3075, Vol.9(1), Pp 324-328 (2019), DOI: [10.35940/ijitee.A4114.119119](https://doi.org/10.35940/ijitee.A4114.119119)
5. **Surinder Paul\***, Manokamna, Arun Kumar, Arvind Kumar, *Synthesis and Characterization of  $La_{0.70}Ca_{0.30}MnO_3$  System for Solid Oxide Fuel Cel, Applications, Institute of Physics; IOP conf. series: Materials Science and Engineering, ISSN 1757-898, Vol. 1225, (2022) 0012054, doi:10.1088/1757-899X/1225/1/012054*
6. Manokamna, **Surinder Paul**, A. Singh, K.L. Singh, G.Bhargava, A.P. Singh, “*Effect of  $Sr^{2+}$  doping on the Structural, Thermal, Dielectric and Electrical properties of  $La_{1-x}Sr_xCo_{0.50}Fe_{0.50}O_3$  { $0.10 \leq x \leq 0.40$ } Cathode for SOFCs*” Rasayan Journal of Chemistry, ISSN 0974-1496, Vol.14(2), 1019-1027, (2021). <http://dx.doi.org/10.31788/RJC.2021.1426153>
7. Manokamna, **Surinder Paul**, A.Kumar, A.Singh, K.L.Singh, G. Bhargav, A.P.Singh “*Role of  $Ba^{2+}$  substitution on structural, thermal, dielectric and electrical properties of  $La_{1-x}Ba_xMn_{0.50}Fe_{0.50}O_3$  { $0.10 \leq x \leq 0.40$ } cathode for SOFCs*” Materials Today: Proceedings, ISSN 2214-7853, Vol. 45, 4639-4645 (2021). <https://doi.org/10.1016/j.matpr.2021.01.095>
8. Manokamna, **S. Paul**, A. Singh, K.L. Singh, A.P. Singh, “*Structural, Thermal, Electrical and Dielectric properties of  $La_{1-x}Sr_xMn_{0.50}Fe_{0.50}O_3$  { $0.10 \leq x \leq 0.40$ }*”

*cathode material for SOFCs*” Asian Journal of Chemistry, ISSN: 0970-7077, volume-32,12, Pp 3165-3172 (2020), <https://doi.org/10.14233/ajchem.2020.22965>

9. Manokamna, **Surinder Paul**, A.Singh, K.L. Singh, G. Bhargava, A.P. Singh “*Influence of Ba<sup>2+</sup> substitution on Structural, Dielectric, Thermal and Electrical behavior of La<sub>1-x</sub>Ba<sub>x</sub>Co<sub>0.50</sub>Fe<sub>0.50</sub>O<sub>3</sub> {0.10 ≤ x ≤ 0.40} Cathode for SOFC*” Research Journal of Chemistry and Environment, ISSN 0972-0626 , Pp 105-113, Volume 25(10), (2021).
10. Manokamna, **Surinder Paul** , Arun Kumar, D.K.Sharma, K.L. Singh, G.Bhargava, A.P.Singh, “*Structural, Thermal and Electrical Properties of La<sub>0.80</sub>Sr<sub>0.20</sub>MnO<sub>3</sub> Cathode of SOFCs*”, American Institute of Physics (AIP) Proceeding, ISSN 1551-7616, Volume-2369, 020136(1-5) (2021), <https://doi.org/10.1063/5.0061372>
11. Sangeeta Devi, Naiem Ahmed, Manokamna, Anupinder Singh, **Surinder Paul\***, “*Study the effect of Ca<sup>2+</sup> doping on Structural, Electrical, Thermal and Dielectric properties of La<sub>1-x</sub>Ca<sub>x</sub>Fe<sub>0.75</sub>Co<sub>0.25</sub>O<sub>3</sub> {x = 0.15 & 0.25} perovskite ceramics for solid oxide fuel cell applications*” Materials Today: Proceedings, ISSN 2214-7853, (In Press) <https://doi.org/10.1016/j.matpr.2022.01.214>
12. Naiem Ahmed , Sangeeta Devi, Ankansha, Manokamna, Anupinder Singh, **Surinder Paul\***, “*Effect of Ni substitution on structural, magnetic and dielectric properties of Ti<sub>1-x</sub>Ni<sub>x</sub>O<sub>2</sub> {0 ≤ x ≤ 0.3} nanoparticles prepared by sol gel method*” Materials Today: Proceedings, ISSN 2214-7853, ( In Press), <https://doi.org/10.1016/j.matpr.2022.02.440>
13. Ankansha, Naiem Ahmed, Manokamna, Anupinder Singh, **Surinder Paul\***, Synthesis and characterization of Zn doped Ti<sub>1-x</sub>Zn<sub>x</sub>O<sub>2</sub> {0 ≤ x ≤ 0.25} nanoparticles, Materials Today: Proceedings, ISSN 2214-7853, ( In Press), <https://doi.org/10.1016/j.matpr.2022.03.384>
14. Naiem Ahmed, Manokamna, Anupinder Singh, Neha Sharma, Surinder Paul\*, Synthesis and Characterization of Co Doped Ti<sub>1-x</sub>Co<sub>x</sub>O<sub>2</sub> {0 ≤ x ≤ 0.30} Solid Solutions , Materials Today: Proceedings, ISSN 2214-7853, (Accepted)

#### **Research Paper Presented/Published in Conferences/Other journals:**

15. **Surinder Paul**, Manokamna, A P Singh, S. Thakur, K. L Singh “*Comparative Structural Study of Microwave and Conventionally Sintered La<sub>0.8</sub>Sr<sub>0.2</sub>Co<sub>0.5</sub>Fe<sub>0.5</sub>O<sub>3</sub> Cathode Material for Solid Oxide Fuel Cell*” Proceeding ;3rd DAV National Congress Science Technology Engineering Humanities & Management ; ISBN :978-93-5254-976-4; 20-21 May, 2016; Vol-1; Pp 497-501.
16. **Surinder Paul**, D. Kumar, Manokamna, Gagandeep, “*Barium titanate as a ferroelectric and piezoelectric ceramics*” Journal of Biosphere, Govt. college Kathua J&K, 2(1) 55-58, ISSN 2278 – 3342 (2013).
17. Dinesh Kumar Malviya, A.K Shrivastva, **Surinder Paul**, N.A.A. Mundari, “*TiO<sub>2</sub> linked with CdSe using bifunctional surface modifier for solar cell application*”

Arni university international journal, Volume 2,issue 2, Pp154-160, ISSN 2278-4241(2013).

18. **Devinder Kumar Sharma, Gagandeep, Surinder Paul, Rakesh Sharma and Nargis Nelofar** “*Crystallographic Analysis of some Structures of Indole Derivatives*” **Journal of Basic and Applied Engineering Research**, p-ISSN: 2350-0077; e-ISSN: 2350- 0255; **Volume 5, Issue 5; pp. 363-365 (2018)**
19. **Surinder Paul**, Manokamna, K. L.Singh, “*La 0.7Sr0.3Co0.2Fe0.8O3 Cathode Materials for solid oxide fuel cell*” National conference on advances in basic and applied sciences; Career Point University Hamirpur ; April 7-8,2017 (oral)
20. **Surinder Paul** , N. Sharma, Manokamna, Sonika, K. L.Singh; “*Synthesis and Characterization of nanosized Titanium Dioxide by sol gel method*” DAV national congress on science, Technology and Management; DAVIET ; 7-8 Nov. 2014 (poster)
21. **Surinder Paul** “*Synthesis and characterization of La 0.85Sr0.15MnO3 cathode material of SOFC*” National conference on recent trends in chemical and environmental sciences; Arni university Indora H.P;27-28 Feb.2014 (Oral).
22. **Manokamna, Surinder Paul, K. L. Singh, A.P. Singh**, “*Structural, Thermal, Dielectric and Electrical Properties of La<sub>0.8</sub>Ba<sub>0.2</sub>Mn<sub>0.50</sub>Fe<sub>0.50</sub>O<sub>3</sub> Perovskite Materials for SOFCs*” International conference “Biological Sciences vis-à-vis Sustainable Development & Environment Conservation” Career Point University Hamirpur ; July 3-4,2020 (Oral).

#### **Participation in conference:**

1. International conference of multidisciplinary aspects of materials in engineering , icname- 2021, University institute of engineering & technology, Panjab university, Chandigarh, 8-9 October 2021
2. 1st International Conference on Applied Research and Engineering, ICARAE - 2021, Cape Town, Western Cape, South Africa, 7335, 26-28 November 2021
3. National conference on advances in basic and applied sciences; Career Point University Hamirpur; April 7-8,2017
4. 3<sup>rd</sup> DAV national congress STEHM; DAVIET; May-2016
5. DAV national congress on science, Technology and Management; DAVIET; 7-8 Nov. 2014
6. National conference on recent trends in chemical and environmental sciences; Arni university Indora H.P;27-28 Feb.2014
7. Recent advances & futuristic trends in nanotechnology; DAVIET: 24<sup>th</sup> March 2012.
8. Emerging trends in medical biotechnology & nanotechnology; Arni University

Indora;3-4<sup>th</sup> Dec.2011