

PROFILE

- 1) **NAME IN FULL** : SUSHRISANGITA SAHOO
2) **DATE OF BIRTH** : 01.02.1990
3) **PLACE OF BIRTH** : Kuhunda, Cuttack, Odisha
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7) **EDUCATIONAL CAREER** :



University/Institute	Degree	Specialization/ Subjects	Year	Divison/ Class
Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar	Ph.D.	Physics, Multiferroic (Field of Research)	2018	-
Fakir Mohan University, Balasore	M.Sc.	Applied Physics and Ballistics	2012	First (68 %)
Salipur College, Salipur	B.Sc.	Physics (Hons.), Chemistry (Pass), Mathematics (Major Elective), Biology (minor Elective)	2010	First Class with distinction (74.12 (Honors), 62.88 (T))

- 8) **PH.D. THESIS TITLE, GUIDE'S NAME, INSTITUTE/ ORGANIZATION/ UNIVERSITY, YEAR OF AWARD.:** Fabrication and characterization of Barium Titanate modified Rare earth orthoferrites, Prof. P K Mahapatra, Siksha 'O' Anusandhan (Deemed to be University), 2018

9) RESEARCH & TEACHING EXPERIENCE

- a) Worked as a Leading Researcher (Post Doctoral Fellow) at Research Institute of Physics, Southern Federal University, Rostov-on-Don, Russia, from May 2021 to December 2022.
- b) Worked as Guest Faculty in Physics at Ravenshaw University, Cuttack, Odisha on Dt. 10.02.2020 to March 2021.
- c) Worked as a Junior Research Fellow in NALCO sponsored project (Work Order No. NBC/R&D/301 dated 21.01.16) entitled "DEVELOPMENT OF ELECTRONIC MATERIALS FOR DEVICE FABRICATION USING NALCO RED MUD" in Department of Physics, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar under the supervision of Prof. R N P Choudhary from 23.03.2017 to 21.07.2019.

10) PRESENT EMPLOYMENTS DETAILS

Presently working as a Postdoctoral Associate at Materials Science & Engineering Department, Tuskegee University, Alabama, USA.

11) RESEARCH ACTIVITIES:

a. PUBLICATIONS IN JOURNAL

1. Dielectric and impedance spectroscopy of (Ba, Sm)(Ti, Fe)O₃ system in the low medium frequency range, **Sushrisangita Sahoo**, P. K. Mahapatra, R. N. P. Choudhary, M. L. Nandagoswami, *J Mater Sci: Mater Electron* 26 (2015) 6572 (*Springer*)
2. The structural, electrical and magnetoelectric Properties of soft-chemically synthesized SmFeO₃ Ceramics, **Sushrisangita Sahoo**, P K Mahapatra and R N P Choudhary, *Journal of Physics D: Applied Physics* 49 (2016) 035302 (*IOP Publishing, U.K.*)
3. Structural, electrical and magneto-electric characteristics of improper multiferroic: GdFeO₃ **Sushrisangita Sahoo**, P K Mahapatra, RNP Choudhary, ML Nandagoswami and Ashok Kumar, *Mater. Res. Express* 3 (2016) 065017 (*IOP Publishing, U.K.*)
4. Effect of sintering temperature on dielectric, electrical and magneto-electric characteristics of chemico-thermally synthesized (Ba_{0.9}Gd_{0.1})(Ti_{0.9}Fe_{0.1})O₃ **Sushrisangita Sahoo**, P K Mahapatra and R N P Choudhary *Ceramics International* 42 (2016) 15955(*Elsevier*)

5. Capacitive and resistive characteristics of gallium modified lead zirconate titanate, Pulkit Sharma, Sugato Hajra, **Sushrisangita Sahoo**, P. K. Rout, R. N. P. Choudhary, *Journal of Materials Science: Materials in Electronics* 28 (2017) 12048 (*Springer*)
6. Structural and electrical characteristics of gallium modified PZT ceramics, Pulkit Sharma, Sugato Hajra, **Sushrisangita Sahoo**, Pravat Kumar Rout, Ram Naresh Prasad Choudhary, *Processing and Application of Ceramics* 11 [3] (2017) 171
7. Processing and electrical properties of gallium-substituted lead zirconate titanate ceramics Sugato Hajra, Pulkit Sharma, **Sushrisangita Sahoo**, P. K. Rout, R. N. P. Choudhary, *Applied Physics A* 123 (2017) 786 (*Springer*)
8. Influence of compositional variation on structural, electrical and Magneto-electric characteristics of $(\text{Ba}_{1-x}\text{Gd}_x)(\text{Ti}_{1-x}\text{Fe}_x)\text{O}_3$ ($0.2 \leq x \leq 0.5$), **Sushrisangita Sahoo**, P K Mahapatra, R N P Choudhary, Perumal Algarsamy *Mater. Res. Express* 5 (2018) 016101 (*IOP Publishing, U.K.*)
9. Fabrication and Characterization of LaFeO_3 - BaTiO_3 Electroceramics, **Sushrisangita Sahoo**, Satyabati Das, P K Mahapatra, R N P Choudhary, *Materials chemistry and Physics* 216 (2018) 158 (*Elsevier*)
10. Resistive, Capacitive and Conducting Properties of $\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$ - BaTiO_3 Solid Solution, **Sushrisangita Sahoo**, Sugato Hajra, Manojit De, R N P Choudhary *Ceramics International* 44 (2018) 4719 (*Elsevier*)
11. Structural and electrical characteristics of barium modified bismuth-sodium titanate $(\text{Bi}_{0.49}\text{Na}_{0.49}\text{Ba}_{0.02})\text{TiO}_3$ SugatoHajra, **Sushrisangita Sahoo**, Manojit De, Pravat Kumar Rout, H. S. Tewari, R. N. P. Choudhary, *Journal of Materials Science: Materials in Electronics* 29 (2018) 1463 (*Springer*)
12. Studies of structural, dielectric and electrical characteristics of BaTiO_3 - BiFeO_3 - CaSnO_3 electronic system, Sugato Hajra, **Sushrisangita Sahoo**, Twinkle Mishra, Manojit De, P. K. Rout, R. N. P. Choudhary *Journal of Materials Science: Materials in Electronics* 29 (2018) 7876 (*Springer*)
13. Structural, dielectric and electrical characteristics of BiFeO_3 - NaNbO_3 solid solutions Manojit De, SugatoHajra, Rashmi Tiwari, **Sushrisangita Sahoo**, R.N.P. Choudhary, H.S. Tewari, *Ceramics International* 44 (2018) 11792 (*Elsevier*)

14. Structural, dielectric and impedance characteristics of $(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3\text{-BaTiO}_3$ electronic system Sugato Hajra, **Sushrisangita Sahoo**, Rutuparna Das, R.N.P. Choudhary, *Journal of Alloys and Compounds* 750 (2018) 507 (*Elsevier*)
15. Processing, dielectric and impedance spectroscopy of lead free $\text{BaTiO}_3\text{-BiFeO}_3\text{-CaSnO}_3$ **Sushrisangita Sahoo**, Sugato Hajra, Manojit De, Kalyani Mohanta, R.N.P. Choudhary, *Journal of Alloys and Compounds* 766 (2018) 25 (*Elsevier*)
16. Structural, electrical and ferroelectric characteristics of $\text{Bi}(\text{Fe}_{0.9}\text{La}_{0.1})\text{O}_3$, Nripesh Kumar, Alok Shukla, Nitin Kumar, **Sushrisangita Sahoo**, Sugato Hajra, R.N.P. Choudhary, *Ceramics International* 44 (2018) 21330–21337 (*Elsevier*)
17. Structural, bulk permittivity and impedance spectra of electronic material: $\text{Bi}(\text{Fe}_{0.5}\text{La}_{0.5})\text{O}_3$, Nripesh Kumar, Alok Shukla, Nitin Kumar, Sugato Hajra, **Sushrisangita Sahoo**, R. N. P. Choudhary, *Journal of Materials Science: Materials in Electronics* 30 (2019) 1919 (*Springer*)
18. Fabrication and electrical characterization of $(\text{Bi}_{0.49}\text{Na}_{0.49}\text{Ba}_{0.02})\text{TiO}_3\text{-PVDF}$ thin film composites, Sugato Hajra, **Sushrisangita Sahoo**, R. N. P. Choudhary, *Journal of Polymer Research* 26[14] (2019) 2-14 (*Springer*)
19. Structural, electrical and ferroelectric properties of lithium niobate-bismuth ferrite solid solutions, Manojit De, Sugato Hajra, Rashmi Tiwari, **Sushrisangita Sahoo**, RNP Choudhary, H S Tewari *Solid state Sciences* 93 (2019) 1-6 (*Elsevier*)
20. Colossal dielectric response, relaxation mechanism and multiferroic properties of $(\text{Ba}_{1-x}\text{Sm}_x)(\text{Ti}_{1-x}\text{Fe}_x)\text{O}_3$ ($0.0=x=0.5$), **Sushrisangita Sahoo**, P. K Mahapatra, R. N. P. Choudhary, *Materials Science and Engineering B* 260 (2020) 114624 (*Elsevier*)
21. The Influence of the Elemental Composition, Crystal Structure, and Grain Structure of the Ferro-Piezoceramics of Various Degrees of the Ferro-Hardness on the Stability of the Polarized State, Konstantin Andryushin, Svetlana Dudkina, **Sushrisangita Sahoo**, Lidiya Shilkina, Vladimir Alyoshin, Ekaterina Triger, Inna Andryushina, Iliya Verbenko, Daniil Rudskiy, Angela Rudskay, Larisa Reznichenko, *Materials* 15 (2022) 2118 (*MDPI*)
22. Thermophysical properties of solid solutions of lead zirconate titanate obtained in various solid state states, K. P. Andryushin, **S. Sahoo**, V. G. Smotrakov, V. V. Eremkin,

- L. A. Shilkina, I. N. Andryushina, S. I. Dudkina & L. A. Reznichenko, *Ferroelectrics*, 591 (2022) 7-15 (*Taylor & Francis*)
23. Peculiarities of the dependences of the dielectric properties of solid solutions of multicomponent systems on the electronegativity of their constituent cations, Andryushin Konstantin, Dudkina Svetlana, Shilkina Lidiya, **Sahoo Sushrisangita**, Moysa Maksim, Andryushina Inna, Verbenko Iliya and Reznichenko Larisa, *Journal of Advanced Dielectrics* 12 (2022) 2244004 (*World Scientific*)
 24. Crystal structure, microstructure, electrophysical properties, and thermally induced aging of PZT-CdNb₂O₆ ceramics Andryushin Konstantin, Pavelko Alexey, **Sahoo Sushrisangita**, Shilkina Lidiya, Nagaenko Alxandr, Andryushina Inna, Moysa Maksim and Reznichenko Larisa, *Journal of Advanced Dielectrics* (2022) 2244005 (*World Scientific*)
 25. Colossal dielectric response and complex impedance analysis of LaFeO₃ ceramics, **Sushrisangita Sahoo**, K. P. Andryushin, P. K. Mahapatra and R. N. P. Choudhary, *Journal of Advanced Dielectrics* 12 (2022) 2250019 (*World Scientific*)
 26. Influence of (0.19HfO₂-0.81ZrO₂) ceramics filler content on structural and dielectric properties of PVDF polymer **Sushrisangita Sahoo**, Abhinav Yadav, K.P. Andryushin, R.N.P. Choudhary, *Synthetic Metals* 287 (2022) 117097 (*Elsevier*)
 27. Structural transformation, dielectric and multiferroic properties of (Gd_{1-x}Ba_x)(Fe_{1-x}Ti_x)O₃ ceramics by tuning composition **Sushrisangita Sahoo**, Abhinav Yadav, K.P. Andryushin, P.K. Mahapatra, R.N.P. Choudhary, *Ceramics International* 49 (2023) 918 (*Elsevier*)
- b. BOOK**
1. *Electronic Materials, Introduction, Processing, Characterization and Applications*, **Sushrisangita Sahoo**, Sugato Hajra, R N P Choudhary ISBN No. 978-3-330-31924-0, Omni Scriptum GmbH & Co. KG
- c. BOOK CHAPTER**
1. *Role and Prospects of Polymer based Nanomaterials in the Dielectric World*, **Sushrisangita Sahoo**, Abhinav Yadav, K.P. Andryushin, L.A. Reznichenko, Springer (Accepted)
- d. CONFERENCE PROCEEDINGS**

1. Effect of sintering temperature on dielectric, electrical and magneto-electric properties of $(\text{Ba}_{0.8}\text{Gd}_{0.2})(\text{Ti}_{0.8}\text{Fe}_{0.2})\text{O}_3$ **Sushrisangita Sahoo**, P K Mahapatra, RNP Choudhary AIP Conference Proceedings 1832 (2017) 030002
2. Resolution of loss tangent to grain and grain boundary relaxation and conductivity Components, Neeha Pradhani, **Sushrisangita Sahoo**, P. K. Mahapatra, R. N. P. Choudhary AIP Conference Proceedings 2115 (2019) 030013

e. PATENT

1. Development of electronic material useful for application in filter circuit from industrial waste red mud, Bhimsen Pradhan, Krishna Vasudevan, Partho Bandopadhyaya, **Sushrisangita Sahoo**, RNP Choudhary, Shaik Mohammed Ali, Indian Patent Application no. 202031000510 of 6.01.2020 (Filed).

f. PAPERS PRESENTED IN INTERNATIONAL/NATIONAL CONFERENCES

1. Low frequency electrical characteristics of $\text{SmFeO}_3\text{-BaTiO}_3$. Sushrisangita Sahoo, P. K. Mahapatra, R. N. P. Choudhary & M. L. Nandagoswami, Recent Trends in composite and Nanomaterials, RDCN-2015. **(Poster)**
2. Structural, Electrical and Magnetolectric Properties of soft-chemically synthesized GdFeO_3 Ceramics. Sushrisangita Sahoo, P K Mahapatra and R N P Choudhary, International conference on Frontiers in Materials science & Technology, ICFMST-2015 **(Poster)**
3. Comprehensive analysis of dielectric, impedance and multiferroic properties of GdFeO_3 ceramics for electronic device applications, Sushrisangita Sahoo, P K Mahapatra and R N P Choudhary, Recent Advances in Computer, Electronics & Electrical Science, RACEES-2016 **(Poster)**
4. Influence of sintering temperature on dielectric, electrical and magneto-electric characteristics of Gd-orthoferrite modified BaTiO_3 , Sushrisangita Sahoo, P K Mahapatra and R N P Choudhary, International conference on Role of Microscopy and Allied Techniques in the Development of Multifunctional and Nano Materials, ICMAMN-2016 **(Oral)**
5. Influence of sintering temperature on dielectric, electrical and magneto-electric characteristics of Gd-orthoferrite modified BaTiO_3 , Sushrisangita Sahoo, P K

Mahapatra and R N P Choudhary, International conference on Smart Materials & Applications, ISMA-2016 (**Poster**)

6. Investigation of multiferroic and conductance characteristics of rare-earth orthoferrites, Sushrisangita Sahoo, P K Mahapatra and R N P Choudhary, XIX National Seminar on Ferroelectrics and Dielectrics, NSFD-2016 (**Oral**)
7. Effect of Sintering Temperature on Dielectric, Electrical and Magneto-Electric Properties of $(\text{Ba}_{0.8}\text{Gd}_{0.2})(\text{Ti}_{0.8}\text{Fe}_{0.2})\text{O}_3$ Sushrisangita Sahoo, P K Mahapatra and R N P Choudhary 61st DAE solid state Symposium 2016 (**Poster**)
8. Structural and electrical characteristics of Rare Earth orthoferrites, Sushrisangita Sahoo, P K Mahapatra, R N P Choudhary, International Conference on Advanced Engineering Functional Materials, ICAEFM-2017 (**Oral**)
9. Giant dielectric permittivity and relaxation mechanisms in $(\text{Ba}_{0.5}\text{Sm}_{0.5})(\text{Ti}_{0.5}\text{Fe}_{0.5})\text{O}_3$, Sushrisangita Sahoo, P K Mahapatra, R N P Choudhary, National Workshop On Advanced Materials & Applications, NWAMA-2018 (**Poster**)
10. Structural transformation and Phase transitions in $(\text{Ba}_{1-x}\text{Gd}_x)(\text{Ti}_{1-x}\text{Fe}_x)\text{O}_3$ ($0.1 \leq x \leq 0.5$), Sushrisangita Sahoo, P K Mahapatra, R N P Choudhary, XX National Seminar on Ferroelectrics and Dielectrics, NSFD-2018 (**Oral**)
11. Colossal dielectric response and complex impedance analysis of LaFeO_3 ceramics, 10th Anniversary International Conference on “Physics and Mechanics of New Materials and Their Applications”, PHENMA-2021

12) CITATION INDICES

Citation: 657

h-index: 15

i10-index: 16

13) AWARD

Top Cited Author Awards from IOP Publishing Group for the publications entitled “The structural, electrical and magnetoelectric Properties of soft-chemically synthesized SmFeO_3 Ceramics” and “Structural, electrical and magneto-electric characteristics of improper multiferroic: GdFeO_3 ” on 2018.

14) REVIEWER OF SCI JOURNAL

- Physica Status Solidi (b)- Basic Solid State Physics (Wiley)

- Materials Chemistry and Physics (Elsevier)
- Materials Research Bulletin (Elsevier)

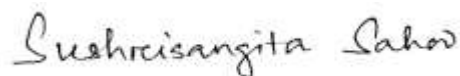
15) SKILLS AND TECHNIQUES

- Synthesis of multiferroic or Ferroelectric or Dielectric materials in different forms (such as ceramics in bulk and nano form, flexible polymer sheets or thick film) using various preparation method (such as Solid state reaction method, Chemical method, Ball milling or mechanical alloying, solution casting method etc.).
- Characterization and analysis of different properties (such as structural using XRD, microstructural using SEM, Dielectric and impedance spectroscopy, transport properties (AC and DC), Multiferroic) of materials.
- Software: Origin, Zsimpwin, MAUD, Xpert High Score, Mathematica, Fortran, Latex

16) DECLARATION

I hereby declare that the information in the bio-data (CV) is true best of my knowledge and belief.

Date: 06.07.2023



Place: Tuskegee, AL, USA

Sushrisangita Sahoo