

CURRICULUM – VITAE

DR. SANJEEB KUMAR ROUT

OBJECTIVES

To work in a competitive research environment, which fully utilizes the skills I have and gives me an opportunity to improve them for our mutual benefit, thereby contributing to a meaningful endeavor.

EDUCATIONAL QUALIFICATIONS

DOCTORAL DEGREE (2001–2006):- Faculty of Science (Physics)

DOCTORAL THESIS TITLE

“Phase Formation and Dielectric Studies of Some BaO-TiO₂-ZrO₂ Based perovskite system” in the Department of Physics and Department of Ceramic Engineering at National Institute of Technology Rourkela (www.nitrkl.ac.in)

MASTER DEGREE (1999–2001): - Master of Science (Physics), Specialization-Electronics.

Institution/University: - National Institute of Technology Deemed University (formerly REC), Rourkela, Orissa, India-769008. (<http://www.nitrkl.ac.in>).

Course Outline:- Solid State Physics, Particle Physics, Nuclear Physics, Mathematical Physics, Classical Mechanics, Quantum Mechanics, Statistical Mechanics, Electrodynamics & Electronics (Specialization).

Percentage: 74.6 % (First Class)..

BACHELOR DEGREE (1994 – 1997): - Bachelor of Science (Physics)

Institution/University: - Utkal University, Orissa, India.

Course Outline:- Mathematical Physics, Classical Mechanics, Quantum Mechanics, Optics, Thermodynamics, Electricity & Magnetism, Electronics and General Organic, Inorganic & Physical Chemistry, Electrochemistry, Mathematics as major subjects and electronics as ancillary subjects.

Percentage: 61.5 % (First Class).

PRESENT POSITION:

Working as “Associate Professor” in the Department of Applied Physics, Birla Institute of Technology, Mesra, Ranchi, Jharkhand, India.

HANDS ON INSTRUMENTS

XRD (Rietveld Refinement), SAXS, Langmuir-Blodgett (LB) Thin Film deposition, LSMCD setup for thinfilm deposition. Spin Coating Unit, UV-Vis Spectrophotometer, Scanning Electron Microscopy (SEM), TG/DSC, Dilatometer, Impedance Analyzer, High Temperature Furnaces.

HONOR AND AWARDS

Appendix-A

RESEARCH PUBLICATIONS

Appendix-B

SPONSORED RESEARCH PROJECT

Appendix-C

WORK EXPERIENCES

Appendix-D

PROFESSIONAL DEVELOPMENTS

Appendix-E

INVITED SCIENTIFIC/POPULAR LECTURE

APPENDIX-F

PERSONAL DETAILS

Name	: Sanjeeb Kumar Rout
Father's Name	: Siddheswar Rout
Date of Birth	: 04 th July 1978.
Sex	: Male
Marital Status	: Married
Languages known	: English, Hindi, Oriya and Bengali.
Nationality	: Indian

COMMUNICATION INFORMATION

Current Address:

Dr.S.K.Rout
Department of Applied Physics.
Birla Institute of Technology,
Mesra, Ranchi, Jharkhand.

Permanent Address:


Vill:-. Bari Malliaghai,
P.O.: – Bari Kalamatia,
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Orissa, Pin- -755003. INDIA

Email IDs: skrout@bitmesra.ac.in; drskrout@gmail.com

DECLARATION

I here by declare that, all the information stated above is true to best of my knowledge and belief.

Date: 28th Apr 2015
Place: Ranchi


SANJEEB KUMAR ROUT

APPENDIX-A

FELLOWSHIP, HONOR AND AWARD

- Associate Editor, Physics Jet (ISSN 2231 – 0002), a quarterly International Journal, Cognizure Corporation Publishers.
- Guest Editor, Special Issue on Photoluminescence Properties of Nanocrystals, Journal of Nanomaterials (ISSN: 1687-4110 (Print) ISSN: 1687-4129 (Online)), published on 1st June 2012.
- *Selected for Bharat Jyoti Award, 20012 by India International Friendship Society, New Delhi.*
- *BOYSCAST postdoctoral fellow from 1st April, 2008 to 31st March 2009, at KAIST, South Korea, supported by Department of Science and Technology, Government of India, New Delhi.*
- *BK21 postdoctoral fellow from 17th Dec 2007 to 31st March 2008 at KAIST, South Korea, supported by Government of South Korea.*
- *Included in 2009 Edition of Marquis who's who in the World published in November 2008.*
- Reviewer for more than *twenty* international journals in the field of electronic ceramics, bio-polymeric solids and thin films.
- *Own 1st prize in inter hostel English essay competition -2001, conducted by Regional Engineering College (presently known as National Institute of Technology), Rourkela, Orissa, India.*
- *Secretary of SSSYC (a NGO registered under act XXI of 1860), Bari, Jajpur, since 1994.*

PATENT

1. A new liquid cell for MeV- electron irradiation at low temperature, Application No.935/KOL/2013 filed on 08.08.2013

Publications of **S. K. Rout**

(I) Annual Publications in International Refereed Journals

Sl No	Complete Reference
1.	Experimental and theoretical analysis of electronic and optical properties of MgWO ₄ , Prabal Dev Bhuyan, Deobrat Singh, Shivam Kansara, Pritam Yadav, Sanjeev K. Gupta, Yogesh Sonvane, Sanjeeb K. Rout, and Ela Sinha, <i>J Mater Science</i> , 52 (9), (2017) 4934-4943.
2.	Concentration-driven structural stability and dielectric dispersion in lead free (Ba _{1-x} Sc _{2x/3})Zr _{0.3} Ti _{0.7} O ₃ ceramics, S. K. Ghosh, S. K. Deshpande and S. K. Rout , <i>Journal of Materials Science: Materials in Electronics</i> , 28(2), (2017) 1336–1351.
2016	
3.	Large electrostrictive effect in (Ba _{1-x} Gd _{2x/3})Zr _{0.3} Ti _{0.7} O ₃ relaxor towards moderate field actuator and energy storage applications, S. K. Ghosh, Sujoy Saha, T. P. Sinha, and S. K. Rout , <i>Journal of Applied Physics</i> , 120(2016) 204101-9p.
4.	Induced instability in local structure and ferroelectric polarization of rare earth modified BZT relaxor ceramics, S. K. Ghosh and S. K. Rout , <i>Current Applied Physics</i> , 16 (2016) 989-1000.
5.	Structural and optical properties of dysprosium doped barium zirconium titanate ceramic, T. Badapanda, S. Parida, S.K. Rout , <i>Materials Letters</i> , 185 (2016) 415-419.
6.	Dielectric and ferroelectric properties of samarium substituted BaBi ₄ Ti ₄ O ₁₅ Aurivillius oxides, M. Reddy Prakash, S.K. Rout , Avishek Satapathy, T. P. Sinha, S. Md Sariful, <i>Ceramic International</i> , 42 (2016) 8798–8803
7.	Influence of niobium substitution on structural and opto-electrical properties of BNKT piezoelectric ceramics, Vidhi Chauhan, S. K. Ghosh, Ali Hussain, S. K. Rout , <i>J. Alloys and Compds</i> , 674 (2016) 413-424.
8.	Two Element Magneto-Dielectric Resonator Antenna for Angle Diversity, Kumar Mohit, Vibha Rani Gupta and S K Rout , <i>Frequenz</i> , 70 (5-6) (2016) 203–210.
9.	A CPW fed quad directional stacked magneto-dielectric resonator antenna for angle diversity application, Kumar Mohit, V R Gupta and S K Rout , <i>Microwave and Optical Technology Letters</i> , 58(1), (2016) 61-64.
2015	
10.	Structural refinement, Raman spectroscopy, optical and electrical properties of (Ba _{1-x} Sr _x)MoO ₄ ceramics, S.K. Ghosh, S.K. Rout*, A. Tiwari, P. Yadav, J.C. Sczancoski, M.G.R. Filho, L.S. Cavalcante, <i>Journal of Materials Science: Materials in Electronics</i> , 26 (2015) 8319-8335.
11.	Order-disorder correlation on local structure and photo-electrical properties of La ³⁺ ion modified BZT ceramics, S. K. Ghosh, M. Ganguly, S. K. Rout , T. P. Sinha, <i>Eur. Phys. J. Plus</i> 130 (2015) 68 (18p).
12.	Effect of Neodymium on Optical Bandgap and Microwave Dielectric Properties of Barium Zirconate Ceramic, Sabyasachi Parida, A. satapathy, E. Sinha, Anurag Bisen, and S.K. Rout , <i>Metallurgical and Materials Transactions A</i> , 46A, (2015) 1277-1286.
2014	

SI No	Complete Reference
13.	Structural, Optical Band Gap, Microwave dielectric properties and Dielectric Resonant Antenna studies of $Ba_{(1-x)}La_{(2x/3)}ZrO_3(0 \leq x \leq 0.1)$ Ceramics, A. Bisen, S. Parida, E.Sinha, S.K.Rout , M. Kar, J. Alloys and Compds, <i>615(2014),1006-1012</i>
14.	Structural and dielectric relaxor properties of a-site deficient samarium doped $Ba_{1-x}Sm_x(Zr_{0.3}Ti_{0.7}O_3)$ ceramics, S.K.Ghosh, M.Ganguly, S.K.Rout , T.P.Sinha, J. Mater Sci 49 (2014) 5441–5453
15.	Structural and Microwave Characterization of $Ni_{0.2}Co_xZn_{0.8-x}Fe_2O_4$ for Antenna Applications, Kumar Mohit, V.R. Gupta, N. Gupta, S. K. Rout , Ceramics International, <i>40(1) (2014)1575-1586</i> .
16.	Influence of rare earth ion on the structural and dielectric features of barium titanate. M. Ganguly, S K Rout , Phys. Express (2014) 4, 28
17.	Microwave Dielectric Properties of $Ni_{0.2}Cu_xZn_{0.8-x}Fe_2O_4$ for Application in Antenna, Kumar Mohi, Vibha R. Gupta, and Sanjeeb K. Rout , Progress In Electromagnetics Research B, Vol. 57, (2014) 157-175.
18.	Structural, optical and dielectric relaxor properties of neodymium doped cubic perovskite $(Ba_{1-x}Nd_{2x/3})(Zr_{0.3}Ti_{0.7})O_3$, S.K.Ghosh, M. Ganguly, S.K. Rout , S. Chanda, T.P. Sinha, Solid State Sciences,30(2014), 68–77.
2013	
19.	Structural investigation and improvement of photoluminescence properties in $Ba(Zr_xTi_{1-x})O_3$ powders synthesized by the solid state reaction method, S. Parida, S.K. Rout, L.S. Cavalcante, A.Z. Simões, P.K. Barhai, N.C. Batista, E. Longo, M. Siu Li, S.K. Sharma, Materials Chemistry and Physics 142 (2013) 70-76
20.	Characterization of A-site deficient Neodymium doped Barium Titanate, M. Ganguly, S. K. Rout , C. W. Ahn, I. W. Kim, Phase Transitions, 87 (2013) 157.
21.	Dielectric Resonant Antenna Studies of Dysprosium Doped Barium Zirconate Ceramic, S. Parida, Anurag Bisen, E.Shina, S.K. Rout , Journal of Materials Engineering and Performance 22 (2013)2634–2640.
22.	Structural, electrical and optical properties of $Ba(Ti_{1-x}Yb_{4x/3})O_3$ ceramics, M. Ganguly, S.K. Rout, C.W. Ahn, I.W. Kim, Manoranjan Kar, <i>Ceramics International</i> , 39 (2013) 9511 – 9524.
23.	Structural, optical and microwave dielectric properties of $Sr_{1-x}Ca_xWO_4$ ceramics prepared by the solid state reaction route, Nidhi Khobragade, Ela Sinha, S.K. Rout , Manoranjan Kar, <i>Ceramics International</i> , 39 (8), (2013) 9627-9635.
24.	Characterization and Rietveld Refinement of A-site deficient Lanthanum doped Barium Titanate, M. Ganguly, S.K. Rout , T.P. Sinha, S.K. Sharma, H.Y. Park, C.W. Ahn, I.W. Kim, <i>Journal of Alloys and Compounds</i> , (2013), 473-484.
25.	Morphotropic phase boundary and electrical properties of $1-x[Bi_{0.5}Na_{0.5}]TiO_3 - xBa[Zr_{0.25}Ti_{0.75}]O_3$ lead-free piezoelectric ceramics, B. Parija, T. Badapanda, S.K. Rout , L.S. Cavalcante, S. Panigrahi, E. Longo, N.C. Batista, T.P. Sinha, <i>Ceramics International</i> , 39(5), (2013) 4877-4886.
26.	Structural, optical and microwave dielectric properties of $Ba_{1-x}Sr_xWO_4$ ceramics prepared by solid state reaction route, Ammu Priya, Ela Sinha, S K Rout , Solid State Science, 20 (2013) 40-45
27.	Solubility limits and microwave dielectric properties of $Ca(Zr_xTi_{1-x})O_3$ solid solution, S.Parida, S.K.Rout , N. Gupta. V. R. Gupta, <i>Journal of Alloys and Compounds</i> , 546 (2013) 216-223.

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28.	Characterization of A-site deficient samarium doped barium titanate, M.Ganguly, S.K. Rout , W.S. Woo, C.W. Ahn, I.W. Kim, <i>Physica B: Condensed Matter</i> , 411 (2013) 26–34.
29.	<u>Editorial article</u> : The special issue on condensed matter physics from the CMDAYS-2012 conference, S K Rout, <i>Physics Express</i> , 2013.
2012	
30.	<u>Editorial Article</u> “Photoluminescence Properties of Nanocrystals”, L. S. Cavalcante, J. C. Sczancoski, J. A. Varela, E. Longo, J. Andres, and S. K. Rout, <i>Journal of Nanomaterials</i> , Volume 2012, Article ID 681594, 2 pages.
31.	Structure, microstructure and dielectric properties of $100-x(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3-x[\text{SrTiO}_3]$ composites ceramics, B. Parija, S.K. Rout , L.S. Cavalcante, A.Z. Simões, S. Panigrahi, E. Longo, N.C. Batista, <i>Applied Physics A: Mat. Sc. Proces.</i> 109 (2012)715-723.
32.	Structural, optical and dielectric studies of $\text{Ni}_x\text{Zn}_{1-x}\text{Fe}_2\text{O}_4$ prepared by auto combustion route, Kumar Mohit, S. K. Rout , Vikram Kumar, S. Parida, G. P. Singh, S. K. Sharma, S. K. Pradhan, Ill Wom Kim, <i>Physica B: Condensed Matter</i> , 407(6) (2012) 935-942.
33.	Dielectric dispersion and impedance spectroscopy of lead free $(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3$ ferroelectric ceramics, B Parija, T.Badapanda, S.K.Rout , S.Panigrahi, T.P.Sinha, <i>Physics Express</i> , 2 (2012)21.
34.	Influence of Ball Milling Parameters on the Crystallite Size of $\text{Ba}(\text{Ti}_{1-x}\text{Zr}_x)\text{O}_3$, S. Parida, S. K. Rout , P. K. Barhai and J. Bera, <i>Ferroelectrics</i> , 429 (2012) 22–30.
35.	Frequency-Temperature dependence of Dy doped $\text{Ba}(\text{Zr}_{0.25}\text{Ti}_{0.75})\text{O}_3$ Ceramic: Impedance and modulus spectroscopy, T.Badapanda, V Senthil, S.K.Rout , S.Panigrahi, T.P.Sinha, <i>Physics Express</i> , 2 (2012)19.
36.	Dielectric relaxation on $\text{Ba}_{1-x}\text{Bi}_{2x/3}\text{Zr}_{0.25}\text{Ti}_{0.75}\text{O}_3$ ceramic, T. Badapanda, V. Senthil, S.K. Rout, S. Panigrahi, T.P. Sinha, <i>Mat. Chem. Phys</i> , 133 (2012) 863– 870.
37.	Diffuse phase transition, Piezoelectric and Optical study of $\text{Bi}_{0.5}\text{Na}_{0.5}\text{TiO}_3$ ceramic, B.Parija, T. Badapanda, V Senthil, S.K. Rout , S. Panigrahi, <i>Bull. Mat. Sci.</i> , 35 (2) (2012) 197-201.
38.	Structural, microwave dielectric properties and dielectric resonator antenna studies of $\text{Sr}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ ceramics, S. Parida, S. K. Rout , V. Subramanian. P. K. Barhai N. Gupta. V. R. Gupta, <i>Journal of Alloys and Compounds</i> , 528 (2012)126-134.
39.	Structural refinement, optical and microwave dielectric properties of BaZrO_3 , S. Parida, S.K. Rout , L.S. Cavalcante, E. Sinha, M. Siu Li, V. Subramanian, N. Gupta, V.R. Gupta, J.A. Varela, E. Longo, <i>Ceramic International</i> , 38(3)(2012) 2129-2138.
2011	
40.	Structural, Dielectric and Electrical properties of $\text{BaFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$ ceramic prepared by solid state reaction technique, M. Ganguly, S. Parida, E.Sinha, S. K. Rout , A. K. Himansu, A. Hussain, I. W. Kim, <i>Mat. Chem. Phys</i> , 131 (2011) 535-539.
41.	Rietveld refinement, microstructure, conductivity and impedance properties of $\text{Ba}[\text{Zr}_{0.25}\text{Ti}_{0.75}]\text{O}_3$ ceramic, T. Badapanda, S.K.Rout , S.Panigrahi, L.S.Cavalcante, <i>Current Applied Physics</i> , 11 (2011) 1282-1293.
2010	
42.	“Anisotropic Electrical Properties of $\text{Bi}_{0.5}(\text{Na}_{0.75}\text{K}_{0.25})_{0.5}\text{TiO}_3$ Ceramics Fabricated by Reactive Templated Grain Growth (RTGG)”, A. Hussain, C.W. Ahn, H.J. Lee, I.W. Kim, J.S. Lee, S.J. Jeong, S.K. Rout , <i>Current Applied Physics</i> , 10(1),(2010) 305-310
43.	“Frequency-Temperature response of $\text{CaBi}_4\text{Ti}_4\text{O}_{15}$ ceramic prepared by soft chemical route: Impedance and Modulus spectroscopy characterization”, S. K. Rout , E.Sinha, A. Hussain, and I. W. Kim, <i>Current Applied Physics</i> , 10(3),(2010), 917-922.

SI No	Complete Reference
44.	“Anisotropic dielectric and electrical properties of hot-forged SrBi ₄ Ti ₄ O ₁₅ ”, S. K. Rout , E. Sinha, A. Hussian, P. K. Barhai and I. W. Kim, International Journal of Applied Ceramic Technology, 7[S1] (2010) E114-E123.
45.	“Structural and dielectric relaxor properties of yttrium-doped Ba(Zr _{0.25} Ti _{0.75})O ₃ ceramics”, T. Badapanda, S.K. Rout , L.S. Cavalcante, J.C. Sczancoski, S. Panigrahi, T. P. Sinha, E. Longo, Materials Chemistry and Physics, 121 (2010) 147–153.
46.	“Structure and optical properties of [Ba _{1-x} Y _{2x/3}](Zr _{0.25} Ti _{0.75})O ₃ powders” J.C. Sczancoski, L.S. Cavalcante, T. Badapanda, S.K. Rout , S. Panigrahi, V.R. Mastelaro, J.A. Varela, M. Siu Li, E. Longo, Solid State Sciences, 12(7)(2010), 1160-1167.
47.	“Investigations on the structure, composition and performance of nanocrystalline thin film thermocouples deposited using anodic vacuum arc”, S.K. Mukherjee, M.K. Sinha, B. Pathak, S.K. Rout , P.K. Barhai, A.K. Balamurugan, A.K. Tyagi, F.L. Ng, Thin Solid Films, 518(20)(2010) 5839-5854.
2009	
48.	“Effect of Y substitution on dielectric properties of BTZ relaxor ceramics”, T. Badapanda, S. K. Rout , S. Panigrahi, T. P. Sinha, and S. I. Woo, Journal of Korean Physical Society, 55(2009) 749-753
49.	“Characteristics of Cylindrical Dielectric Resonator Antenna” Nisha Gupta, S. K. Rout , K. Sivaji, Microwave Review, 15 (2) (2009) 29-32.
50.	“Anodic vacuum arc developed nano crystalline Cu-Ni and Fe-Ni thin thermocouples,” S. K. Mukherjee, M. K. Sinha, B. Pathak, S. K. Rout , and P. K. Barhai, Journal of Applied Physics, 106 (2009) 113717.
51.	“Optical and dielectric relaxor behavior of Ba(Zr _{0.25} Ti _{0.75})O ₃ ceramic explained by means of distorted clusters”, T. Badapanda, S.K.Rout , L.S. Cavalcante, J.C. Sczancoski, S. Panigrahi, E.Longo and M. Siu Li, Journal of Physics D: Applied Physics, 42 (2009) 175414-9p
52.	“Photoluminescence property of Ba(Zr _{0.25} Ti _{0.75})O ₃ powders prepared by solid state reaction and polymeric precursor method”, S.K. Rout , L.S. Cavalcante, J.C. Sczancoski, T. Badapanda, S. Panigrahi, M. Siu Li, E. Longo, <i>Physica B: Condensed Matter</i> , 404 (2009) 3341-3347
53.	“Influence of BTO phase on structural, magnetic and electrical properties of LCMO”, S. Keshri (Shaw), L. Joshi, S. K. Rout , <i>Journal of Alloys and Compounds</i> , 485 (2009) 501-506.
54.	“Structural, electrical and optical properties of boron doped ZnO thin films using LSMCD method at room temperature”, Gilho Kim, Jungsik Bang, Yunseok Kim, S.K. Rout , Seong IhWoo, <i>Applied Physics A: Mat. Sc. Proces.</i> 97 (2009) 821-828.
55.	“Electrical anisotropy in the hot-forged CaBi ₄ Ti ₄ O ₁₅ ceramics”, S.K.Rout , E.Sinha, A. Hussian, and I.W.Kim, Solid State Science, 11 (2009) 1144-1149.
56.	“Phase transition in ABi ₄ Ti ₄ O ₁₅ (A=Ca, Sr, Ba) Aurivillius oxides prepared through a soft chemical route”, S.K.Rout* , E.Sinha, A.Hussian, J.S.Lee, C. W. Ahn, I.W.Kim and S.I.Woo, Journal of Applied Physics, 105(2), (2009) 024105-6p
57.	Impedance spectroscopy and morphology of SrBi ₄ Ti ₄ O ₁₅ ceramics prepared by a soft chemical method”, S.K.Rout , A.Hussian, J.S.Lee, I.W.Kim and S.I.Woo, Journal of Alloys and Compounds, 477(1-2) (2009) 705-711.
58.	“Influence of fibre-surface treatment on structural, thermal and mechanical properties of jute fibre and its composite”, E.Sinha and S.K.Rout , Bulletin of Materials Science, 32(1)(2009) 65-76.

SI No	Complete Reference
59.	“Effect of Dy substitution on dielectric properties of BTZ relaxor ceramics”, T.Badapanda, S.K.Rout , S.Panigrahi, T.P.Sinha, and S.I.Woo, <i>Ferroelectrics</i> , 385 (2009) 177-186
60.	“Electronic transport in LCMO-BTO composites”, L.Joshi, S. Keshri and S.K. Rout , <i>Phasetransition</i> , 82(2) (2009) 123-130.
61.	“Phase formation and Dielectric study of Bi doped BaTi _{0.75} Zr _{0.25} O ₃ ceramic”, T.Badapanda, S.K.Rout , S.Panigrahi, T.P.Sinha, <i>Current Applied Physics</i> , 9(4) (2009) 727-731.
62.	“Synthesis of (Ba _{0.5} Sr _{0.5}) (Ti _{1-x} Zr _x)O ₃ ceramics: Effect of Zr content on room temperature electrical properties”, S.K.Rout , S.Panigrahi, P.K. Barhai and I.W.Kim, <i>Journal of Electroceramic</i> , 23 (1) (2009) 37-42.
2008	
63.	“Ferroelectric phase transition of Ba _{1-x} Sr _x Ti _{0.6} Zr _{0.4} O ₃ ceramics”, T.Badapanda, S.K. Rout , S. Panigrahi, E. Sinha and T.P. Sinha, <i>Phasetransition</i> , 81(10) (2008) 897-906
64.	“Relaxor behaviour of (Ba _{0.5} Sr _{0.5})(Ti _{0.6} Zr _{0.4})O ₃ ceramics”, T.Badapanda, S.K. Rout , S. Panigrahi, and T.P. Sinha, <i>Bulletin of Materials Science</i> , 31(6), (2008), 1-5.
65.	“Study of the structural and thermal properties of plasma treated jute fibre”, E.Sinha*, S.K.Rout , and P.K.Barhai, <i>Applied Physics A: Mat. Sc. Proces</i> , 92(2008) 283-290
66.	“Effect of neutron irradiation on structural, thermal and mechanical properties of jute fibre”, E. Sinha, and S.K. Rout , <i>J. Appl. Poly. Sc.</i> , 110 (2008) 413-423
67.	“Influence of fibre-surface treatment on structural, thermal and mechanical properties of jute”, E. Sinha and S.K. Rout , <i>J. Mat. Sc.</i> , 43(8) (2008) 2590-2601
68.	“Diffuse phase transition of BaTi _{0.6} Zr _{0.4} O ₃ relaxor ferroelectric ceramics”, S.K. Rout , P.K.Barhai and E. Sinha, <i>Phasetransition</i> , 81(1) (2008) 129-137.
69.	“Dielectric and phase transition of BaTi _{0.6} Zr _{0.4} O ₃ ceramics prepared through a soft chemical route”, S.K.Rout , T.Badapanda, E.Sinha, S.Panigrahi, P.K.Barhai and T.P.Sinha, <i>Applied Physics A: Mat. Sc. Proces</i> . 91(1) (2008) 101-106
2007	
70.	“Dielectric study on sol gel derived BZT film deposited by spin coating technique”, S.K. Rout , T.Badapanda, E.Sinha and S. Panigrahi, <i>Indian Journal of Physics</i> , 81(1) (2007) 149-153,
71.	“BaTi _{0.6} Ti _{0.4} O ₃ Solid Solutions: Phase formation kinetics and reaction mechanism through solid oxide reaction”, S.K. Rout and S. Panigrahi, <i>Indian Journal of Physics</i> , 81(1) (2007) 143-147.
72.	“Dielectric study of spin coated nano-thick BaZr _x Ti _{1-x} O ₃ film”, S.K. Rout , T. Badapanda and S.Panigrahi, <i>Indian Journal Pure and Applied Physics</i> , 45, (2007) 749-753.
73.	“Dielectric properties and diffuse phase transition in Ba _{1-x} Mg _x Ti _{0.6} Zr _{0.4} O ₃ solid solutions”, S.K. Rout , E. Sinha and S. Panigrahi, <i>Mat. Chem. Phys</i> , 101, (2007) 428-432
74.	“Synthesis of [(Ba _{1-x} Sr _x) (Ti _{0.5} Zr _{0.5})] O ₃ ceramics and effect of Zr content on room temperature dielectric properties”, J.Bera and S.K.Rout , <i>Journal of Electroceramics</i> , 18 (2007) 33-37
2006	
75.	“Phase formation and dielectric phase transition in Ba _{1-x} Ca _x Ti _{0.6} Zr _{0.4} O ₃ solid solutions”, S.K.Rout , E.Sinha, S.Panigrahi, J.Bera and T.P.Sinha, <i>Journal Physics and Chemistry of solids</i> , 67 (2006) 2257-2262

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76.	“On the phase formation mechanism of BaTiO ₃ -SrTiO ₃ solid solution through solid state reaction”, S.K. Rout and S.Panigrahi, <i>Indian Journal of Pure and Applied Physics</i> , 44 (2006) 606-611
2005	
77.	“Grain and Grain Boundary Study of Acceptor Doped SrTiO ₃ Dielectrics using Impedance Spectroscopy”, S.K. Rout and J.Bera, <i>Ferroelectrics</i> , 323, (2005) 79-84
78.	“On the formation mechanism of BaTiO ₃ -BaZrO ₃ solid solution through solid-oxide reaction”, J.Bera and S.K. Rout , <i>Materials Letter</i> , 59(1)(2005) 135-138
79.	“SrTiO ₃ - SrZrO ₃ Solid solution: Phase formation kinetics and mechanism through solid oxide reaction” J.Bera and S.K. Rout , <i>Materials Research Bulletin</i> , 40 (2005) 1187-93
80.	“Study on acceptor concentration of Ni-doped SrTiO ₃ ceramics using impedance spectroscopy”, S.K. Rout , S.Panigrahi and J.Bera, <i>Bulletin of Material Science</i> , 28 (2005) 101-105.
2004	
81.	“Dielectric Properties of Acceptor Doped SrTiO ₃ Ceramics”, S.K. Rout and J.Bera, <i>Indian Journal of Physics</i> , 78(8), 819-822 (2004).
82.	“Study of Spin coated Organic thin films under Spectrophotometer”, S.Panigrahi, S.Waugh, S.K. Rout , A.K.Hassan and A.K.Ray, <i>Ind J Physics</i> , 78(8) (2004) 823-826.
83.	“Characterization of Ni-doped SrTiO ₃ Ceramics Using Impedance Spectroscopy, S.K. Rout , S.Panigrahi and J.Bera, <i>Indian Journal of Pure and Applied Physics</i> , 42, (2004) 741-744
2003	
84.	“Optical Parameter of Spun On Film Of Calix[4] Resorcinarene Molecules By Attenuated Reflection Technique”, S.Panigrahi, S.K. Rout , A.K.Hassan and A.K.Ray, <i>Ind J Physics (A)</i> , 77A (2) (2003) 163-165.

*Corresponding Author

(II) Proceeding Publication

(a) International conferences

Sl. No	Name of the Conference	Title of the research paper	Author(s)	Duration	Location
1.	ICTAM-AMF 10	Compositional effect on ferroelectric and piezoelectric properties of lead free Zr modified BNT ceramic	S K Rout, Aks Raj, Sarit Ghosh	07 Nov-11 Nov 2016	Delhi University
2.	Nanoenergy 2015	Evolution of Mixed phase and photo electrical properties of BNKT-BT piezoelectrics	S K Rout, Vidhi Chouhan, Sarit Ghosh	01 June -3 June 2015	Manchester Univ., The U K
3.	European Meeting on Ferroelectrics	Influence of ball milling parameters on the particle size of Ba(Ti _{1-x} Zr _x)O ₃	S.Parida, S.K.Rout, P.K.barhai, J.Bera	June 26 th – July 02, 2011	University of Bordeaux, France
4.	The 7 th Korea-Japan conference on ferroelectricity	Dielectric behavior of Ytterbium doped Barium Zirconium Titanate ceramics	T.Badapanda, S.Panigrahi, T.P.Sinha, S.K.Rout and S.I Woo	Aug. 06-09, 2008	Cheju National University, Jeju, Korea
5.	AMF-6	Effect of Dy substitution on dielectric properties of BTZ relaxor ceramics”,	T.Badapanda, S.Panigrahi, T.P.Sinha, S.K.Rout and S.I Woo	Aug. 2-6, 2008	National Taipei University of Technology, Taiwan.
6.	Ferro 2006	Spin glass analogy of ABO ₃ relaxor ferroelectrics: A theoretical model	S.Panigrahi, S.K.Rout and T.Badapanda	Feb. 11-15, 2006,	Williamsburg, Varginia, USA
7.	Piezo 2006	Pseudospin description of relaxor ferroelectrics under spherical bond random field model	S.Panigrahi, S.K.Rout and T.Badapanda	March 8-10, 2006.	Narway
8.	6 th International topical conference on optical probes of conjugated polymer and bio-systems	Theoretical study of optical properties of BaTiO ₃ at room temperature.	S.Panigrahi and S.K.Rout,	Jan. 4-8, 2005.	JNCASR, IISc., Bangalore. India.
9.	AMF-4	Grain and Grain Boundary Study of Acceptor Doped SrTiO ₃ Dielectrics using Impedance Spectroscopy.	S.K.Rout and J.Bera.	Dec. 12-15, 2003	IISc. Bangalore.

(b) National Conferences

1. "Soft Nanocomposite by Langmuir-Blodgett (LB) Technique", National Seminar on nanocomposite-2005, S. K.Rout, **et al.** Dept. of Mechanical, NIT, Rourkela
2. "From Quantum Paradoxes to Quantum Reality", S. K.Rout, **et al.** Dept of Physics, VJNIT, Nagpur
3. "Langmuir Blodgett (LB) Monolayer and Multilayer Thin films Activities at NIT, Rourkela-2005, S. K.Rout, **et al.** Orissa Physical Society Meeting -2005, R.D Women's College, Bhubaneswar.
4. "Dielectric study of sol gel derived BZT thinfilm deposited by spin coating technique", S. K.Rout, **et al.** Aug. 27-29, 2005, CMDAYS-2005, Dept of Physics, Berhampur University, Berhampur
5. "Optical Sensor Based on Surface Plasmon Resonance Measurement" ", S. K.Rout, **et al.** Emerging technology for sustainable environment in chemical and allied industries, Oct.02-03, 2004, Dept of Chemical Engineering, NIT, Rourkela
6. "Langmuir Blodgett Compatible Ultrathin Organic Environmental Sensors", S.K.Rout, **et al.** National work shop on PMIP-2004, Nov. 20-21, 2004, Dept. of Chemistry, NIT, Rourkela
7. "Optical Sensor Based on Surface Plasmon Resonance Measurement" **S.K.Rout**, et al. Emerging technology for sustainable environment in chemical and allied industries, Oct.02-03, 2004, Dept of Chemical Engineering, NIT, Rourkela
8. "Characterization of acceptor doped SrTiO₃ Ceramic using Impedance spectroscopy," **S.K.Rout**, et al. National Conference on advanced materials and Technology, Sep. 24-26, 2004. DAV College, Amritsar.
9. "Electrical Characterization of Ni-doped SrTiO₃ Ceramic Using Impedance Spectroscopy," **S.K. Rout**, et al. National Seminar on Condensed Matters (CMDAYS-04), Aug.25-27, 2004.North Eastern Hill University, Silong.
10. "Liquid Crystals: An introduction", **S.K.Rout**, et al. Confluence 2k4, Jan.10-11, 2004. NIT, Rourkela.

11. "Black Holes: An introduction," **S.K.Rout**, et al. Confluence 2k4, Jan.10-11, 2004. NIT, Rourkela.
12. "Polymer liquid crystals: An introduction", **S.K.Rout**, et al. Confluence 2k4, Jan.10-11, 2004. NIT, Rourkela.
13. "Role of polymer in todays technology: A special reference to electronics and optics", **S.K.Rout**, et al. Confluence 2k4, Jan.10-11, 2004. NIT, Rourkela.
14. "Laser: Production and Application", **S.K.Rout**, et al. Confluence 2k4, Jan.10-11, 2004. NIT, Rourkela.
15. "Organic Materials: Revisited", **S.K.Rout**, et al. Confluence 2k4, Jan.10-11, 2004. NIT, Rourkela.
16. "Dielectric Properties of Acceptor Doped SrTiO₃ Ceramics", **S.K. Rout**, et al. National Seminar on Condensed Matters (CMDAYS-03), Aug.27-29, 2003. Jadavpur University.
17. "Study of Spin coated Organic thin films under Spectrophotometer", **S.K. Rout**, et al. National Seminar on Condensed Matters (CMDAYS-03), Aug.27-29, 2003. Jadavpur University.
18. "Characterization of Ni-Doped SrTiO₃ using impedance spectroscopy" **S.K.Rout**, et al. National Symposium On Advanced Electronic Materials And Information Technology, Apr 18-20, 2003. Guru Ghasi Das University, Bilaspur (CG).
19. "High Temperature Ceramics Superconductors: The Eco-friendly Wonder Materials" **S.K. Rout**, et al. National seminar on Pollution and waste Management on Ceramic and Allied Industries, Feb 14-15,2003.NIT, Rourkela.
20. "Optical and Electrical properties of organic thin film materials" **S.K. Rout**, et al XXVIII Convention Of Optical Society Of India, Jan. 6-8, 2003, Netaji Subhash Institute of Technology, New Delhi.
21. "Electrical and Optical properties of some organic polymeric materials". **S.K. Rout**, et al National Seminar On Advance Materials, Government College Rourkela.
22. "A study on cyclone prediction through sea surface temperature variability; special reference to ORISSA super cyclone". **S.K. Rout**, et al National Convention On Disaster Management On Disaster Management, REC, Rkl-2002

23. "Influence of Coriolis force of atmospheric disturbances including cyclogenesis", **S. K. Rout**, et al National Seminar on Indian Geophysical Union 2002. Bisakhapatanam.
24. "Organic material and devices for better tomorrow" **S.K Rout**, et al, National Seminar on Chemical Engineering for Better Tomorrow, REC Rourkela. 2001
25. "A modified method for calculation of porosity of graphite using X ray powder Diffractometer", **S.K. Rout**, et al P-73, H-10, Proc. XXX National Seminar On Crystallography, 28-30 June 2000.Tirupati.

APPENDIX-C

SPONSORED RESEARCH PROJECT

Investigator	Project Title	Funding Agency	Date of Sanction	Sanction amount (INR)	Duration in year	Date of completion
S.K.Rout (PI)	Developments of nano crystalline high permittivity lead free materials for microwave applications.	DST, India	07-11-2007	Rs.23,35,471/-	3 years	Completed on 31/03/2012.
S.K.Rout (PI)	Synthesis, dielectric and optical properties of rare earth doped lead free BZT relaxor ceramics	UGC, India	06-01-2011	Rs.9,82,800/-	3 years	Completed on 31/01/2014
S.K.Rout (Co-PI)	Development of nano structured carbon nitride coating for nano tribological applications.	AICTE, India	05-03-2008	Rs.5,75,000/-	2 years	Completed on 05-03-2010
S.K.Rout (PI)	Development of High Piezoelectric Bismuth Layered Perovskites Materials for Transducer Applications	NRB New Delhi	06-Sep -14	Rs.15,90,000/-	2 years	Completed on 31-12-2016
S.K.Rout (PI)	Investigation on Photoluminescence and microwave dielectric properties of some tungstates and molybdates prepared by microwave assisted solid state reaction route	DST, India	06-May -13	Rs.24,00,000/-	3 years	On going
S.K.Rout (PI)	Development of Bismuth Based Materials for Piezoelectric Microsystem in Robotic Applications	BRNS, Mumbai	13- Feb -16	Rs.35,00,000/-	3 years	On going

APPENDIX-D

WORK EXPERIENCES

(a) Teaching Experience:

<i>University/ Institute</i>	<i>Period</i>	<i>Position</i>	<i>Nature of Duty</i>
<i>National Institute of Technology. Rourkela</i>	<i>2001-2006</i>	<i>Guest Lecturer</i>	<i>Teaching both UG (Engg.) and PG (M.Sc) students.</i>
<i>Birla Institute of Technology, Mesra, Ranchi</i>	<i>Nov 14, 2006 to June 28, 2012</i>	<i>Assistant Professor</i>	<i>Teaching both UG (Engg.) and PG (M.Tech) students.</i>
<i>Birla Institute of Technology, Mesra, Ranchi</i>	<i>June 28, 2012 to till date</i>	<i>Associate Professor</i>	<i>Teaching both UG (Engg.) and PG (M.Tech) students.</i>

(b) Research Experience (Inland):

<i>University/ Institute</i>	<i>Period</i>	<i>Position</i>	<i>Nature of Duty</i>
<i>Department of Physics. National Institute of Technology. Rourkela.</i>	<i>July,2001 to May. 2006</i>	<i>Research Scholar</i>	<i>Research on Electronic Ceramic, Multi layers and thin films</i>
<i>Department of Elec. Engineering. Indian Institute of Technology. Bombay.</i>	<i>June 26,2006 to Nov 07, 2006</i>	<i>Senior Research Associate</i>	<i>Research on Nano-electronics</i>
<i>Department of Applied Physics. Birla Institute of Technology, Mesra, Ranchi</i>	<i>Nov 14, 2006 to Apr 06, 2009</i>	<i>Lecturer</i>	<i>Teaching both UG (Engg.) and PG (M.Tech) students.</i>
<i>Birla Institute of Technology, Mesra, Ranchi</i>	<i>Apr 06, 2009 to till date</i>	<i>Sr. Lecturer</i>	<i>Teaching both UG (Engg.) and PG (M.Tech) students.</i>

(c) Research Experience (Abroad):

<i>University/ Institute</i>	<i>Period</i>	<i>Position</i>	<i>Nature of Duty</i>	<i>Sponsored</i>
<i>Korea Advance Institute of Science and Technology, Daejeon, S.Korea</i>	<i>17th Dec. 2007 to 31st Mar 2008</i>	<i>Post Doctoral Fellow</i>	<i>Research on Re RAM switching.</i>	<i>BK21, South Korea</i>
<i>Korea Advance Institute of Science and Technology, Daejeon, S.Korea</i>	<i>1st April 2008- 31st Mar 2009</i>	<i>BOYSCAST Post Doctoral Fellow</i>	<i>Research on Re RAM switching.</i>	<i>DST, Govt. of India</i>

APPENDIX-E

PROFESSIONAL DEVELOPMENTS

No of Refresher Course Attained:- 3(Three)

<i>University/ Institute</i>	<i>Period</i>	<i>Course Name</i>
<i>Institute of physics, Bhubaneswar</i>	<i>10th june to 22nd june 2002</i>	<i>Refresher Course in Physics</i>
<i>North Orissa University, Baripada</i>	<i>18th jan to 7th feb 2003</i>	<i>UGC Sponsored Refresher Course in Physics</i>
<i>Institute of physics, Bhubaneswar</i>	<i>6th june to 18th june 2005</i>	<i>Refresher Course in Physics</i>

Specialized Training/ Workshop:

A. International

<i>Laboratory/ Institute</i>	<i>Period</i>	<i>Courses</i>
<i>Dept. of Physics, Anna University</i>	<i>13th Feb to 17th Feb, 2006.</i>	<i>International workshop on nano science and technology</i>

B. National

<i>Laboratory/ Institute</i>	<i>Period</i>	<i>Courses</i>
<i>Department of Chemical Engineering. Indian Institute of Science.</i>	<i>03.12.2002 to 07.12.2002</i>	<i>Workshop com symposium on complex fluid</i>
<i>Solid and structural Chemistry unit, IISc, Bangalore</i>	<i>05.06.2004 to 10.06.2004</i>	<i>XRD, and elements of Rietveld refinement</i>
<i>Sambalpur University</i>	<i>11.10.2004 to 16.10.2004</i>	<i>Maintenance of Electronics Laboratory Instruments.</i>
<i>The University of Burdwan</i>	<i>25.01.2005 to 27.01.2005</i>	<i>Advanced Laser and Nano-materials</i>
<i>IIT, Hyderabad.</i>	<i>14.12.2015 to 19.12.2015</i>	<i>Workshop on Thermal Analysis of Materials</i>

APPENDIX-F

Invited Scientific/popular Lecture

<i>Name of the program</i>	<i>Venue</i>	<i>Duration</i>	<i>Title of the lecture</i>
National conference on Material Science for Energy Harvesting	<i>Department of Physics, Jubilee College Bhurkunda, Jharkhand</i>	15-16 Oct, 2014	<i>Lead free materials for Energy harvesting and storage</i>
One Week Short Term Training on Analysis of Composite Materials	<i>Department of Poly Engg, BIT, Mesra, Ranchi</i>	19- 23 Jan, 2015	<i>Materials Characterization using XRD</i>
workshop on Capacity building for submission of research proposal to different funding agencies	BIT, Mesra, Ranchi	12 Dec, 2016	Funding oportunities from BRNS and proposal preparation for BRNS

Ph. D supervision by Dr S K Rout

Sl No	Name of the Candidate and Roll Number	Name of the institute	Title of the Thesis	Date of registration	Date of Award
1.	Sabyasachi Parida PHD/0058/2009	BIT, Mesra	Structural, optical and microwave dielectric properties of some alkaline earth titanate-zirconate perovskites	July 2009	26/06/2012
2.	Moumita Ganguly PHD/01/2010	BIT Mesra	Effect of rare earth elements on structural, dielectric and optical properties of BaTiO ₃	July 2010	21/05/2014
3.	Kumar Mohit PHD/EC/1001/2011	BIT Mesra	Design & Development of Antennas using Magneto-Dielectric Materials	July 2011	07/12/2016 (Submitted)
4.	Sarit Kumar Ghosh PHD/AP/10002/2013	BIT Mesra	Synthesis, dielectric and optical properties of rare earth doped barium zirconate titanate relaxor(BZT) ceramics	July 2013	15/12/2016 (Submitted)

M.Tech thesis supervision by Dr S K Rout

Sl No	Name of the Candidate and Roll Number	Name of the institute	Title of the Thesis	Date of registration	Date of Award
1	Kumar Mohit	BIT, Mesra	Auto combustion synthesis and characterization of Ni-Zn ferrite nano particles	Mo 09	10/05/2011
2	Anurag Bisen MT/NSNT/1003/2010	BIT, Mesra	Studies of structural, optical and microwave dielectric properties of rare earth (Nd, La and Dy) doped barium zirconate ceramic	MO 10	05/05/2012
3	Nidhi Khobragade MT/NSNT/1002/2011	BIT, Mesra	Structural, optical and microwave dielectric studies of $Sr_{1-x}Ca_xWO_4$ and $Ca_{1-x}Ba_xWO_4$ ceramic prepared by solid state reaction route	MO 11	07/05/2013
4	Aparna Tiwari MT/NSNT/10002/2012	BIT, Mesra	Structural, optical and microwave dielectric properties of $Ba_{(1-x)}Sr_xMoO_4$ ceramic prepared by solid state reaction route	MO 12	15/05/2014
5	Aakash ME/ECE/10014/2013	BIT, Mesra	Fabrication and characterization of doped ferrite for antenna applications	MO 13	07/05/2015
6	Vidhi Chauhan MT/NSNT/10003/2013	BIT, Mesra	Bismuth based piezoelectric material for transducer application	Mo 13	06/05/2015
7	AksRaj ME/ECE/10015/2013	BIT, Mesra	Development of lead free piezoelectric material for transducer application	MO 13	07/05/2015

M.Sc. thesis supervision by Dr S K Rout

Sl No	Name of the Candidate and Roll Number	Name of the institute	Title of the Thesis	Date of registration	Duration
1	Subhadip Ghosh (SAP/1008/2010)	BIT, Mesra	Study of microwave dielectric properties of Mg(Zr _{1-x} Ti _x)O ₃ ceramics	SP 2012	6 Months
2	Jyoti Kumari SAP/10001/2013	BIT, Mesra	Studies of structural and optical properties of ytterbium(Yb) doped barium zirconate ceramics	SP 2015	6 Months
3	Anand Raj IPH/1011/2011	BIT, Mesra	Structural and electrical properties of BNKT-BCZT ceramics near MPB region	SP 2016	6 Months