

**Achievement/ Recognition of School of Physics during the  
Academic session 2016-17**

**1. Research Publication by Faculty members in National/International Journals.**

Sl. no.	Title of the Paper	Name of the Author(s)	No./Vol./Year/ Pages	ISSN No.	Impact Factor
1.	Structural and Optical Properties of Novel Nematogens Based on DFT and Semiempirical Method- A Comparative Picture	<b>D.P. Ojha</b>	<b>633</b> , 91 (2016)	1542-1406 Taylor & Francis, UK	0.59
2.	Theoretical Study of Closo-Decorborate Novel Nematogen Thermodynamic Behaviour and Phase Stability	S. Sahoo & <b>D.P. Ojha*</b>	<b>630</b> , 172 (2016)	1542-1406 Taylor & Francis, UK	0.59
3.	Theoretical Study of Size Dependent Properties of CdSe Quantum Dot	A.Kumar & <b>D.P. Ojha</b>	<b>90</b> , 1041 (2016)	0973-1458 India	1.34
4.	UV-Visible Absorption and Circular Dichroism Spectra of Closo-decarborate Nematogens-A Computational Analysis	<b>D.P. Ojha</b>	<b>6</b> , 231 (2016)	2319-7064 USA	2.30
5.	Structural and Thermodynamic Properties of Nematogen-A Computational Model at Molecular Level	<b>D.P. Ojha</b>	<b>11</b> , 6 (2016)	2162-7269 India	0.23
6.	Structural, Electrochemical and Optical Properties of 4-n-Alkyl-4-Cyanobiphenyl (nCB)-A Computational Approach	S. Prasad & <b>D.P. Ojha*</b>	<b>652</b> , 133 (2017)	1542-1406 Taylor & Francis, UK	0.59
7.	UV Spectral Characterization of a Smectic-C Liquid Crystal-Theoretical Support to the Experimental	P.L. Praveen, D.S. Ramkrishna & <b>D.P. Ojha</b>	<b>643</b> , 76 (2017)	1542-1406 Taylor & Francis, UK	0.59
8.	Theoretical and Experimental Studies on Novel Liquid Crystals-The Role of Position of Oxygen	S. Praseed & <b>D.P. Ojha*</b>	<b>7</b> , 35 (2017)	2162-8424 USA	0.76
9.	Study of Group Charges, Molecular Conformations, and Electrochemical Properties of Nematogens- A DFT Approach	S. Prasad & <b>D.P. Ojha*</b>	<b>7</b> , 41 (2017)	2162-8424 USA	0.76
10.	A Comparative Picture of Structural and Electrochemical Properties of Fluoronated Liquid Crystals-A Theoretical Study	S. Prasad & <b>D.P. Ojha*</b>	<b>132</b> , 1383 (2017)	1898-749X Poland	0.43
11.	Vibrational Spectra, Electronic Properties and Effect of Alkyl Chain Length on Chemical Stability of Nematogens-A Comparison using DFT and HF Methods	S. Prasad & <b>D.P. Ojha*</b>	<b>655</b> , 1 (2017)	1542-1406 Taylor & Francis, UK	0.59

12.	Phase Stability and Ordering of Nematogen at Molecular Level-A Computer Aided Modeling	<b>D.P. Ojha</b>	<b>624</b> , 163 (2017)	1542-1406 Taylor & Francis, UK	0.59
13.	Deformation properties with a finite-range simple effective interaction.	X.Vinas, <b>T.R. Routray</b> , L M Robledo and M Centelles and S P Pattnaik	<i>J. Phys. G: Nucl. Part. Phys.</i> 43 (2016) 045115	0954-3899 (print); 1361-6471 (web)	2.899 (2016)
14.	Properties of Nuclear matter and Finite nuclei with finite range Simple Effective Interaction	<b>T. R. Routray</b> , X. Viñnas, M.Centelles, L.Robledo3, S. P. Pattnaik and B.Behera.	<i>EPJ Web of Conferences</i> <b>117</b> 07009(2016) <b>DOI:10.1051/epjconf/2016117009</b>		
15.	Exact versus Taylor expanded energy density in the study of the neutron star crust-core transition.	<b>T. R. Routray</b> , X. Viñnas, D. N.Basu, S. P. Pattnaik, M.Centelles, L.Robledo, and B.Behera.	J. Phys. G: Nucl. Part. Phys. 43 (2016)105101	0954-3899 (print); 1361-6471 (web)	2.899 (2016)
16.	Density dependence of nuclear symmetry energy”	B. Behera, <b>T. R. Routray</b> and S. K. Tripathy.	Modern Physics Letters A Vol. 31, No. 34 (2016) 1650194	0217-7323 (print); 1793-6632 (web)	1.338 (2014)
17.	Influence of the nuclear matter equation of state on the r-mode instability using the finite-range simple effective interaction.	S. P. Pattnaik, <b>T. R. Routray</b> ,_ X. Viñnas, D. N. Basu, M. Centelles, K.Madhuri and B.Behera.	J. Phys. G: Nucl. Part. Phys. ( <i>In press</i> ) JPhysG-102230.R1	0954-3899 (print); 1361-6471 (web)	2.899(2016)
18.	Crustal moment of inertia of glitching pulsars with the KDE0v1 Skyrme interaction.	K. Madhuri, D.N. Basu, <b>T.R. Routray</b> , and S.P. Pattnaik.	Eur. Phys. J. A (2017) <b>53</b> : 151		2.736 (2016)
19.	<i>Structural, dielectric and electrical properties of Lithium Niobate Microfibers</i>	C.R. Cena, A.K. Behera and <b>Banarji Behera</b>	<i>Journal of Advanced Ceramics</i> , <b>5</b> , 84-92 (2016). (Published by Springer)	2226-4108	1.198
20.	Transport phenomena and conductivity mechanism in Sm doped Bi <sub>4</sub> V <sub>2-x</sub> Sm <sub>x</sub> O <sub>11</sub> ceramics	Sasmitarani Bag and <b>Banarji Behera</b>	Journal of Science :Advanced Materials and Devices, <b>1</b> , 512-520 (2016). (Published by Elsevier)	2468-2179	-----
21.	Effect of Gadolinium Doping on structural, ferroic and electrical properties of 0.8BiGd <sub>x</sub> Fe <sub>1-x</sub> O <sub>3</sub> -0.2PbTiO <sub>3</sub> (x=0.00, 0.05, 0.10, 0.15 and 0.20) Composites	Truptimayee Sahu, A.K. Patra and <b>Banarji Behera</b>	Journal of Alloys and Compounds, <b>695</b> , 2273-2284 (2017). (Published by Elsevier)	0925-8388	3.133
22.	Surface functionalization of BiFeO <sub>3</sub> : A pathway for the enhancement of dielectric and electrical properties of poly(methyl methacrylate)-BiFeO <sub>3</sub> composite films	Mukesh Kumar Mishra, Srikanta Moharana, <b>Banarji Behera</b> , Ram Naresh Mahaling	Front. Mater. Sci. <b>11</b> , 82-91 (2017). (Published by Springer)	2095 – 0268	1.471
23.	Investigation on Structural, Dielectric and Ferroelectric properties of Samarium	Truptimayee Sahu and <b>Banarji Behera</b>	J. of Advanced Dielectrics, <b>7</b> , 1750001-175006	2010-135x	1.198

	Substituted BiFeO <sub>3</sub> -PbTiO <sub>3</sub> Composites		(2017). (Published by World Scientific)		
24.	Structural and Electrical Properties of a new lead free Tungsten Bronze Ferroelectric Ceramics Na <sub>2</sub> Ba <sub>2</sub> Eu <sub>2</sub> W <sub>2</sub> Ti <sub>4</sub> Nb <sub>4</sub> O <sub>30</sub>	S. Samarpita, S. Behera, <b>Banarji Behera</b> and P.R. Das	Journal of Materials Science: Materials in Electronics, <b>28</b> , 3843-3850 (2017). (Published by Springer)	0957-4522	2.016
25.	Enhanced Dielectric Properties of Polyethylene glycol (PEG) Modified BaTiO <sub>3</sub> (BT)-Poly (vinylidene fluoride) (PVDF) Composites	Srikanta Moharana, Mukesh Kumar Mishra, <b>Banarji Behera</b> and Ram Naresh Mahaling	Polymer Science, Series A <b>59</b> , 53-63 (2017). (Published by Springer)	0965-545X	0.822
26.	Dielectric, electrical and magnetic properties of La doped BiFeO <sub>3</sub> -PbZrO <sub>3</sub> composites	S. K. Satpathy, S. Sen, <b>Banarji Behera</b>	<i>Journal of Materials Science: Materials in Electronics</i> , <b>28</b> , 9102-9113 (2017). (Published by Springer)	0957-4522	2.016
27.	AC impedance spectroscopy and conductivity studies of Dy doped Bi <sub>4</sub> V <sub>2</sub> O <sub>11</sub> ceramics	Sasmitarani Bag and <b>Banarji Behera</b>	<i>Journal of Theoretical and Applied Physics</i> , <b>11</b> , 13-25 (2017). (Published by Springer)	1735-9325	0.802
28.	Studies of ferroelectric properties and leakage current behaviour of microwave sintered ferroelectric Na <sub>0.5</sub> Bi <sub>0.5</sub> TiO <sub>3</sub> ceramic	H.S. Mohanty, T. Dam, H. Borkar, Ashok Kumar, K.K. Mishra, Shrabanee Sen, <b>Banarji Behera</b> , Balaram Sahoo, Dillip K. Pradhan (2017)	<i>Ferroelectrics</i> , <b>517</b> , 25-33 (2017). (Published by Taylor & Francis)	0015-0193	0.491
29.	Structural, Micro-Structural and Electrical Properties of Rare Earth Doped Bi <sub>4</sub> V <sub>2</sub> O <sub>11</sub> Ceramics,	<u>Sasmitarani Bag</u> and <b>Banarji Behera</b>	ECS J. Solid State Sci. Technol., <b>6</b> N127-N136 (2017). (Published by The Electrochemical Society)	2162-8777	1.558
30.	High-spin states in <sup>133</sup> Cs and the shell model description;	S. Biswas, R. Patil, J. Sethi, A. Raghav, U.Garg <b>Z. Naik</b> , S. Sharma,	<i>Phys. Rev. C</i> <b>95</b> , 064320 (2017)		
31.	Azimuthal correlations of D-mesons in p+p and p+Pb collisions at LHC energies;	M.Younus, S.K. Tripathy, P.K.Sahu, <b>Z. Naik</b>	<i>Eur. Phys. J. A</i> <b>53</b> , 112 (2017)		

## 2. Awards/Recognitions/Fellow received during the year (2016-2017)

Name of Teacher	Name of the Awards/Recognitions/Fellow	Host organization	Year
Prof. T. R. Routray	Invited to Department of Physics, University of Barcelona (Facultat de Fisica, Department D' Estructura i Constituent de la Materia), Spain for Scientific Collaborative Research work during 20 September – 7 October' 2017	University of Barcelona (Facultat de Fisica, Department D' Estructura i Constituent de la Materia), Spain	<b>2017</b>
Prof. T. R. Routray	Speaker Invitation   Dr. T R Routray to the 2nd International Conference on Atomic and Nuclear Physics November 08-09, 2017 at Las Vegas, USA	Atomic Physics 2017 Organizing Committee, Las Vegas, USA.	<b>2017</b>
Prof. T. R. Routray	Invited to visit GANIL, Caen, France, & to participate in NuSYM17 during 3-9 Sept.'2017.	Director GANIL, Caen, France	<b>2017</b>

## 3. No. of students qualified NET/GATE/JEST during the year (2016-2017)

Year	No. of students qualified NET/GATE/JEST etc.	No. of students received Fellowship (JRF/RGNF/Inspire/Others)
2016	<b>01 (NET) + 04 (GATE+ JEST) + 02 (GATE)= 07</b>	<b>01 (INSPIRE) + 01(JRF) + 01 (RGNF-JRF)</b>
2017	<b>02 (NET) + 04 (GATE + JEST) + 02 (GATE) = 08</b>	<b>01 (INSPIRE) + 03 (JRF) + 01 (BPRF-JRF)</b>