

Govt. Pt. Shyamacharan Shukla College Dharsiwa Raipur (CG)

Report of  
National Seminar on

**“Advance Materials for Sustainable Industrial and Social Applications”**

**(NSAMSISA-2020)**

**(17<sup>th</sup> -18<sup>th</sup> Jan 2020)**

Two days National Seminar on **“Advance Materials for Sustainable Industrial and Social Applications” (NSAMSISA-2020)** has been organized by Faculty of Science during **17<sup>th</sup> -18<sup>th</sup> Jan 2020**. The program was conducted in five different sections namely, Pre-seminar talk, Inaugural function, Technical session-1, technical session-2, technical session-3, technical session-4 and Poster presentations. In the inaugural functional the Chief guest was honourable Prof. K L Verma, vice-chancellor, Pt. Ravishankar Shukla University, Raipur (CG) and presided by respected principal Prof. D S Jagat. The inaugural function was started at 10:00 am by worshipping goddess Saraswati, followed by the welcome address by principal Prof. D S Jagat. Chief guest Prof. K L Verma congratulated the principal and staff of faculty of science for organizing the seminar in spite of infrastructural limitations in the college. Convenor of the seminar Prof. Kaushal Kishore, Assistant prof. department of Botany introduced the sessions with objectives and themes of the seminar. He also explained the relevance of the topic in the present scenario. Guest of Honour Dr. Anjali Oudhia, head of the Department, Department of Physics, Govt. Nagarjuna PG College of Science also addressed the inaugural session and gave information on the importance and relevance of the theme of seminar in the present-day scenario. In the end Dr. G Nag Bhargavi, Assistant prof. department of Physics gave vote of thanks. In this seminar on our call 45 participants have registered from 6 different states of the country. 56 abstracts were submitted by participants out of which there are 01 keynote address, 15 invited talks, 17 oral talks and 23 poster presentations.

**Technical Session-1 (Day -1, 11:00 am-1:30 pm)**

In the first technical session there were 01 keynote address and two invited talks. The first talk (keynote address) was delivered by Prof. P K Bajpai, Professor and Head, Department of Physics, Guru Ghasidas Central University, Bilaspur (CG) on “Advances in Multifunctional Materials”. The first invited talk was delivered by Dr. Sanjib Banerjee, Assistant Professor, Indian Institute of Technology Bhilai, India. Second invited talk was delivered by Dr. K. N. Singh, Assistant Professor, Department of Physics, School of Science, O P Jindal University, Raigarh (CG). The session was chaired by prof. Anjali Oudhia, Professor and Head, Govt. Nagarjuna PG College of Science, Raipur (CG). After this session there was lunch break of 30 min. 1:30-2pm.

**Technical Session-2 (2:00 pm- 5:30 pm)**

The second session was chaired by Dr. S K Rout, Professor, Associate Professor, Department of Physics, Birla Institute of Technology, Mesra. In this session 03 invited talks and 11 oral

talks were presented by the participants. Parallely a poster presentation session was conducted in which 23 posters were presented by the participants.

### **Technical Session-3 (9:30 am- 11:30 am)**

The third session was chaired by Dr. Tanmaya Badapanda, Associate Professor, Department of physics, C. V. Raman College of Engineering, Bhubaneshwar, Odisha. In this session 05 invited talks were presented followed by a tea break.

### **Technical Session-4 (11:40 am- 1:30 pm)**

The fourth session was chaired by Dr. Ayush Khare, Associate Professor& Head, Department of Physics, National Institute of Technical, Raipur. In this session 04 invited talks and 03 oral talks were presented by the participants followed by a lunch break.

Valedictory session was started at 3:30 PM. In the Valedictory the invited speakers, guest, judges and the participants gave feedback on the seminar. Chief guest Dr. P K Bajpai addressed the session and congratulated the principal and staff for success conduction of the academic event At last result of oral presentation and poster presentations were declared, Principal Dr. D S Jagat congratulated all the winners and the organizing team of the seminar and all the participants. Kaushal Kishore presented the report of the seminar and Dr. G Nag Bhargavi gave the vote of thanks in the valedictory.

Prof. Kaushal Kishore



Dr. G Nag Bhargavi



Shri Hemant Deshmukh



Principal

# Photographs



<p><b>National Advisory Committee</b>          Prof. P. K. Bajpai, <i>GGU Bilaspur</i>          Prof. RNP Chaudhary, <i>SOA University, Bhubaneswar</i>          Dr. Ashok Kumar, <i>NPL, Delhi</i>          Dr. S. G. Agrawal, <i>NPL, Delhi</i>          Prof. Nameeta Brahm, <i>PRSU, Raipur</i>          Dr. Ayush Khare, <i>NIT, Raipur</i>          Dr. Tannaya Badapanda, <i>C.V. Raman College of Engineering, Bhubaneswar</i>          Prof. D. P. Bisen, <i>PRSU, Raipur</i>          Prof. Sanjay Tiwari, <i>PRSU, Raipur</i>          Prof. Kallol Ghosh, <i>PRSU, Raipur</i>          Dr. Sanjib Banerjee, <i>IIT, Bhubilai</i>          Dr. Anjali Oudhia, <i>GovtN PG Science College, Raipur</i>          Dr. S. K. Rout, <i>BIT, Mesra</i>          S. Panigrahi, <i>NIT, Rourkela</i></p>	<p><b>NATIONAL SEMINAR</b>          ON  <b>"ADVANCE MATERIALS FOR SUSTAINABLE INDUSTRIAL AND SOCIAL APPLICATIONS"</b>          (NSAMSISA-2020)          January 17-18, 2020  <b>REGISTRATION FORM</b></p> <p>Name:.....          Designation:.....          Affiliation:.....          Corresponding Address:.....          E-mail:.....          Phone No. ....          Title of the paper:.....          Accommodation required (Yes/No) :.....          Payment Mode.....          Transaction Detail:..... Dated:.....          Bank Branch and City:.....</p> <p>Please mail completed registration form with payment details to:  <a href="mailto:bhargavi.nag24@gmail.com">bhargavi.nag24@gmail.com</a></p> <p>Place .....          Date:.....</p> <p>Signature of the Delegate/Participant</p>	<p><b>NATIONAL SEMINAR</b>          On  <b>"Advance Materials for Sustainable Industrial and Social Applications"</b>          (NSAMSISA-2020)</p> <p><b>17<sup>th</sup> -18<sup>th</sup> January 2020</b></p>  <p><b>Organized by:</b>  <b>FACULTY OF SCIENCE</b></p>  <p><b>Govt. Pt. Shyamacharan Shukla College,</b>          Kunra Road, Dharsiwa, Raipur (CG) PIN: 493221          Accredited by NAAC with Grade - B          Ph. No.9893043414 , Website: <a href="http://www.gpssc.in">www.gpssc.in</a></p>
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<p><b>About Seminar</b>          Materials Science is an interdisciplinary field concerned with the understanding and application of properties of matter. This field focuses mainly on the design and development of new materials particularly solids with novel properties. This field has a prospect of including elements of basic and applied physics and chemistry as well as various branches of engineering like, chemical, electrical, mechanical etc. In the recent years materials science has propelled to the forefront by paying significant attention to nano-science and technology. Another important aspect of materials science is the development of eco-friendly materials. Most of the materials are excellent in electrical, optical and thermal properties, but there are some issues due to toxic and hazardous nature that has an adverse impact on environment. Because of the environmental concerns these materials are not found suitable for direct industrial applications. Now it is a challenge and opportunity for the future generation to develop eco friendly materials industrial and social applications. This seminar includes the core areas of materials science like ceramics, electronic materials, polymers, composites &amp; bio materials &amp; apart from this also covers all emerging topics.</p> <p><b>About the Institute</b>          Govt Pt. Shyamacharan Shukla College Dharsiwa (Shankar Nagar) was established on 14th August 1989 by the Government of Madhya Pradesh. The college was named in the memory of freedom fighter and former chief minister of undivided Madhya Pradesh i.e. Pt. Shyamacharan Shukla ji . After the bifurcation of the State in 2000 it is governed by the Government of Chhattisgarh. The institute is affiliated to Pt. Ravishankar Shukla University, Raipur Chhattisgarh. At the time of establishment the college was started in Shankar Nagar Raipur, but in 2010 it was shifted to Dharsiwa block of Raipur district and due to lack of its own building it was started in a community hall named "Mangal Bhavan" temporarily. August 2014 onwards the institute is running in its own building. The institution is recognised under 2(f) and 12(b) sections of UGC.</p> <p><b>About Dharsiwa</b>          The Dharsiwa is a Tehsil in Raipur District of Chhattisgarh State, India. Dharsiwa Tehsil Head Quarters is Dharsiwa town. It is located 13 KM towards North from District head quarters Raipur and 12 KM from State capital Raipur towards South. It is the famous industrial block of Chhattisgarh with various industrial establishments. Raipur Rail Way Station, Mandhar Rail Way Station, Urkura Rail Way Station are the very nearby railway stations to Dharsiwa Tehsil. Raipur, Bhubilai (Bhubilai Nagar), Durg , Mahasamund , Dhamtari are the near - by important tourist destinations to see.</p>	<p><b>Objective of the Seminar</b>          This seminar will be an excellent academic forum for sharing knowledge and results in theoretical, experimental, methodological and applications of Materials Science and various streams. The seminar will cover the significant contributions from almost all the major fields of materials science. In this seminar participant from different universities, academic institutions and participants from all over the country are anticipated. The latest developments in the field of materials science and its applications will be reviewed. This seminar will be an interactive platform to all the academicians and researchers.</p> <p><b>Themes of NSAMSISA-2020</b></p> <table border="0"> <tr> <td> <p><b>Advanced Materials</b></p> <ul style="list-style-type: none"> <li>Smart Materials</li> <li>Dielectric, Ferroelectric, Piezoelectric Materials</li> <li>Luminescent Materials (Electro, Thermo, Mechano, Photo, Lyo, Bio, Chemi)</li> <li>Nano materials and Nano technology</li> <li>Magnetic materials</li> <li>Bio Materials</li> <li>High temperature materials</li> <li>Sensors</li> </ul> <p><b>Materials Characterisations</b></p> <ul style="list-style-type: none"> <li>Various characterization techniques</li> <li>Characterization techniques of Optical materials</li> <li>Advanced characterizations</li> </ul> </td> <td> <p><b>Composites</b></p> <ul style="list-style-type: none"> <li>Polymers</li> <li>Ceramics</li> <li>Metal Matrix ceramics</li> <li>Fiber reinforced ceramics</li> <li>Nano composites</li> <li>Bio composites</li> </ul> <p><b>Applications of smart materials and waste utilization</b></p> <ul style="list-style-type: none"> <li>Radiation effects and dosimetry</li> <li>Phosphors in medical applications</li> <li>Industrial applications of Phosphors</li> <li>Industrial waste utilization</li> <li>Organic waste utilization</li> <li>Hazardous waste utilization</li> <li>Recyclable waste</li> <li>Electronic waste utilization</li> </ul> <p><b>Mask development for industrial areas</b></p> <p><b>Catalyst development for polymerisation</b></p> </td> </tr> </table>	<p><b>Advanced Materials</b></p> <ul style="list-style-type: none"> <li>Smart Materials</li> <li>Dielectric, Ferroelectric, Piezoelectric Materials</li> <li>Luminescent Materials (Electro, Thermo, Mechano, Photo, Lyo, Bio, Chemi)</li> <li>Nano materials and Nano technology</li> <li>Magnetic materials</li> <li>Bio Materials</li> <li>High temperature materials</li> <li>Sensors</li> </ul> <p><b>Materials Characterisations</b></p> <ul style="list-style-type: none"> <li>Various characterization techniques</li> <li>Characterization techniques of Optical materials</li> <li>Advanced characterizations</li> </ul>	<p><b>Composites</b></p> <ul style="list-style-type: none"> <li>Polymers</li> <li>Ceramics</li> <li>Metal Matrix ceramics</li> <li>Fiber reinforced ceramics</li> <li>Nano composites</li> <li>Bio composites</li> </ul> <p><b>Applications of smart materials and waste utilization</b></p> <ul style="list-style-type: none"> <li>Radiation effects and dosimetry</li> <li>Phosphors in medical applications</li> <li>Industrial applications of Phosphors</li> <li>Industrial waste utilization</li> <li>Organic waste utilization</li> <li>Hazardous waste utilization</li> <li>Recyclable waste</li> <li>Electronic waste utilization</li> </ul> <p><b>Mask development for industrial areas</b></p> <p><b>Catalyst development for polymerisation</b></p>	<p><b>Paper Submission Guidelines</b></p> <ul style="list-style-type: none"> <li>All abstract/full paper must be submitted through Email via - <a href="mailto:bhargavi.nag24@gmail.com">bhargavi.nag24@gmail.com</a></li> <li>Abstract (max 300 words should contain title of the paper, authors' names, affiliation and contact details)</li> <li>Font: English - Times New Roman, Font size - 12 Hindi - Krutidev 010, Font Size - 14</li> <li>Space between the lines - 1.15</li> <li>Format: MS office word, A-4 size</li> </ul> <p><b>Important Dates:</b></p> <ul style="list-style-type: none"> <li>Abstract Submission begins – December 15, 2019</li> <li>Abstract submission closes – January 05, 2020</li> <li>Acceptance notification – January 07, 2020</li> <li>Last date of registration – January 10, 2020</li> </ul> <p><b>Registration Fees</b></p> <table border="1"> <thead> <tr> <th>Delegate Type</th> <th>Upto 10<sup>th</sup> Jan. 2020</th> </tr> </thead> <tbody> <tr> <td>Faculty Members</td> <td>800/-</td> </tr> <tr> <td>Research Scholars</td> <td>500/-</td> </tr> <tr> <td>Students</td> <td>300/-</td> </tr> <tr> <td>Accompanying person</td> <td>600/-</td> </tr> <tr> <td>Delegates from Industry</td> <td>1000/-</td> </tr> </tbody> </table> <p>Registration fee may be paid through online to the bank details given below:          Bank Name &amp; Address: Dena Bank, Dharsiwa, Raipur          Account Name – PRINCIPAL, GOVT.PT. SHYAMACHARAN SHUKLA COLLEGE          Account No. - 070910031892          IFSC Code: BKDN0820709</p> <p><b>Accommodation</b>          Accommodation will be provided to all the out station participants on payment basis.</p> <p><b>CONTACT NUMBERS</b>          Dr. G. Nag Bhargavi - (Mob.) 9981373012  <a href="mailto:bhargavi.nag24@gmail.com">bhargavi.nag24@gmail.com</a>          Shri. Hemant Kumar Deshmukh - (Mob.) 8319618077  <a href="mailto:deshmukh.hemant2012@gmail.com">deshmukh.hemant2012@gmail.com</a></p>	Delegate Type	Upto 10 <sup>th</sup> Jan. 2020	Faculty Members	800/-	Research Scholars	500/-	Students	300/-	Accompanying person	600/-	Delegates from Industry	1000/-
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**GOVT. PT. SHYAMACHARAN SHUKLA COLLEGE DHARSIWA  
RAIPUR, (CG)**

**FACULTY OF SCIENCE**

**National Seminar on Advance Materials for Sustainable Industrial and Social Applications  
(NSAMSISA-2020)  
January 17-18, 2020**

**Technical program**

<b>Day -1, 17-01-2020 (Friday)</b>			
<b>Registration: 09:00 AM – 10:00 AM</b>			
10:00- 10:45AM	INAUGURAL CEREMONY (Seminar Hall II floor)		
10:45- 11:00AM	HIGH TEA		
<b>Technical session -1 (Seminar Hall II floor)</b>			
<b>Session chair: Dr. Anjali Oudhia</b>			
11:00- 12:00 PM	<i>Keynote Address</i>	Advances in Multifunctional Materials <i>by Prof. P. K. Bajpai</i>	
12:00- 12:30 PM	IT-1	Advanced Polymer-based Materials: Synthesis, Properties and Industrial Applications <i>by Dr. Sanjib Banerjee</i>	
12:30- 1:00 PM	IT - 2	Study of Diffuseness and Dielectric Relaxation in ABO <sub>3</sub> : Lead-Free Ceramic Material <i>by Dr. K. N. Singh</i>	
1:00- 1:10 PM	OT-1	<i>Manojit De, H. S. Tewari, R. N. P. Choudhary</i> , Studies of LiNbO <sub>3</sub> modified BiFeO <sub>3</sub> : Structural, Vibrational, Dielectric, Impedance and Polarization Study	
1:10- 1: 20 PM	OT-2	<i>Ramsingh Kurrey</i> , Surface Enhanced Infra-Red Spectroscopy for Determination of Quaternary Ammonium Cationic Surfactants using Silver Nanoparticles as a Chemical Sensor	
1: 20- 1: 30 PM	OT-3	<i>Tripti Richhariya, Nameeta Brhame, D. P. Bisen, Ekta Chandrawanshi, Yugbodh Patle, Sanjay Baghel and Kamlesh Thakkar</i> , Synthesis and Photoluminescence studies of Barium Alumino Silicate Phosphor	
1: 30- 2: 00 PM	<b><u>LUNCH</u></b>		
<b>Technical session -2 (Seminar Hall II floor)</b>			
<b>Session chair: Dr. S.K. Rout and Dr. Tanmaya Badapanda</b>			
2:00- 2:30 PM	IT - 3	Application of Functionalized Graphene Quantum Dots for Alzheimer's Disease <i>by Prof. Kallol Ghosh</i>	
2:30- 3:00 PM	IT - 4	Design and Development Paper based Electronics and Chemical Sensors <i>by Dr. Kamlesh Shrivastava</i>	
3: 00- 3: 30 PM	IT - 5	Nanomaterial-Based Sensors for Detection of Biomolecules and Toxicants <i>by Dr. Manmohan L. Satnami</i>	
3: 30-	OT-4	<i>Sanjay K. Baghel, Nameeta Brahme, D.P.Bisen, Ganesh Banjare,</i>	

	3: 40 PM		<b>Yugbodh Patle, Sukhraj Nureti,</b> Study of photoluminescence properties of SrZrSi <sub>2</sub> O <sub>7</sub> :Eu <sup>3+</sup> Phosphor
	3: 40- 3: 50 PM	OT-5	<b>Bodh ram Chaohan,</b> Study of the soil properties of Shakradhar gram block Manora district Jashpur Chhattishgarh for suitability of tea (camellia sinensis) gardening
	3: 50- 4: 00 PM	OT-6	<b>Sanju Soni, P.K. Bajpai and Charu arora,</b> BIMETALLIC METAL-ORGANIC FRAMEWORK FOR EFFICIENT ADSORPTION OF METHYLENE BLUE DYE
	4: 00 - 4:10 PM	<i>TEA BREAK</i>	
	4: 10 - 4: 20 PM	OT-7	<b>Dr. Mrs. Rita Bajpai,</b> Impact of Industrial waste management on Environment - An analysis
	4: 20 - 4:30 PM	OT-8	<b>Kanchan Tiwari,</b> Optical Properties (Refractive Index, Absorption, Absorption Index) Of Ca <sub>2</sub> Al <sub>2</sub> SiO <sub>7</sub> Using Computational Method (SIESTA)
	4: 30 - 4:40 PM	OT-9	<b>Adilaxmi Tiwari, Hitendra Kumar Lautre,</b> Discovering natural products as antimicrobial agents
	4: 40 - 4:50 PM	OT-10	<b>Kamal Kumar Pandey, Abhishek Kumar Misra and Rajiv Manohar,</b> Electro-optical and Dielectric Characterization of Ferroelectric Liquid Crystals dispersed with Fe <sub>2</sub> O <sub>3</sub> Nanoparticles
	4: 50 - 5:00 PM	OT-11	<b>Vikas Gulhare, R. S. Kher, S. J. Dhoble,</b> Luminescence characterization of Tb doped Ca(VO <sub>3</sub> ) <sub>2</sub> phosphors
	5: 00 - 5:10 PM	OT-12	<b>Kishore Janardhan Patil,</b> Microalgae <i>Chlorella sp.</i> concentration by flocculation and their phytochemical analysis
	5: 10- 5: 20 PM	OT-13	<b>Rakesh Kumar Kurre and P.K. Bajpai,</b> Evaluate the effect of cerium doping on structural and gas sensing properties of strontium stannate
	5: 20- 5: 30 PM	OT-14	<b>Dakeshwar Kumar Verma,</b> Gravimetric, electrochemical, surface and theoretical study of some green corrosion inhibitors for mild steel in 1 M HCl

<b>Day -2, 18-01-2020 (Saturday)</b>			
<b>Registration: 09:00 AM – 10:00 AM</b>			
<b>Technical Session- 3 (Seminar Hall II floor)</b>			
<b>Session chair: Dr. Tanmaya Badapanda</b>			
	9:30-9:50AM	IT-6	Solar Photovoltaics: A Promising Source of Renewable Energy <i>by Dr. Ayush Khare</i>
	9:50-10:10AM	IT-7	Grain and Grain Boundary Study of Ceramics Using Impedance Spectroscopy <i>by Dr. S. K. Rout</i>
	10:10 - 10:30AM	IT-8	<i>H. S. Tewari, Rashmi Tiwari and Manojit De</i> , Advance Materials Based on Perovskite Oxide: Synthesis, Characterization and Applications
	10:30 - 10:50AM	IT-9	<i>M. P. Sharma, Rashmi Tiwari, Vasundhara Shahu, Manojit De and H. S. Tewari</i> , Structural, Morphological and Vibrational Characterizations of Ni-Zn Based Ferrites
	10:50 - 11:10AM	IT-10	<i>M. P. Sharma, Neeraj Jaiswal and H. S. Tewari</i> , Synthesis and characterization of $\text{CoCr}_x\text{Fe}_{2-x}\text{O}_4$ ferrite
	11:10 - 11:30PM	IT-11	<i>Goverdhan Reddy Turpu, G Bera, A Mishra, P Das, and P Mal</i> , Multi - functionality of graphene oxide – orthovanadate composites
	11:30 – 11:40PM		<i>TEA BREAK</i>
<b>Technical Session- 4 (Seminar Hall II floor)</b>			
<b>Session chair: Dr. Ayush Khare</b>			
	11:40 - 12:00PM	IT-12	Ferroelectric and piezoelectric ceramic for energy storage and harvesters <i>by Dr. Tanmaya Badapanda</i>
	12:00 - 12:20PM	IT-13	Comparative study on Luminescence properties of Melilite group phosphors <i>by Prof. Nameeta Brahme</i>
	12:20-12:40PM	IT-14	<i>Pradip Das</i> , Transport evidence of 3D topological insulator: $(\text{Pb}/\text{Sn})\text{Bi}_2\text{Te}_4$ and $\text{PbBi}_{2-x}\text{Fe}_x\text{Te}_4$
	12:40 - 1:00PM	IT-15	<i>G. Maity and Shiv P. Patel</i> , Metal Induced Crystallization of Amorphous semiconductors under Swift Heavy Ion Irradiation
	1:00 - 1:10PM	OT-15	<i>Tarkeshwar Sinha, Ayush Khare</i> , A comparative analysis of photoluminescence properties of cadmium sulfide films synthesized by two different chemical deposition techniques
	1:10 - 1:20PM	OT-16	<i>Devjyoti Lilhare and Ayush Khare</i> , Studying the effect of annealing on characteristics of electrodeposited $\text{CdTe}/(\text{Cd}_x\text{-Zn}_{1-x})\text{S}$ thin films
	1:20 - 1:30PM	OT-17	<i>Neha Anchal, Bijay Kumar Sahoo</i> , The effect of Polarization Mechanism on Internal Quantum Efficiency of InGaN/GaN Blue LED
	1:30 - 2:30PM		<i>LUNCH</i>
	2:30 - 3:30PM		<i>POSTER PRESENTATIONS (PP-1 to PP-21, II floor)</i>
	3:30 - 4:30PM		<i>VALEDICTORY FUNCTION</i>

## POSTER PRESENTATIONS

<b>1</b>	<b>PP-1</b>	<i>Dr. Preeti Soni</i> , Effect of cement dust pollution on water bodies around Bhatapara Chhattisgarh
<b>2</b>	<b>PP-2</b>	<i>Meenakshi Chandra</i> , Synthesis, Characterization and dielectric studies of Pure and Mn doped BZT ceramics
<b>3</b>	<b>PP-3</b>	<i>Prashant Mundeja</i> , PESTICIDES: A REVIEW ON PESTICIDE WASTES, DISPOSAL & MANAGEMENT
<b>4</b>	<b>PP-4</b>	<i>Yuvraj Singh Jagat</i> , Change in electron mobility due to biaxial strain in graphene
<b>5</b>	<b>PP-5</b>	<i>Rashmi Jain</i> , Variation of dielectric constant of soil with moisture content
<b>6</b>	<b>PP-6</b>	<i>Nidhi Dewangan</i> , Impact of Fibre-reinforced composites on SH-wave propagation
<b>7</b>	<b>PP-7</b>	<i>Dr. Usha Rani Singh</i> , Bamboo: environmental friendly and sustainable building materials
<b>8</b>	<b>PP-8</b>	<i>Vinod Kumar Verma and K.K Dubey</i> , Synthesis and Characterization of ZnS nanoparticle using capping agent Polyvinyl alcohol (PVA) by Co-precipitation method
<b>9</b>	<b>PP-9</b>	<i>Vinod Kumar Verma and K.K Dubey</i> , Effect of Post-Irradiation Deformation of Thermoluminescence of Cu <sup>++</sup> and Ag <sup>+</sup> doped NaCl Crystals
<b>10</b>	<b>PP-10</b>	<i>Upendra Kumar Verma</i> , Lyoluminescence study of gamma-ray irradiated Dy <sup>3+</sup> activated YCa <sub>4</sub> O(BO <sub>3</sub> ) <sub>3</sub> Phosphors for dosimetry applications
<b>11</b>	<b>PP-11</b>	<i>Laxmi Gond and Anjali Bajpai</i> , Pb(II) Ion Remediation by dithiocarbamylated chitin
<b>12</b>	<b>PP-12</b>	<i>Rashmi Sharma</i> , Dosimetric properties of different TLD Materials: A Review
<b>13</b>	<b>PP-13</b>	<i>Lakhapati Patel, Shweta Jaiswal, Dr. A. K. Shrivastava</i> , Analytical study of microwave remote sensing and electrical spectroscopic behavior of soil
<b>14</b>	<b>PP-14</b>	<i>Kaushal Kishore and S K Verma</i> , Production of bio-plastic from paddy straw, an agricultural waste in Chhattisgarh, India
<b>15</b>	<b>PP-15</b>	<i>G. Nag Bhargavi, T. Badapanda, A. Khare, S. Anwar, Nameeta Brahme</i> , Impedance spectroscopy and electrical modulus studies of Barium Zirconium Titanate Ceramic for Thermistor applications
<b>16</b>	<b>PP-16</b>	<i>D. S. Tandon and Yashwant Vaishnav</i> , Fuzzy modules and its Properties over a t-norms
<b>17</b>	<b>PP-17</b>	<i>Miss Neelima Patel</i> , Communications of Geostationary satellite in space science
<b>18</b>	<b>PP-18</b>	<i>Saroj Vikram Ratnakar</i> , Environmental aspect and courtship behavior of Indian Grey Hornbill Around Vikram University campus Ujjain, India
<b>19</b>	PP-19	<i>Durgesh Sinha, Tanuja Markam, Yodhan Singh Mandavi, Chhama Bhuarya, Dakeshwar Kumar Verma</i> , Hibiscus Sabdariffa extract used as corrosion inhibitor of iron in acidic media
<b>20</b>	PP-20	<i>Pratibha Gumasta, Ms Sujata, Naresh Chandra Deshmukh, Y. R. Katre</i> , A review on organic waste composting, at Bhilai township area Durg, Chhattisgarh
<b>21</b>	PP-21	<i>Manisha Dewangan, D. K. Pandey, Hitendra Kumar Lautre</i> , Pesticides Determination using Biological system
<b>22</b>	PP-22	<i>K.N.Singh, A.K.Shrivastava</i> Role of changing environment and its impact
<b>23</b>	PP-23	<i>Neekita Shah, Nameeta Brahme, D.P. Bisen, Tripti Richhariya, Ekta Chandrawanshi, Yugbodh Patle, Sanjay Baghel</i> , Impact of Dysprosium doping on the optical properties of the Calcium Gallium silicate phosphor

**National Seminar on Advance Materials for Sustainable Industrial and Social Applications  
(NSAMSISA-2020)  
January 17-18, 2020**

**Day – 1, 17<sup>th</sup> Jan. 2020**

**Technical session – I**

**Keynote Address- Prof. P. K. Bajpai**

*Professor & Head*

*Department of Physics, Guru Ghasidas Central University, Bilaspur (CG)*

Prof. Bajpai is a renowned name in the field of materials science. He has started his academic journey from North Eastern Hill University Shilong later on he joined Guru Ghasidas Vishwavidyalaya in 1996. He has done Ph. D from North Eastern Hill University Shilong in 1988 on the topic “Structural Phase Transition in Improper Ferroelectric Ammonium Sulphate.” The thesis was selected among the seven best thesis by DAE for S.N. Satyamurthy Award. He is member of many national and international Advisory boards also, he has chaired board of studies of many universities. He is a project co-ordinator and centre in-charge of National Centre for Accelerator Based Research- A 3.0 MV Accelerator based Centre for interdisciplinary Research using ion beams.

11 research scholars have successfully completed Ph. D under his esteemed supervision also more 150 dissertations of M. Phil and M.Sc. students are guided by him. He is a peer reviewer of many international indexed journals of Springer, Elsevier, IOP etc. He has published more than 260 research articles in various indexed journals and edited 2 books. His participation and scholarly presentations in conferences is more than 100. Prof. Bajpai has been principal investigator of various Mega, Major and Minor research proposals under the banner of DAE-BRNS, CSIR, DST, UGC, CGCOST etc.

He is a Fellow of International Academy of Physical Sciences; Full Member of American Nano Society and executive editor of Chhattisgarh J. Science & Technology and reviewer of many prestigious Journals, as also the regional Editor of Int. J. Research published from Maxwell Publications. He has delivered more than 50 lectures in various International/ National conferences including more than a dozen key note addresses and chaired technical sessions in seminars. He has organized 28 national Conferences and one International conference.

**Invited Talk – Dr. Sanjib Banerjee**

*Assistant Professor, Indian Institute of Technology Bhilai, India*

*PhD, Indian Association for the Cultivation of Science, India*

*Post-doc, University of Massachusetts Lowell, USA and ENSCM, France*

**Research Interests:** Carbon Capture and Recycling, Nano-engineered Molecular Materials for industrial applications

**Invited Talk – Dr. K. N. Singh**

*Assistant Professor, Department of Physics, School of Science, O P Jindal University, Raigarh (CG)*

*Ph. D in Material Science from Guru Ghasidas Vishwavidyalaya Bilaspur (A Central University)*

**Technical session – II**

**Invited Talk – Prof. Kallol K. Ghosh**

*Professor, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur (CG)*

*Ph. D in Physical Chemistry from Pt. RAVISHANKAR SHUKLA UNIVERSITY, RAIPUR*

**Invited Talk – Dr. Kamlesh Shrivastava**

*Associate Professor, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur*

*Ph. D. in Chemistry, Pt. Ravishankar Shukla University, Raipur, CG*

**Invited Talk – Dr. Manmohan L. Satnami**

*Assistant Professor, School of Studies in Chemistry, Pt. Ravishankar Shukla University, Raipur*

*Ph. D. in Phys. Org. Chemistry (Surface Science), Pt. Ravishankar Shukla University, Raipur, CG*

**Day – 2, 18<sup>th</sup> Jan. 2020**

**Technical session – III**

**Invited Talk – Dr. Ayush Khare**

*Associate Professor & Head, Department of Physics, National Institute of Technical, Raipur*

*Ph. D. in Solid State Physics, Pt. Ravishankar Shukla University, Raipur, CG*

**Invited Talk – Dr. S. K. Rout**

*Associate Professor, Department of Physics, Birla Institute of Technology, Mesra*

*Ph. D. from Department of Physics, National Institute of Technology, Rourkela, Odisha*

**Invited Talk – Prof. H. S. Tewari**

*Associate Professor, Department of Pure & Applied Physics Guru Ghasidas University, Bilaspur*

*Ph. D., Department of Metallurgical Engineering, I. I. T. –BHU, Varanasi*

**Invited Talk – Dr. M. P. Sharma**

*Assistant Professor, Department of Pure & Applied Physics Guru Ghasidas University, Bilaspur*

*Ph. D., Materials Science, Univ. of Rajasthan, Jaipur.*

**Invited Talk – Dr. Goverdhan Reddy Turrupu**

*Assistant Professor, Department of Pure & Applied Physics Guru Ghasidas University, Bilaspur*

*Ph. D., Materials Science, Department of Physics, Osmania University, Hyderabad Telangana*

## **Technical session – IV**

### **Invited Talk – Dr. Tanmaya Badapanda**

*Associate Professor, Department of physics, C. V. Raman College of Engineering, Bhubaneshwar, Odisha*

*Ph. D in Solid State Physics, National Institute of Technology, Rourkela.Odisha*

### **Invited Talk – Prof. Nameeta Brahme**

*Professor, School of Studies in Physics and Astro - Physics, Pt. Ravishankar Shukla University, Raipur (CG)*

*Ph. D in Solid State Physics (Mechanoluminescence), Guru Ghasidas Vishwavidyalaya Bilaspur*

### **Invited Talk – Dr. Pradip Das**

*Assistant Professor, Department of Pure & Applied Physics Guru Ghasidas University, Bilaspur*

*Ph. D.from Department of Physics, Indian Institute of Technology Bombay*

### **Invited Talk – Dr. Shivpoojan Patel**

*Assistant Professor, Department of Pure & Applied Physics Guru Ghasidas University, Bilaspur*

*Ph.D from Inter-University Accelerator Centre, New Delhi*