

## YOUNG SCIENTISTS' COLLOQUIUM YSC 2016



16 September, 2016

Venue: Foyer of Boson and Fermion Lecture Halls, SNBNCBS

## **POSTER SESSION**

| SL. NO. | TITLE                                                                                                                                               | NAME & AFFILIATION                                                                                                                   |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| P1      | Spin-orbital liquid state assisted by singlet-<br>triplet excitation in $J = 0$ ground state of<br>Ba <sub>3</sub> ZnIr <sub>2</sub> O <sub>9</sub> | <b>Abhishek Nag</b><br>Department of Material Science,<br>Indian Association for the Cultivation of<br>Sciences, Kolkata             |
| P2      | Synthesis and biocompatibility study of nano crystalline hydroxyapatite from <i>Mercenaria</i> clam shells                                          | <b>Anindya Pal</b><br>Indian Institute of Engineering Science and<br>Technology, Shibpur, Howrah                                     |
| Р3      | The Structural Properties Based On<br>WO <sub>3</sub> /SiO <sub>2</sub> /p-Si Sensing Element and the<br>Effects of Annealing Temperatures          | <b>Anup Dey</b><br>Jadavpur University, Kolkata                                                                                      |
| P4      | Nano-heterostructures: Interface as a<br>Quantum Device                                                                                             | Arup Chakraborty<br>Department of Solid State Physics, Indian<br>Association for the Cultivation of Science,<br>Kolkata              |
| P5      | Multiferroic studies on geometrically frustrated "114" cobaltites                                                                                   | <b>C. Dhanasekhar</b><br>Department of Physics, Indian Institute of<br>Technology, Kharagpur                                         |
| P6      | Electrochemical Behavior and Mechanical<br>Integrity of Few Layers Graphene upon<br>Lithiation / Delithiation                                       | Farjana J. Sonia<br>Department of Metallurgical Engineering and<br>Materials Science, Indian Institute of<br>Technology (IIT) Bombay |
| Ρ7      | Composite of Colloidal Graphene - Titanium<br>nitride Nanocrystals for Plasmonic, Electrical<br>conductivity and Elctrocatalytic Applications       | <b>G. Shiva Shanker</b><br>Department of Chemistry, IISER - Pune                                                                     |
| P8      | Observation of transient superconductivity at LaAlO <sub>3</sub> /SrTiO <sub>3</sub> interface                                                      | <b>Gopi Nath Daptary</b><br>Department of Physics, Indian Institute of<br>Science, Bangalore                                         |
| P9      | Colloidal, Ligand-free semiconductor<br>nanocrystals for optoelectronics                                                                            | Metikoti Jagadeeswararao<br>Department of Chemistry, IISER-Pune                                                                      |
| P10     | Strength-toughness optimization by<br>incorporating functionalized metal oxides<br>within jute polyester composites                                 | Jaideep Adhikari<br>Indian Institute of Engineering Science and<br>Technology, Shibpur, Howrah                                       |

| SL. NO. | TITLE                                                                                                                                                                                                          | NAME & AFFILIATION                                                                                                            |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| P11     | Theoretical and experimental investigations<br>on surface plasmon resonance assisted<br>interferometric fringe modulation under both<br>radial and lateral shearing environment with<br>application in sensing | <b>Jayeta Banerjee</b><br>University of Calcutta, Kolkata                                                                     |
| P12     | Defect mediated n-type behaviour of<br>unintentionally doped ZnO nanorods:<br>correlating defects, emission spectra,<br>morphology and conductivity                                                            | <b>K. Bandopadhyay</b><br>Indian Institute of Science Education and<br>Research, Thiruvananthapuram                           |
| P13     | Tuning of Edge and Surface Energy of TiO <sub>2</sub><br>Nanotubes via Partial Rupture by Controlling<br>Anodization Voltage for Gas Sensor Device<br>Applications                                             | <b>Koushik Dutta</b><br>Indian Institute of Engineering Science and<br>Technology, Shibpur, Howrah                            |
| P14     | Functionalized Nanocomposite Cathode to<br>Enhance the Stability of Solid Oxide Fuel Cell<br>Performance                                                                                                       | Koyel Banerjee (Ghosh)<br>CSIR-Central Glass and Ceramic Research<br>Institute, Kolkata                                       |
| P15     | A study of inorganic metal halide perovskites<br>and their application in opto-electronic<br>devices                                                                                                           | <b>Lekha Peedikakkandy</b><br>Centre for Research in Nanotechnology and<br>Science, IIT Bombay                                |
| P16     | Low field magnetoresistance of<br>polycrystalline Gadolinium for different<br>spatial dimensions (Bulk, Film and Nanowire)                                                                                     | Manotosh Chakravorty<br>S. N. Bose National Centre for Basic<br>Sciences, Kolkata                                             |
| P17     | Visible Light Activity and Thermoelectric<br>Performance of Aluminium Doped Zinc Oxide<br>/ Polyaniline (AZP) Hybrid                                                                                           | <b>Mousumi Mitra</b><br>Department of Physics, Indian Institute of<br>Engineering Science and Technology,<br>Shibpur, Howrah  |
| P18     | First-principles Design of 2D Nanostructures<br>for Efficient Storage of Hydrogen and Fuel<br>Cell Catalysis                                                                                                   | <b>Paramita Banerjee</b><br>Department of Materials Science, Indian<br>Association for the Cultivation of Science,<br>Kolkata |
| P19     | Artificial Leaf as Future Energy Harvesting<br>Tool                                                                                                                                                            | <b>Priyam Mitra</b><br>Dept. of Chemical Engineering, Haldia<br>Institute of Technology, Purba Medinipur                      |
| P20     | Protein induced structural modulation in phospholipid model membranes: An x-ray scattering study                                                                                                               | <b>R P Giri</b><br>Saha Institute of Nuclear Physics, Kolkata                                                                 |
| P21     | Pd/RGO/TiO₂ Nanotube Ternary Hybrid<br>Structure as a Novel Gas Sensor Device                                                                                                                                  | Sanghamitra Ghosal<br>Indian Institute of Engineering Science and<br>Technology, Howrah                                       |
| P22     | Reduced Band-gap Ferroelectric Materials for<br>Photovoltaic Application                                                                                                                                       | Shyamashis Das<br>Indian Institute of Science, Bangalore                                                                      |

| SL. NO. | TITLE                                                                                                                       | NAME & AFFILIATION                                                                           |
|---------|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| P23     | Photo-voltaic and catalytic Performance of Anatase TiO <sub>2</sub> Nanocubes with Coexposed $\{101\}$ and $\{001\}$ facets | <b>Soumita Mukhopadhyay</b><br>CSIR-Central Glass and Ceramic Research<br>Institute, Kolkata |
| P24     | Low Threshold Quantum Dot Lasers                                                                                            | Veena Hariharan lyer<br>Indian Institute of Science, Bangalore                               |
|         |                                                                                                                             |                                                                                              |

(Abstracts available at <a href="http://newweb.bose.res.in/Conferences/YSC2016/">http://newweb.bose.res.in/Conferences/YSC2016/</a>)