

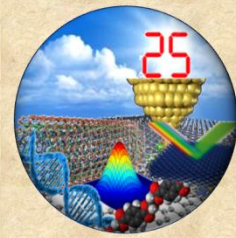


## 25<sup>th</sup> National Conference on Condensed Matter Physics

### Condensed Matter Days-2017

(CMDAYS17)

29-31 August 2017



Organized by Department of Physics, Tezpur University, Napaam, Tezpur- 784028, Assam

#### List of papers to be presented in CMDAYS-2017

Category: **Oral** (Duration = 12+3=15 mins)

Sl. No.	Presenter's name	Affiliation	Title of paper	Mode of presentation
1	Shahbaz Alam	Aliah University, Kolkata	The surface morphology and optical properties of amorphous diamond like carbon prepared from sucrose	Oral
2	Sashi S. Behera	Berhampur University, Odisha	Carrier-induced magnetism in diluted magnetic tin telluride	Oral (Special Session)
3	Tarun K. Dey	B.R.A Bihar University, Muzaffarpur	Study of thermophysical properties of nanofluid systems database	Oral
4	Abu M. P. Hussain	Cotton University, Assam	Shell thickness dependent structural and optical properties of lattice matched HgTe/CdTe core/shell structure	Oral
5	Saumen Acharjee	Dibrugarh University, Assam	Effect of magnetic field on magnetization reversal and switching time of a current biased F S F spin valve system	Oral
6	Ali Akbar	Gauhati University, Assam	Effect of cadmium (Cd) source concentration on structural and optical properties of polyaniline (PANI)-cadmium sulphide (CdS) composite	Oral
7	Biswajit Choudhury	IASST, Assam	Blue emission from graphitic carbon nitride nanosheet	Oral
8	Ujjal Saikia	IASST, Assam	Point defect energetics and their interaction in fcc/bcc semi-coherent metallic interfaces	Oral

9	Anup Pattanaik	IGIT, Sarang, Odisha	Different physical parameters of compound semiconductors from refractive index	Oral
10	Pallabi Kundu	IIT Dhanbad	Integral equation theory for a system of 2-D Gay-Berne liquid crystals	Oral
11	Vipul Sharma	IIT Mandi	Real time monitoring of photocatalytic organic transformations on biomimetic substrates using surface enhanced Raman spectroscopy	Oral
12	Suneel Kumar	IIT Mandi	N-ZnO nanosheets loaded over g-C <sub>3</sub> N <sub>4</sub> nanosheets to form highly Efficient 2D-2D heterojunctions with enhanced visible light activity for removal of diverse industrial pollutants	Oral
13	Rajkumar Modak	IIT Guwahati	Annealing temperature dependent structural transition and associated magnetic properties of Fe substituted thin films of Ni-Mn-In alloy	Oral
14	Pratap Behera	IIT Guwahati	Structural, dielectric and magnetic studies of Zn doped Y-type hexaferrite	Oral
15	Ganesh C. Paul	IOP Bhubaneswar	Adiabatic quantum transport through superconducting hybrid junctions of Silicene	Oral
16	K. Chakraborty	Jadavpur University, Kolkata	Influence of single walled carbon nano tubes (SWCNT) on series resistance of Rose Bengal and Methyl Red dye based organic photovoltaic cell	Oral
17	Shantanu Roy	Jadavpur University, Kolkata	Schottky specific heat and nuclear hyperfine properties of TmF <sub>3</sub>	Oral
18	Ritika Bashistha	Kaziranga University, Assam	An alternative to liquid electrolytes in PV cells by solid polymer electrolytes and hence measuring the fill factors and efficiencies of the PV cell	Oral
19	S. Dorendrajit Singh	Manipur University, Imphal	Effect of heating rate on the Thermoluminescence (TL) properties of the $\beta$ -irradiated Li <sub>2</sub> B <sub>4</sub> O <sub>7</sub> :Ag nanoparticles	Oral

20	Laihnuna	Mizoram University, Aizawl	Optical and transport properties of III-V binary compound semiconductors	Oral
21	Himanshu Joshi	Mizoram University, Aizawl	Thermoelectric properties of tetragonal Half-Heusler compound HfGeSb: A probe from Density Functional Theory (DFT)	Oral
22	B. R. K. L. Lyngdoh Mawphlang	NEHU, Shillong	Differential transform study of cantilevered carbon nanotube based on nonlocal model	Oral
23	L. Robindro Singh	NEHU, Shillong	Preparation of highly luminescence of $Ba_{1-x}Y_xSO_4$ : Eu nanoparticles a new class of material	Oral
24	Ivan Skhem Sawkmie	NEHU, Shillong	The two dynamical states in sinusoidal potentials: an analog simulation experiment	Oral
25	Th. Gomti Devi	NERIST, Arunachal Pradesh	Development of different substrates for SERS measurement of L-proline molecule	Oral
26	Ramanuj Mishra	NERIST, Arunachal Pradesh	Effect of gold nano-particles on dielectric properties of 4-N-Hexyloxy-4'-Cyanobiphenyl (6OCB)	Oral
27	Susmita Roy	SINP, Kolkata	Giant low- field magnetocaloric effect in single crystalline $EuTi_{0.85}Nb_{0.15}O_3$	Oral
28	Arnab Pariari	SINP, Kolkata	Prominent metallic surface conduction and the singular magnetic response of topological Dirac fermion in three-dimensional topological insulator $Bi_{1.5}Sb_{0.5}Te_{1.7}Se_{1.3}$	Oral (Special Session)
29	Pranjal K. Gogoi	NUS, Singapore	Oxygen passivation mediated tunability of trion and excitons in $MoS_2$	Oral
30	S. Kundu	TIFR, Mumbai	Role of exchange splitting in electronic phase competition in $Pb_{1-x}Sn_xTe$	Oral
31	Manish Debbarma	Tripura University, Agartala	Effects of doping of mercury (Hg) atom(s) on structural, electronic and optical properties of binary zinc chalcogenides- a DFT based theoretical investigation	Oral



32	Somnath Chowdhury	Visva-Bharati, WB	Experimental and theoretical investigation of charge transfer complex between Zinc tetraphenylporphyrin and some aromatic solvents	Oral
33	Subhankar Ghosh	St. Xavier's College, Kolkata	Nanorods-rich copper zinc tin sulphide (CZTS) grown by chemical route	Oral
34	Deep Kumar Kuri	TU, Tezpur	Energetic proton generation from intense laser-plasma interactions	Oral
35	Dimpi Paul	TU, Tezpur	PCFPS and PCFPA: computational tools for study and analyze modal parameter of photonic crystal fiber incorporated with GUI on different material domain	Oral
36	Homen Lahan	TU, Tezpur	TiO <sub>2</sub> nanospheres anatase phase: a new class of anode material for aqueous aluminium-ion batteries	Oral
37	Rajiv Borah	TU, Tezpur	Electrospun MEH-PPV:PCL nanofibers for enhanced cell behaviour and electrical stimulation of PC12 cells	Oral
38	Anindita Bora	TU, Tezpur	Carbon black/polyaniline nanotube composite as electro-catalyst for triiodide reduction in dye sensitized solar cells	Oral
39	P. Mandal	SINP, Kolkata	Topological materials: A new concept in condensed matter Physics	Oral (Special Session)
40	Manjit Borah	TU, Tezpur	Electron paramagnetic resonance (EPR) and ferroelectric behaviour of rare earth- doped barium titanate nanosystems	Oral

**Category: Poster (Size of the poster width: 80 cm × length: 110 cm)**

Sl. No.	Presenter's name	Affiliation	Title of paper	Mode of presentation
1	P.K. Choudhary	R.D.S. College B.R.A.Bihar University	Thermodynamic properties of homogenous associating molecular fluids	Poster
2	Sukhdeo Singh	N.N.College, Singhara (Vaishali) B.R.A.Bihar University	Theoretical Study of the input /output characteristics of coherent photon transport in a semiconductor wave guide cavity system with a quantum dot	Poster
3	Somnath Bhattacharya	Barasat Govt. College, Kolkata	Estimate of time-scales in the current relaxation for percolative RRTN model	Poster
4	S. K. Shadangi	Berhampur University, Berhampur	Effective mass representation in the presence of spin-orbit interaction and magnetic field : Application to w-GaN	Poster
5	Dipen Basumatary	Bodoland University	Synthesis and characterization of pristine and Ag deposited ZnO nanoparticles and investigation of their carrier transference due to LSPR	Poster
6	D. Das	Cotton University	Effect of CdS shell thickness on PbS/CdS core/shell nanoparticles and its applications	Poster
7	Arindam Boruah	Dibrugarh University	Effect of silver nanoparticles on the photoluminescence behavior of Rhodamine-B	Poster
8	Bishwajit Boruah	Dibrugarh University	A theoretical study of H <sub>2</sub> adsorption on transition metal doped Al clusters: a first principle DFT study	Poster
9	Dibyajyoti Kakoti	Dibrugarh University	ZnS enhanced photoluminescence from Sm <sup>3+</sup> ions in sol-gel silica glass	Poster

10	Lipika Gogoi	Dibrugarh University	Optical properties of nanocrystalline $\text{Cd}_{1-x}\text{Zn}_x\text{S}$ thin films prepared by chemical bath deposition technique	Poster
11	Nibedita Dehingia	Dibrugarh University	Nanosilver induced photoluminescence in $\text{Sm}^{3+}$ doped sol-gel silica glasses	Poster
12	P. J. Dihingia	Dibru College, Dibrugarh	Structural characterization of $\text{TiO}_2$ nanoparticles prepared in-situ in $\text{SiO}_2$ gel matrix	Poster
13	Anup K. Kalita	Gauhati University	Synthesis and characterization of undoped ZnO thin film nanoparticles	Poster
14	Chandrama Kalita	Gauhati University, Guwahati	Study of variation of structural and optical properties of copper oxide nanoparticles synthesized by sol-gel method	Poster
15	Pradhyut Rajkumar	Gauhati University, Guwahati	Understanding the exciton-plasmon interaction in magnetron sputtered Ag/ZnO heterostructure	Poster
16	Pritisha Dakuwa	Gauhati University, Guwahati	Synthesis and study of nanocrystalline CdS particle with annealing temperature	Poster
17	Samarjit Sarmah	Gauhati University, Guwahati	Photo sensing by MSM heterostructure constructed from CdS nanoparticle passivated porous silicon	Poster
18	Geetanjali Purohit	Sambalpur University, Odisha	Magnetic field dependence of heat capacity in single crystal $\text{BaKFe}_2\text{As}_2$ superconductor	Poster
19	Anupam Kumar	IIT Dhanbad	Density functional theory of a system with tunable soft interaction	Poster
20	Biplab Kumar Mandal	IIT Dhanbad	Freezing transitions in a two-dimensional microgel system	Poster
21	Kumbam Lingeshwar Reddy	IIT Mandi	Enhancement of luminescence intensity in red emitting $\text{NaYF}_4:\text{Yb}/\text{Ho}/\text{Mn}$ upconversion nanophosphors by variation of reaction parameters	Poster



22	Rituporn Gogoi	IIT Mandi	Pristine graphene - copper (II) oxide nanocomposite: a novel green heterogeneous catalyst for 'Click' chemistry	Poster
23	Rupam Borah	IIT Roorkee	Dynamical heterogeneities in unentangled polymer melts	Poster
24	Aakansha	IIT Guwahati	study of structural and magnetic properties of $Y_3Fe_{5-x}Cr_xO_{12}$	Poster
25	Anabil Gayen	IIT Guwahati	Tuning magnetic properties of thick CoFeB films by interlayer coupling through simple trilayer structure	Poster
26	Aneeta Manjari Padhan	IIT Guwahati	Mechanically activated magnesiothermic reduction reaction and magnetic properties of NiO nanoparticles	Poster
27	Bibhuti Dash	IIT Guwahati	Sign reversal of exchange bias in $GdCr_{1-x}Mn_xO_3$	Poster
28	Camelia Das	IIT Guwahati	Thickness dependent magnetic properties in FeTaC single layer films and the role of $SiO_2$ spacer layer on interlayer magnetic coupling between FeTaC layers in multilayer films	Poster
29	Dolly Taparia	IIT Guwahati	Effect of oxidation on structural, magnetic and vibrational properties of sputtered iron thin films	Poster
30	Sanat Karmakar	Jadavpur University, Kolkata	Identification of lipid type in bio-membranes using spectroscopic properties of lipophilic dye Nile red: effect of cholesterol	Poster
31	S. Mollah	Jadavpur University, Kolkata	Bond angle disorder induced suppression of transition in $REBa_2Cu_3O_{7-y}$	Poster
32	S. Roy	Jadavpur University, Kolkata	Numerical studies on field profile in disordered pnictide superconductor	Poster
33	S. Haldar	Jadavpur University, Kolkata	Nonlinear current-voltage characteristic and impact of sweeping rate variation in $Gd_{1-x}Ce_xBa_2Cu_3O_{6.9}$	Poster

34	S. Bhunia	Jadavpur University, Kolkata	Dependence of trap energy on the incident intensity of light of methylene blue (MB) dye based photovoltaic devices	Poster
35	Dhrubajyoti Saikia	J.B. College, Jorhat	Improve performance of bottom emitting organic light emitting diode using rubrene interlayer between electrode and organic interface	Poster
36	Priyanka Das	DCB Girls' college, Jorhat	Protein quantification through colorimetric digitization technique	Poster
37	Amrit Dutta	Kaziranga University	Fabrication and measurement characteristics of dye sensitized solar cell using dye extracted from giant exhibition Palisandra leaves	Poster
38	Sandeepan Borah	Kaziranga University	Synthesis and characterization of sweet potato starch based biodegradable bamboo - polymer composite	Poster
39	K. Neupane	Mizoram University	Study of structural, electronic and optical properties of fluoride perovskite CsCaF <sub>3</sub> using FP-LAPW method	Poster
40	Lalhriatpuia Hnamte	Mizoram University	Study of electronic and magnetic properties of Vanadium-based double perovskite oxide: Ba <sub>2</sub> VNbO <sub>6</sub>	Poster
41	Mary Lalchhuanawmi	Mizoram University	Calculation of the Band Splitting Energy of Ternary Nitride Compounds using modified Becke-Johnson potential	Poster
42	U. Khan	Mizoram University	Structural and optical studies of Eu <sup>3+</sup> ions embedded TiO <sub>2</sub> nanoparticles in silica glasses	Poster
43	L. Bokatial	North Lakhimpur College, Assam	Energy transfer between Tb <sup>3+</sup> and Sm <sup>3+</sup> in CdS nanoparticles doped sol-gel silica glasses	Poster
44	Wellstandfree K Bani	NEHU, Shillong	Experimental study of instability of water jets	Poster



45	K. Bhuyan	<b>NERIST, Arunachal Pradesh</b>	Study of sensing of ammonia by tin oxide nano particles with raman spectroscopy at room temperature	Poster
46	Binod Gogoi	<b>NERIST, Arunachal Pradesh</b>	Temperature and frequency dependent dielectric spectroscopy of SNP dispersed 60.6	Poster
47	Diptimayee Tripathy	<b>NERIST, Arunachal Pradesh</b>	Phase stability and ionic conductivity of bitivox	Poster
48	U. P. Gogoi	<b>NERIST, Arunachal Pradesh</b>	Liquid crystal polymer based microstrip patch antenna for x-band applications	Poster
49	Nakul Chhetri	<b>University of North Bengal, Siliguri</b>	Electronic and optical properties of green energy material $\text{CuXS}_2$ (X=Al, Ga, In)	Poster
50	Prabhanjan Mallick	<b>North Orissa University, Odisha</b>	Evolution of surface topography and optical band gap of ZnO film deposited on NiO/Si(100)	Poster
51	Vishal Sharma	<b>Panjab University</b>	Harsh electronics using nitride based wide band gap semiconducting materials	Poster
52	Sanjib Bhattacharya	<b>Siliguri Institute of Technology, Darjeeling</b>	Development of research on glassy nanocomposites: from ionic to chalcogenide glassy alloys	Poster
53	Keshab Chandra Shadangi	<b>Sri Bharat Pati Mahavidyalaya, Samantiapalli, Odisha</b>	Microscopic theory of raman spectra in heavy Fermion systems in Kondo - lattice Model	Poster
54	Paragjyoti Gogoi	<b>Sibsagar College, Shivsagar, Assam</b>	Top gate ZnO – $\text{La}_2\text{O}_3$ thin film transistors fabricated by sol-gel dip coating method	Poster
55	Moumita Das	<b>SINP, Kolkata</b>	Magnetic and magnetocaloric properties of $\text{GdFeO}_3$ single crystal	Poster
56	Ratnadwip Singha	<b>SINP, Kolkata</b>	Single crystal growth and magnetotransport properties of new topological Dirac semimetal ZrSiS	Poster (Special Session)

57	Sanjukta Paul	SINP, Kolkata	Giant magnetoelectric effect in pure manganite-manganite heterostructures	Poster
58	S. K. Chakrabarti	Tribhuvan University, Nepal	Entropy of mixing of lithium-lead liquid alloy as studied by different models	Poster
59	Bimal Debnath	Tripura University, Agartala	DFT based theoretical investigation of modification of optoelectronic properties of binary barium chalcogenides by means of doping of calcium atom(s)	Poster
60	Rahul Bhattacharjee	Tripura University, Agartala	Tuning of band gap and optoelectronics properties of binary lead chalcogenides by means of doping of strontium atom(s) – a theoretical initiative using DFT based FP-LAPW approach	Poster
61	Amrita Deka	Tezpur University	Evaluation of different surfactant coated MnSe nanoparticles fabricated via hydrothermal route	Poster
62	Arati Sharma	Tezpur University	Acetylcholinesterase biosensor based on multi component nanohybrid of polypyrrole, nafion and multiwall carbon nanotubes for detection of organophosphate and carbamate pesticides	Poster
63	Bhagyalakhi Baruah	Tezpur University	Synthesis and characterization of rgo/ PEDOT:PSS nanocomposite based electrocatalyst for methanol oxidation	Poster
64	Bijoy Sankar Boruah	Tezpur University	Assessing optical absorption properties of silver nanoparticles under various pH and its implications	Poster
65	Biraj Das	Tezpur University	Formation of fractal to monolayer growth of AgCl and Ag/AgCl nanoparticle on vanadium oxides (VOx)	Poster
66	Dunasmitha Gogoi	Tezpur University	Production of high quality biooil using ceria nanoparticles	Poster

67	Jayashree Nath	Tezpur University	Synthesis of carboxymethyl cellulose-g-poly(acrylic acid)/LDH hydrogel for the <i>In Vitro</i> controlled release of vitamin B <sub>12</sub>	Poster
68	Junali Handique	Tezpur University	Synthesis of some self-healing polymer-graphene composites by atom transfer radical polymerization	Poster
69	Kashmiri Deka	Tezpur University	Cobalt based nanoparticles as biocompatible MRI contrast agent	Poster
70	Kiranjyoti Mohan	Tezpur University	An efficient and stable quasi solid state dye sensitized solar cell based on polymethyl methacrylate (PMMA)/carbon black (CB) polymer gel electrolyte with improved open circuit voltage	Poster
71	Lakhi Chetia	Tezpur University	Biogenic synthesis of silver nanoparticles using diatom for ammonia sensing	Poster
72	Madhabi Devi	Tezpur University	Swift heavy ion irradiation induced changes in morphological, structural and thermal properties of reduced graphene oxide-polypyrrole nanotubes nanocomposites	Poster
73	Manash Jyoti Borah	Tezpur University	Biodiesel production from waste cooking oil catalyzed by MgO/ZnO nanocatalyst	Poster
74	Meenakshi Boro	Tezpur University	Synthesis and characterization of ZnS nano particle	Poster
75	Rewrewa Narzary	Tezpur University	Design and Simulation of micro-heater on Si/SiO <sub>2</sub> substrate for gas sensing application	Poster
76	Rituraj Dutta	Tezpur University	Charge carrier relaxation dynamics and AC conductivity scaling of metal organic framework (Ni-MOF) based polymer electrolyte nanocomposites incorporated with ionic liquid	Poster
77	Saurabh J Hazarika	Tezpur University	Synthesis, characterization and photocatalytic study of WS <sub>2</sub> nanosheets	Poster

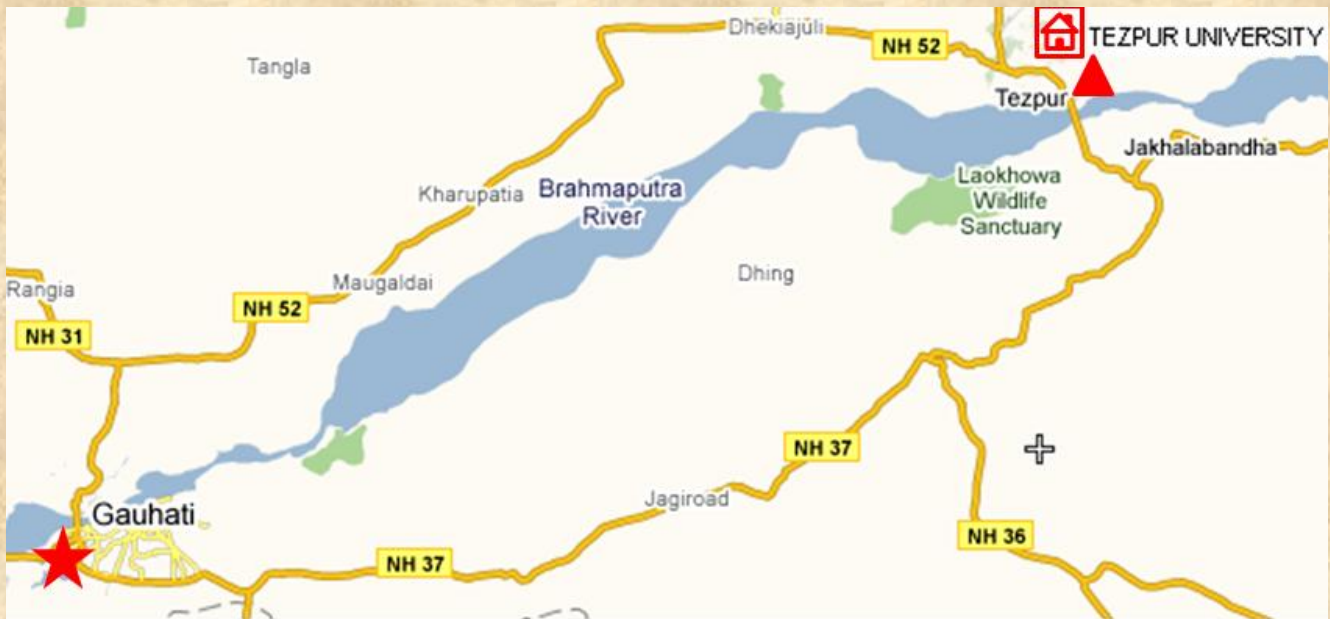


78	R. Khanam	Tezpur University	Effect of 100 keV Au <sup>+</sup> ion irradiation on titania nanosheets	Poster
79	Rohaam Deb and Pralay Kumar Karmakar	Amity University and Tezpur University	A new equation of state for stellar structures	Poster
80	Samiran Hazarika	Tezpur University	Synthesis, characterization and biophysical aspect of nanoscale gadolinium oxide (Gd <sub>2</sub> O <sub>3</sub> )	Poster
81	Simanta Doley	Tezpur University	Development of sunflower oil based polyurethane through non-isocyanate routes: an eco-friendly approach	Poster
82	Sushant Kumar Behera	Tezpur University	Electric field driven non-trivial topological insulating phases in van der Waals heterostructure	Poster
83	Swati Nawami Aideo	Tezpur University	Assessment of wettability and reflectance properties in four varieties of butterflies	Poster
84	Homnath Luitel	VECC, Kolkata	Room temperature ferromagnetism in p block element doped ZnO	Poster
85	Bikash C. Gupta	Visva-Bharati, Santiniketan	Zigzag CdS nanotubes: A density functional study	Poster
86	Rajib Mahanta	Dibru College, Dibrugarh	Study of the Christiansen Effect with Glass power and liquids combination using He-Ne laser	Poster
87	P.G. Reddy	IIT Mandi	Polyarylenesulfonium salt as a novel and versatile non-chemically amplified negative tone photoresist for high resolution EUV lithography applications	Poster
88	Sujata Tongbram	Assam University, Assam	Synthesis and characterization of SrAl <sub>2</sub> O <sub>4</sub> :Dy <sup>3+</sup> phosphors	Poster
87	Abhinab J. Borah	Dibrugarh University, Assam	Scavenging of Hg <sup>2+</sup> from Hg <sup>2+</sup> bound thymine metallobase complexes by neutral, cationic and anionic a Au atoms: a first principle study	Poster

89	Bikash Sarma	<b>Gauhati University, Assam</b>	Effect of deposition power and annealing time on the microstructural and optical properties of ZnO thin films used as the bottom layer of multilayer transparent conductors	Poster
90	Ashim C. Bhowal	<b>IASST, Assam</b>	Studies on optical and electrical behaviours of PEDOT: PSS thin films in presence of charged gold nanoparticles	Poster
91	Bhargab Deka	<b>IIIT, Imphal</b>	Structural and magnetic properties of inverse Heusler alloys: $Mn_2CoAl$ and $Ti_2MnAl$	Poster
92	Sk Noor Nabi	<b>IIT Guwahati</b>	Study of synthetic versus external magnetic field on a spin-1 ultracold Bose gas	Poster
93	S. Sen	<b>Jadavpur University, Kolkata</b>	Effect of single walled carbon nanotubes (SWCNTs) on the band bending of Rose Bengal (RB) dye based photovoltaic devices	Poster
94	Mahesh Ram	<b>NEHU, Shillong</b>	A first principle study of electronic and magnetic properties of Full-Heusler alloy $Mn_2ZnSi$	Poster
95	Mukesh Sharma	<b>Tezpur University</b>	Highly active Pd-NiO nanocatalyst over zeolite-Y <i>via</i> a post synthetic approach	Poster
96	D. Siboh	<b>Rajiv Gandhi University, Arunachal Pradesh</b>	Quantum confinement induced shift in energy band gap and mapping of electron-hole probability distribution within spherical quantum dot	Poster

- No separate letter of acceptance will be sent unless request is made on or before 10<sup>th</sup> August 2017.
- All the selected participants are requested to send the scanned copy of the duly filled in registration form to [cmdays2017@gmail.com](mailto:cmdays2017@gmail.com) on or before 10<sup>th</sup> August 2017.
- Accommodation related information will appear after receiving registration form.
- Registration fee is to be collected by cash only at the registration desk.
- The list of invited talks, information related to accommodation along with the programme schedule of the event will be displayed on the university website [www.tezu.ernet.in](http://www.tezu.ernet.in) on 20<sup>th</sup> August 2017
- Tezpur University is a no-smoking, polythene free ecofriendly zone.

# Guide map to reach Tezpur University



The university is located about 15 km away from the Tezpur city, the headquarters of the Sonitpur district of Assam. It can be reached by road from Guwahati, the capital city of Assam and gate way to the North East. Tezpur is connected by road to Guwahati via NH 52 (presently NH 15) and NH 37. Guwahati is very well connected to the rest of the country by air and train. The participants can also opt for the Kolkata-Tezpur Allied Airlines flight which operates thrice a week via Guwahati.