

# Sustainable Science and Technology

## Index of papers presented in North-East Research Conclave and Assam Biotech Conclave 2022

(Editor-in-Chief: Prof. Uday Shanker Dixit; Assisting Team: Mr. Faladrum Sharma and Mr. Kaustabh Chatterjee)

### Division 1: Advanced Functional Materials

(Editors: Prof. Gopal Das, Prof. L.M. Kundu and Dr. Uttam Manna)

#### Oral Presentations

Sl. No.	Abstract No.	Abstract Title	Authors
1	0325U0023	Structural, dielectric and electrical properties of 'Ca' modified $\text{BaFe}_{1/2}\text{Nb}_{1/2}\text{O}_3$ complex perovskite	Rimpi Chakravarty, Nabasmita Saikia, R. K. Parida, B. N. Parida
2	0325U0030	Controlling the lifetime of cucurbit [8] uril based self-abolishing nanozymes	Saurav Das, Tanushree Das, Priyam Das, Debapratim Das
3	0325U0034	Ratiometric detection of $\text{Zn}^{2+}$ and $\text{Cd}^{2+}$ ions by a benzobisimidazole based probe in triple solvent systems	Araghni Bhattacharya, Vadivelu Manivannan
4	0325U0068	Silk film for developing a colorimetric $\mu\text{PAD}$ methanol biosensor	Phurpa Dema Thungon, Vinay Bachu, Pooja Rani Kuri, Pranab Goswami
5	0325U0080	Bio-modified magnetic nanoparticles as a tool for water purification	Goutam Biswas
6	0329U0132	Metal Oxide Based Electrochemical Nitric Oxide Sensors for Biomedical and Environmental Monitoring Application	Dulal Chandra Patra, Suvra Prakash Mondal
7	0330U0145	Investigating White Light Emission from a $\text{Y}_2\text{O}_3:\text{Eu}^{3+}$ matrix with $\text{Bi}^{3+}$ ion incorporation: Structural and Luminescence Performance for WLEDs	Laishram Robindro Singh, Sanjeeb Limbu
8	0402U0233	Highly Efficient Purely Organic Triplet Harvesting AIE Photosensitizer for Image-guided Photodynamic Therapy	Debasish Barman, Anil. P. Bidkar, P. Rajamalli, Eli Zysman-Colman, S. S. Ghosh, P. K. Iyer
9	0404U0252	Bio-inspired synthesis of flavonoids incorporated $\text{CaCO}_3$ : Influence on the phase, morphology and mechanical strength of the composites	Debojit Paul, Gopal Das
10	0404U0290	Dually Reactive Multilayer Coatings Enable Independent Functionalization of Underwater Superoleophobicity and Oil Adhesion	Angana Borbora, Robert L. Dupont, Yang Xu, Xiaoguang Wang, Uttam Manna
11	0405U0434	A Self-Cleaning Hydrophobic MOF Based Composite for Highly Efficient and	Subhrajyoti Ghosh, Abhijeet Rana, Saurav Kumar, Chiranjib

		Recyclable Separation of Oil from Water and Emulsion	Gogoi, Srijan Mukherjee, Uttam Manna, Shyam Biswas
12	0406U0443	Synthesis of Low Cost Polymer Based Nanocomposite and Its Application in Environmental Pollution Control	Md Dilwar Alam Khan
13	0420U1485	A simple chemically modified cloth mask with potential efficiency against COVID-19 infections	Prerona Gogoi, Arun Chattopadhyay, Partho Sarathi Gooh Pattader
14	0420U1499	Surface-Functionalized, Dextran-Capped Mesoporous Silica Nanoparticles for Glucose-Sensitive Delivery of Vitamin K to Alleviate Hyperglycemia	Sanjib Sarkar, Sawlang Borsingh Wann, Jatin Kalita, Prasenjit Manna
15	0425U1773	Synthesis And Characterization of Two Unknown Cu (II) Complexes: Single Crystal Structure Determination and Catalytic Study	Aieshri Swargiary, Somali Mukherjee, Pranjal Kalita, Arunendu Monda

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0323U0011	A Time-Resolved Area Normalized Emission Spectral Investigation of ESPT Dynamics in Micellar-Polycationic Molecular Interface: A Model Drug Delivery- Drug Sequestration Approach	Tapas Pal, Kalyanasis Sahu
2	0324U0013	Low-Cost Biomodified Magnetite Nanoparticles for the Removal of Methylene Blue and Pb (II) ion from Simulated Wastewater	Chanchal Das, Goutam Biswas, Snehasis Bhakta
3	0324U0016	Improvement in Multifunctional Features of BFO solid solution due to Addition of MgTiO <sub>3</sub>	Santanu Sen, R. K. Parida, N. Parida
4	0324U0017	Investigation of electrical impedance and leakage current of multifunctional solid solution of BiFeO <sub>3</sub> -BaTiO <sub>3</sub> (BFO-BTO)	F. Brahma, S. Bhattacharjee, B. Mohanty, R. L. Hota, B. N. Parida
5	0325U0024	Surface-Imprinted Nanoparticles for Small Molecule Detection	Snehasis Bhakta
6	0325U0026	The Effects of a Short Self-Assembling Peptide on the Physical and Biological Properties of Biopolymer Hydrogels	Sumit Chowdhuri, Moumita Ghosh, Lihi Adler-Abramovich, Debapratim Das
7	0325U0029	Synthesis of Amine-Functionalized Carbon Dots from Biotin-Modified Chitosan and Silk-Fibroin Blend for Targeted Delivery of Anticancer Drugs	Himadree Das, Himali Horo, L.M. Kundu
8	0325U0074	Conjugated Polymer Based Platform for Ultra-Sensitive and Selective Detection of Nitroexplosive – TNT	Retwik Parui, Arvin Sain Tanwar, Rabindranath Garai, Moirangthem Anita Chanu, Parameswar K. Iyer,
9	0404U0248	Synthesis, Single-Crystal XRD, spectral and computational analysis of 2-(3,4-dimethoxyphenyl)-1H-phenanthro[9,10-d]	Peter Solo, M. Arockia doss

		imidazole as Electron-transport and NLO material	
10	0404U0253	Application of Urea and Thiourea Based Anion Receptors	Oiyao Appun Pegu, Gopal Das
11	0404U0256	Self-assembly of low molecular weight compounds and sensing of biologically and environmentally important analytes	Rubi Moral, Gopal Den
12	0404U0270	Functionalized silk-coated chitosan nanoparticles and beads for targeted drug delivery	Pallabi Paul, Lal Mohan Kundu.
13	0404U0311	Highly Sensitive Detection of Trace Tetracycline in Water by AIE luminogen probe	Megha Basak, Gopal Das
14	0405U0317	Study on Microwave Dielectric and Temperature-Dependent Dielectric properties of Additive (CaZrO <sub>3</sub> and Y <sub>2</sub> O <sub>3</sub> ) AlN Ceramics for RF-window and electronic	E. Radhika, D. Pamu
15	0405U0332	Effects of Heterocyclic Ring Fusion and Chain Elongation on Chiroptical Properties of Polyaza[9]helicene: A Computational Study	Bishwanath Mahato, Aditya N. Panda
16	0405U0344	Mixed Matrix Membrane for Separation of CO <sub>2</sub> from CO <sub>2</sub> /N <sub>2</sub> mixture	Shubham Kumar, Aviti Katare, Bishnupada Mandal
17	0405U0405	Electrical and Ferroelectric Features of Mechanothermally Synthesized Multi-Doped BiFeO <sub>3</sub>	Nripesh Kumar, Sushil Joshi, Alok Shukla
18	0405U0416	Interfacial Interaction study of Adsorbate CuPc with Ferroelectric Polymer Substrates	Dhrubojyoti Roy, Sumona Sinha, Manabendra Mukherjee
19	0406U0461	An insight into the adsorptive elimination of Sulfamethoxazole by polypyrrole complexed carbon from aqueous setups under simulated conditions	Chandi Patra, Selvaraju Narayanasamy
20	0407U0483	Rapid recognition of fatal cyanide in water in a wide pH range by a trifluoroacetamido based metal-organic framework	Abhijeet Rana, Chiranjib Gogoi, Subhrajyoti Ghosh, Soutick Nandi, Saurav Kumar, Uttam Manna and Shyam Biswas
21	0408U0492	Investigation of the Role of Chirality on Supramolecular Self Assemblies of Dipeptides	Sayanta Roy, Bhubaneswar Mandal
22	0408U0496	Comparative study of effects of amine-conjugated-chitosan and amine-blended-chitosan on CO <sub>2</sub> /N <sub>2</sub> Gas permeation	Aviti Katare, Shubham Kumar, BP Mandal
23	0411U0653	Hierarchical Graphite Oxide Decorated MOFs for Adsorption of Fluoride with Synergistic Effect of Ultrasonication	Sikha, Bishnupada Mandal
24	0411U0654	Influence of the precursor functional groups and synthesis methods on the intrinsic and morphological properties of ZnO	Debika Devi Thongam, Harsh Chaturvedi
25	0413U0798	Sustainable Synthesis and Commodity Applications of Bio-based Polyhydroxyalkanoates (PHAs)	Parul Shukla, Vimal Katiyar

26	0418U0939	Pyridinic Dominance Graphene as an Efficient and Selective Gas-Sensor Toward SO <sub>2</sub> Detection	Upasana Nath, Manabendra Sarma
27	0419U0995	Thin-film capacitor fabrication and dielectric study of functionalized BaTiO <sub>3</sub> /PMMA polymer nanocomposite	Dhrubojyoti Roy, Trupti Tanaya Mishra
28	0420U1079	Intermetallic Compound Formation and Metallographic Examination in Dissimilar FSW of Aluminum and Steel Alloys	Pardeep Pankaj, Tanmoy Medhi, Pankaj Biswas
29	0420U1087	Development of thin-film nanocomposite nanofiltration membranes with enhanced permeation and antifouling properties	Diksha Yadav, Sachin karki, Moucham Borpatra Gohain and Pravin G. Ingole
30	0420U1090	Development of hydrophilic high flux and antifouling thin film nanocomposite nanofiltration membrane	Moucham Borpatra Gohain, Sachin Karki, Diksha Yadav, Pravin G. Ingole
31	0420U1109	Study of Surface Topography and Surface Roughness of CoTbNi Alloy Thin Films using 3D Optical Profilometer	Rajib Basumatary, Rajeeb Brahma, Sandeep Kumar Srivastava
32	0420U1169	Precision Modulation of Carbon Nitride Frameworks for Enhanced Visible Light Harvesting: Elemental and Molecular Doping	Soumalya Bhowmik, Parameswar Krishnan Iyer
33	0420U1181	Effects of Substitution on Reaction Dynamics at the Conical Intersections of Cyclohexadiene Molecule	Biman Medhi, Manabendra Sarma
34	0420U1185	Performance of silicon rubber in constrained layer damping of structural vibration	V. V. Sarnaik, Nitin Kumar, Satyajit Panda, S. Kanagaraj
35	0420U1201	Comparative study on removal of pharmaceutical pollutants by adsorption	Ajit Kumar, Chandi Patra, Selvaraju Narayanasamy, Sajal Rudra Paul
36	0420U1205	Application of Polythiophene and Polypyrrole based Nanocomposites for Adsorptive and Photocatalytic Sequestration of Water Pollutants: A Short Review	
37	0420U1211	Response of Gold Plasmonic Polymers: A Combined Study of the Effect of Monomer Size and Degree of Polymerization	Debarun Sen, Sudip Pal and Sujit Kumar Ghosh
38	0420U1218	Improvising Hand Layup Process for Jute Epoxy Composite	Reshmi Basak, Sudip Dey, Piyush Gohil
39	0420U1250	The DFT study on the effect of B-site alloying on the opto-electronic properties of RbPbI <sub>3</sub>	Anupriya Nyayban, Subhasis Panda and Avijit Chowdhury
40	0420U1272	MOF of flexible dicarboxylic acid 2,2'-([1,1'-biphenyl]-2,2'-diylbis(oxy))diacetic acid derived from 2,2-Biphenol	Punata Hanglem, Dr.W.Marjit Singh
41	0420U1282	Development of $\beta$ -Cyclodextrin Conjugated Graphene Oxide Nanocarriers For Sustainable Release of Caffeic Acid	Shreya Tiwari, Ankush D. Sontakke, Mihir K. Purkait
42	0420U1311	Silane functionalization of MMT clay with the aid of sonication: The effect of sonication time on silane moiety grafting	Swatantra Kumar, Sudipta Halder, Pannalal Choudhury
43	0420U1313	Use of dry and wet ball milled graphite nanoparticles as low-cost filler to enhance	Lakshi Nandan Borah, Sudipta Halder, Pannalal Choudhury

		the mechanical performance of hybrid CFRP laminated composite	
44	0420U1324	MOF of flexible dicarboxylic acid 2,2'-(9,10-dioxo-9,10 dihydroanthracene-2,6-diyl)bis(oxy) diacetic acid derived from anthraflavic acid	Thokchom Anjali Devi, Dr Wangkheimayum Marjit Singh
45	0420U1341	Extraction and Isolation of pure compounds from Dichrocephala integrifolia by soxhlet extractor	Yumnam Josni, Dr.W. Marjit Singh
46	0420U1343	Synthesis of symmetry non-equivalent binuclear Cobalt complex of flexible dicarboxylic acid 2,2'-([1,1'-biphenyl]4,4'-diylbis(oxy))diacetic acid	Sualiha Yasmeen, Dr. W. Marjit Singh
47	0420U1348	De Novo Design of Peptide catalyst as a Hydrolase model	Kalpana Kumari, Vibin Ramakrishnan
48	0420U1349	MOF of flexible dicarboxylic acid 2,2'-((9,10-dioxo-9,10-dihydroanthracene-1,5-diyl)bis(oxy))diacetic acid derived from Anthrarufin.	Yumnam Nganthinganbi, Dr W. Marjit Singh
49	0420U1364	Hygrothermal properties of GFRPs infused with functionalized multi-walled carbon nanotubes(MWCNTs)	G G Giridhar, Pannalal Choudhury, Sudipta Halder, Lakshi Nandan Borah
50	0420U1455	Role of Polydopamine to produce Vitrimer from cured epoxy via Mechanochemical process	Chandrangith K. P., Lakshi Nandan Borah, Sudipta Halder, Anubhav Saikia
51	0420U1488	Molecular gas separation and enhancing the CO <sub>2</sub> adsorption over MCM-41 using Ionic Liquids	Ashish Malunjar, Amit Kumar
52	0420U1509	Electrical-Discharge Milling of 3D Printed Polymer Composite using Different Electrodes Fabricated by Electrical-Discharge Grinding Process	Ankit Dhar Dubey, Omkar Raj Aryan, Satish Chaurasia and Kishore Debnath
53	0420U1534	Barium titanate based dielectric ceramics for energy storage application through the structural, dielectric and ferroelectric studies	Shashi Priya Balmuchu, Riya Pathak and Pamu Dobbidi
54	0421U1554	The Good, The Bad and The Aggregate	Laxmi Raman Adil and Parameswar Krishnan Iyer
55	0425U1688	Supramolecular polymorphism via solvent and temperature dependence in perinaphthoindigo-boron difluoride aggregate systems	Indraneel Debnath
56	0425U1702	Altering structural, optical, and magnetic properties of NdCrO <sub>3</sub> by rare-earth substitutions	Pragya Gupta, D. Pal
57	0425U1725	Characterizations of Cu-Zn Bimetallic Nano-particles synthesized from Eryngium foetidum extract	Jennifer Daimari, Sunshri Basumatary, Kushwaha Jashvant Kumar, Anamika Kalita Deka
58	0425U1726	Study of green synthesize ZnO nanoparticles using citrus limetta fruit peel and their application in photocatalytic degradation of methylene blue dye	Kushwaha Jashvant Kumar, Sunshri Basumatary, Jennifer Daimari, Arunendu Mondal, Anamika Kalita Deka

59	0425U1732	Catalytic Degradation of Organic Dye Congo Red using Green Synthesized Silver Nano-particle from Antidesma acidum leaf	Sunshri Basumatary, Kushwaha Jashvant Kumar, Jennifer Daimari, Anamika Kalia Dekka
60	0425U1781	Synthesis, optical properties and cation mediated tuning of reduction potentials of core-annulated naphthalene diimide derivatives	Tirupati Roy
61	0425U1803	Structural and magnetodielectric studies of Al <sup>3+</sup> substituted Ba <sub>0.4</sub> La <sub>0.1</sub> Sr <sub>0.5</sub> Al <sub>x</sub> Fe <sub>12-x</sub> O <sub>19</sub> hexaferrite for microwave applications	Hodam Karnajit Singh
62	0425U1829	Copper(I) Mediated Cascade Annulation <i>via</i> Dual C-H/C-H Activation: Access to Benzo[ <i>a</i> ]carbazolic AEEgens	Tamanna Khandelia, Subhendu Ghosh, Pritishree Panigrahi, Rajib Shome, Siddhartha Sankar Ghosh, Bhisma K. Patel.
63	0425U1845	Biosensor: Role In Agriculture	Aditi Baruah
64	0425U1852	Development of Mg Substituted Lithium Ferrite (LiFe <sub>5</sub> O <sub>8</sub> ) for Microwave Applications	Prajna P. Mohapatra, Pamu Dobbidi
65	0429U2048	Catalytic C-H oxidation via water oxidation catalysis by ferrocene functionalized iridium complex	Firdaus Rahaman Gayen, Debashree Bora, Biswajit Saha
66	0429U2049	Fabrication of Al/SiC Based Axially Graded Beam and It's Characterization	Viwek Kumar, Poonam Kumari
67	0429U2051	Sustainable development of bio composite using functional fibers from Bambusa tulda	Abir Saha, Poonam Kumari
68	0502U2158	PVDF/RGO based piezoelectric nanocomposite films with enhanced mechanical and dielectric properties for nanogenerator applications	Nikhil Dilip Kulkarni, Poonam Kumari
69	0504U2275	Unnatural amino acids containing dipeptides mediated diversity in self-assembly	Gobinda Dolai, Bhubaneswar Mandal
70	0506U2413	Development of Piezoelectric Fiber Reinforced Composites for energy harvesting applications	Mukesh Kumar, Poonam Kumari
71	0507U2697	Amyloid Targeting Red Emitting Small Molecule Probe for Therapeutic and Diagnostic Application Against Alzheimer's Disease	Priyam Ghosh, Kamal Shokeen, Sachin Kumar, Parameswar K. Iyer
72	0508U2775	Biomass derived highly porous carbon and synthesis of efficient chalcogenide/C catalyst for removal of synthetic organic waste products.	Priyanga Manjuri Bhuyan, Parikshit Gogoi
73	0509U2798	Mixed Matrix Membrane for Separation of CO <sub>2</sub> from CO <sub>2</sub> /N <sub>2</sub> mixture	Shubham Kumar, Aviti Katare, Bishnupada Mandal
74	0509U2818	Optimization of electroactive phases in poly(vinylidene fluoride) PVDF nanofiber prepared at various solution parameters	Anshika Bagla, Supratim Mitra

## Division 2: Advanced Functional Materials

(Editors: Prof. Pratima Agarwal, Prof. Perumal Alagarsamy and Dr. U.N. Maiti)

### Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0323U0010	A Study on Magnetic, Optical and Dielectric Properties of Mg-Doped TiO <sub>2</sub> (Anatase + Rutile) from Spintronic Perspective	Leeladhar Chouhan, Sandeep Kumar Srivastava
2	0324U0018	Crystal structure, microstructure, optical, dielectric and magnetic property of TiO <sub>2</sub> nanoparticles	B. Dey, S. K. Srivastava
3	0325U0027	N-Doped Carbon Dots for Visual Recognition of 4-Nitroaniline and Use in Fluorescent Inks	Nilanjana Nandi, Priyanka Sarkar, Kalyanasis Sahu
4	0325U0033	Hit Multiple Targets with One Arrow: Pb <sup>2+</sup> and ClO <sup>-</sup> Detection by Edge Functionalized Graphene Quantum Dots and Their Applications in Living Cells	Priyanka Sarkar, Nilanjana Nandi, Shubham Gaurav, Sachin Kumar, Kalyanasis Sahu
5	0325U0036	Long Alkyl Chain Induced OFET Characteristic with Low Threshold Voltage in an n-Type Perylene Monoimide Semiconductor	Mst Nasima Khatun, Anamika Dey, Niranjana Meher, Parameswar Krishnan Iyer
6	0403U0237	Tuning Polymer Semiconductor Morphology through Additive Engineering for Stable Phototransistor	Anwasha Choudhury, Parameswar Krishnan Iyer
7	0405U0330	Interlayer charge transfer in CVD grown Bi <sub>2</sub> O <sub>2</sub> Se/CsPbBr <sub>3</sub> heterostructure	Md. Tarik Hossain, Mandira Das, Joydip Ghosh, Subhradip Ghosh, P K Giri
8	0405U0346	A Novel Approach for Delaying Aging of NVM based Last Level Caches	S. Sivakumar, John Jose
9	0405U0389	Optical studies on thermal conductivity and anisotropic ratio calculations using unpolarized laser excitation in low-temperature CVD grown two dimensional PdSe <sub>2</sub>	Tadasha Jena <sup>1</sup> , Md Tarik Hossain, P K Giri
10	0419U0948	Tuning of Epsilon-near-zero Wavelength in Pulsed Laser Deposited Indium Tin Oxide Thin Films	Sumit Goswami, Ashwini Kumar Sharma
11	0419U0963	h-BN a promising material for optoelectronic devices and optical fibre technology: a first principle investigation	Burhan Ahmed, Indrajit Sharma
12	0419U1042	Impact analysis of Hardware Trojans on Packet Header in NoC based TCMP	Ruchika Gupta, Vedika J. Kulkarni, Mohammad Humam Khan, John Jose, Sukumar Nandi
13	0419U1053	Impact Analysis of complementary attack by Hardware Trojan in Network on Chip based System on Chip	Sachin Bagga, Ruchika Gupta, John Jose

14	0420U1122	Novel spinel structured medium entropy oxides prepared by mechanical alloying process: Phase stabilization, morphology, and magnetic properties	A.K. Sahu, A.M. Padhan, Tandrima Mitra, S. Jana, S.K. Naskar, Perumal Alagarsamy
15	0420U1294	Effect of Deposition pressure and deposition temperature on optical and electrical properties of ITO thin films	Rahul, Juhi Kumari, Pratima Agarwal
16	0420U1299	Optimization of Antireflection coating and its application in crystalline silicon based solar cells	Anterdipan Singh, Pratima Agarwal
17	0420U1323	Nanoscale size effects on the structural, morphological, electronic, vibrational, and magnetic properties of antiferromagnetic MnO powder	A.K. Sahu, A.M. Padhan, S. Biswas, B. Kisan J. Kumar, P. Alagarsamy
18	0420U1393	Effect of substrate temperature on thermally evaporated tungsten tri-oxide films	Juhi Kumari, Pratima Agarwal
19	0420U1419	Graphene as emitter layer in Silicon heterojunction Solar Cell	Jai Shree Bhardwaj, Pratima Agarwal
20	0420U1428	Dynamic scaling study of the silver nanoparticles for light trapping application in thin film solar cells.	Manvendra Singh Gangwar, Pratima Agarwal
21	0423U1660	Temperature dependent study of graphene oxide and applied it in photodetector applications	Ningthoujam Somorjit Singh, P.K. Giri, H.B. Nemade
22	0423U1664	Synthesis of catalyst free vertically oriented Ag nanoparticle decorated $\beta$ -Ga <sub>2</sub> O <sub>3</sub> nanowires and study of its structural and optical properties	Shagolsem Romeo Meitei, Naorem Khelchand Singh
23	0425U1727	Ultrahigh thermal conductivity of $\theta$ -phase tantalum nitride	Ashis Kundu, Xiaolong Yang, Jinlong Ma, Tianli Feng, Jesús Carrete, Xiulin Ruan, Georg K. H. Madsen, Wu Li
24	0425U1827	Au Np sensitized radiative behavior of Sm <sup>3+</sup> in Sol-gel Silica Matrix	Purabi Gogoi, Nibedita Dehingia, Pankaj Dutta
25	0425U1880	Systematic study of large anisotropy in low-dimensional material and related peculiar magnetic phenomena	Gajendra Singh Bisht, D. Pal

### **Division 3: Agro & Food Processing Technologies**

**(Editors: Prof. Ramagopal V S Uppaluri, Prof. Chandan Das, Prof. V. V. Goud and Dr. R. Anandalakshmi)**

#### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
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1	0325U0038	Development of antioxidant rich edible active films & coatings incorporated with de-oiled ethanolic green algae extract: A candidate for prolonging the shelf life of fresh produces	Kona Mondal, Vaibhav V. Goud, Vimal Katiyar
2	0325U0065	Traditional and Modern Storage Practices for Food Grains	Lalit M. Pandey, Uday Shanker Dixit
3	0325U0078	Systemic screening and selection of unique source for extraction and commercialization of bio-insecticides from neem plant ( <i>Azadirachta indica</i> )	Rajendra Adak, Rakhi Chaturvedi
4	0331U0179	Development of natural wax-based active coatings for extending postharvest shelf-life of Khasi mandarin	L Susmita Devi, Santosh Kumar
5	0331U0180	Chitosan based hybrid and active coatings for postharvest life extension of pineapple	Indra Bhusan Basumatary, Vimal Katiyar, Santosh Kumar
6	0404U0258	Studies on fermentation kinetics of Bengal gram-based WARI with incorporation of bamboo shoot powder ( <i>Dendrocalamus hamiltonii</i> ) powder	Tiwari Ajita, Debnath Pinku
7	0407U0481	Techno-economic efficacy of refractance window dried <i>Curcuma Longa</i>	Preetisagar Talukdar, Ramagopal Uppaluri
8	0409U0520	Ultrasound assisted extraction of bioactive constituents from papaya peel and pulp: optimization of process parameters	Khalid Mehmood Wani, Ramagopal V.S. Uppaluri
9	0409U0521	Squash Enriched Cookies: Development and Characterization	Rushikesh Rajendra Kudave, Paushali Mukherjee, Ramagopal Uppaluri
10	0410U0531/ 0410U0554	A Study on bioactive compounds, Functional Groups of <i>Allium Sativum</i> (Garlic) from Assam	Ajay Kumar Shakya, Chandan Das
11	0419U1002	3E (energy, exergy and economic) analyses and kinetic studies on microwave drying of star fruit	Sayan Mandal, Koushik Jena, Prabu V.
12	0419U1003	Comparisons and characterizations of encapsulated green tea extracts using ionic gelation and inclusion methods	Paushali Mukherjee, Kamal Narayan Baruah, Ramagopal Uppaluri
13	0419U1008	Nutritional efficacy-based vegetables selection for ready to cook soup mix formulations development	Kumudhini Akasapu, Ramagopal V.S. Uppaluri
14	0420U1059	Protein Fortified Ready-To-Reconstitute Elephant Apple ( <i>Dillenia Indica</i> ) Juice Powder	Udangshree Borah, Manashi Das Purkayastha
15	0420U1110	Extraction of phenolics from yellow passion fruit rind using supercritical carbon dioxide extraction	Kakali Borah, Rupesh Kumar, Vaibhav V. Goud
16	0420U1112	Optimization of Ginger Extraction from Northeast India and Application of Microencapsulates of Polyphenol Rich Ginger Extract to Elephant Apple Juice	Tabli Ghosh, Charu Lata Mahanta
17	0420U1138	Nutrient Rich Composite Flour Cookies	Kasturi Pusty, Mriganka Shekhar Borah, Ajita Tiwari, Sheriful Alam

18	0420U1141	Qualitative estimation and development of Nutritive muffins using <i>Dillenia indica</i> and <i>Terminalia Chebula</i> with shelf life studies	Jasmin Islam, Dr. Ph Vivekanandini Devi, Madhumita Gogoi, Rupam Medhi
19	0420U1144	Sensory Evaluation and estimation of quality attributes of a Rice based weaning mix.	D. Sharma, N. Ronya, M.P. Sarma, C.C. Barua, B.G. Unni
20	0420U1212	Foam mat dried tamarillo powder: Effect of foaming agents on drying kinetics, physicochemical, and phytochemical properties	Shubham Rohilla, Charu Lata Mahanta
21	0420U1239	Extraction of Phenolic Compounds from Assam Lemon Pomace and Its Utilization in Nanoparticles Synthesis	Pragyan Adhikary, Jishuraj Chetia, Maanas Sharma, Dr. Laxmikant S. Badwaik
22	0420U1270	Microwave Assisted Extraction of Essential Oil from Assam Lemon ( <i>Kaji Nemu</i> ) Peel	Jishu Raj Chetia, Pragyan Adhikary, Lourembam Monika Devi, Laxmikant S. Badwaik
23	0420U1320	Phytochemical and Anti-oxidant Property on <i>Dillenia Indica</i> Fruit Extract	Aradhana Boruah, Samindra Baishya, Ajita Tiwari
24	0420U1326	Sensory and Functional Qualities of Fruit Leather Prepared from Guava ( <i>Psidium Guajava</i> ), Papaya ( <i>Carica Papaya L.</i> ) and Mirika Tenga ( <i>Parameria poluneura</i> )	Ginisha Kalsi
25	0420U1465	Assessment of biological activities of various phytochemicals isolated from passion fruit bagasse	Sukumar Purohit, Emiko Yanase, Lingaraj Sahool, Vaibhav V. Goud
26	0424U1678	Estimation of biochemical components and Sensory acceptance of a ready-to- drink Sea buckthorn berries	Sweety Kumari, Dr. Sujata Pandit Sharma, Akanksha Agrawal
27	0424U1680	Effect of different stabilizers used in preparation of Sea buckthorn juice on its stability and shelf life	Sweety Kumari, Dr. Sujata Pandit Sharma, Akanksha Agrawal
28	0425U1685	Fermentation kinetics, sensory compounds and anti-oxidant molecules identified in Ethnic alcoholic beverage Joubidwi and Jougwan: NE India	Anamika Kalita Deka, Dibakar Chandra Deka
29	0425U1734	Potential uses of plasma in agriculture: A short review	Trishangi Neog, Dr. Kaushik Das, Dr. Pritam Coomar Barua
30	0425U1774	Macrofungi e-Biodiversity universalization for livelihood subsistence and food security in rural areas of North East India	Bhaskar Kalita, Sanjukta Patra
31	0425U1792	Indigenous Soybean Cultivars of North East India: Source of Protein and Product Development for Climate Smart Foods	Neha Jha, Siddhartha Singha, Munmi Borah

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0403U0238	Effect of chitosan coating on strawberries during storage at ambient condition	Sonu Kumar, Vimal Katiyar
2	0404U0246	Plant Based Egg Replacers: An Emerging Trend towards Sustainable Foods	Avik Mukherjee

3	0404U0254	Development of bio-polymer based edible coatings for prolonging the shelf-life of Khashi mandarin	Mandavi Goswami, Kona Mondal, Vimal Katiyar
4	0404U0293	Jackfruit - an Underutilized Fruit: Biological, Nutritional and Medicinal Properties	Nickhil C., Srinivasan G., Nisha R.
5	0405U0383	A review on the solar dryers used for drying high valued agricultural crops grown in North-eastern region of India.	Srinivasan G., Nickhil C.
6	0411U0656	Edible films and coatings for shelf-life extension of fruits and vegetables	Santosh Kumar
7	0417U0881	An Experimental Investigation on the “Neeragam”, Traditional Fermented Rice Beverage of Tamilnadu	Soundarya M., Balaji G., Nandhini Devi G., Senthilvelan S.
8	0418U0918	Efficacy of ceramic membranes in the processing of bottle gourd juice	Sushma Chakraborty, Ramagopal Uppaluri, Chandan Das
9	0402U0225	Supply Chain of Kiwi Fruit in Lower Subansiri District of Arunachal Pradesh	Techi Yajo Tara, Saikat Majumdar, Gayatri Saikia, Dr. Sanjib Kumar Dutta
10	0402U0223	Post-Harvest Management and Marketing of Apple grown in Arunachal Pradesh	Dr. Sanjib Kumar Dutta, Saikat Majumdar, Gayatri Saikia
11	0420U1132	Effects of pre-treatments on chemical composition of sweet potato flour using different drying methods	Mriganka Shekhar Borah, Samindra Baishya, Ajita Tiwari, Kasturi Pusty
12	0420U1200	Formulation and Characterization of Atta/Multigrain atta-Aizong riceSechium edule flour mix baked chips	Srimonti Dutta, Ramgopal Uppaluri, Pankaj Kalita
13	0420U1265	The Study of Fruit Quality Parameters and Packaging by using smart fresh technology in Kiwi and Pears	Kanuri Komala Siva Katyayani, Nelli Yashwanth Kumar
14	0420U1446	Growth Predictions of Tilapia Fish Cultured in Tanks	Suman Debnath, Suranjit Roy, Dr. Sudipto Sarkar
15	0420U1486	Effect of ultrasonic assisted sulfuric acid hydrolysis on morphology of nanocellulose extracted from coconut milk waste residue	Fogila Begum, Charu Lata Mahanta
16	0420U1505	Aerogels characterisation as bioactive delivery vehicles produced through the valorisation of banana rachis (Musa acuminata)	Beatrice Basumatary, Charu Lata Mahanta
17	0426U1937	Analysis of heat transfer characteristics of green bell pepper during vacuum assisted microwave heating	Vivek Kumar, Moirangthem Kalpana Devi
18	0421U1599	Development of a point of detection device for the estimation of Morphine: A Glazing Agent on Coated Fruits and Vegetables	Rupak Kumar
19	0419U1028	Comparison of Poultry Meat Qualities Slaughtered by Different Methods: Jhatka, Halal, Kosher, and Mechanical Stunning	Pankaj Kumar, Saurabh Kumar Laskar, Nigam Thakur

## Division 4: Artificial Intelligence, Data Science based R&D interventions

(Editors: Prof. Ratnajit Bhattacharjee, Dr. Debanga Raj Neog, Dr. Konda Reddy Mopuri and Dr. Santosh Kumar Vipparthi)

### Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0411U0645	Change Detection Based on Triclustering: a Case Study of Kaziranga National Park	Koyel Mandal, Sanjit Maitra
2	0420U1360	Charge preheating effects on the performance of a spark-ignition engine fueled with raw biogas, an Artificial neural network (ANN) study	Pankaj Kumar, Niranjana Sahoo, Vinayak Kulkarni
3	0420U1468	Time series Annual Land Use/ Land Cover mapping and change analysis of Mizoram using Machine Learning algorithm	Priyanka Gupta, Dericks Praise Shukla
4	0404U0312	A Genetic Algorithm based Reinforcement Learning Algorithm for multi-objective optimization in NOMA-IoT networks	Sumita Majhi, Pinaki Mitra
5	0419U1044	Evaluation of Terrain ruggedness and TanDEM-X 90 DEM for parts of Meghalaya and Assam region in North-East India using ICESat-2 data	Ashutosh Bhardwaj, Priti Girohi
6	0409U0523	Recovery of Impulsive forces: A comparative assessment between conventional and soft computing technique	Sima Nayak, Niranjana Sahoo
7	0420U1354	Remote Memory Management in Disaggregated Data Centers	Amit Puri, John Jose, Tamarapalli Venkatesh
8	0420U1097	Prediction and forecasting municipal solid waste generation using machine learning approaches in Northeast India	Tinka Singh, Ramagopal V. S. Uppaluri
9	0406U0444	Machine learning model for predicting surface Water Quality of Upper Ganga Canal Roorkee, Haridwar	Rupanjali Singh, C.B. Majumder
10	0414U0827	Fuzzy Set Based Estimation of Closed-Die Forging Load using the Shop Floor Data	Kaustabh Chatterjee, Uday S. Dixit, Jian Zhang
11	0404U0285	Efficient UNet for Semantic Segmentation in Unstructured Environment	Gaurav Phukan, Kishan Debbarma, Batty Kurkalang, Alexy Bhowmick
12	0406U0441	Classification of Assam Silk Fabrics using Artificial Intelligence	Minakshi Gogoi
13	0419U0953	LSTM based Deep learning model for COVID-19 Public Tweets Sentiment Analysis	Rubul Kumar Bania, Subhomoy Dey
14	0425U1716	Trajectory Tracking and Control of Unmanned Aerial Vehicle (UAV): A Particle Swarm Optimization based Approach	Shreyansh Sharma, Abhinav Kumar Singh, Omkar Singh, Anjan Kumar Ray

15	0425U1764	Prediction of Transient Bed Profiles in An Aggrading Stream using ANN	Arindom Das, Soumen Maji
16	0425U1814	COVID-19 Neologism in Assamese Language	Mridusmita Das, Apurbalal Senapati
17	0413U0786	Selection of suitable Classification Algorithm for prediction of EOR method	Mansi Chopra, Pankaj Tiwari
18	0420U1480	Prediction of Drag Force over a Blunt Bicone Model with Accelerometer force balance at different Mach number using ANFIS technique	Abhishek Kamal, Vinayak N. Kulkarni, Niranjana Sahoo

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0420U1503	A Hybrid Quadratic approximation-based Jaya algorithm for unconstrained optimization problems	Kedar Nath Das, Rajeev Das
2	0425U1749	Evolved Harmonic Beamforming of Time Modulated Linear Arrays	Sayantan Das, Sudipta Das, Surajit Kundu
3	0425U1831	Application of machine learning in predicting yield of Jute crop in Assam	Parishmita Das, R. L. Deka, Nishigandha Kakati
4	0425U1825	A Computational Approach for the Tonal Identification in Bodo Language	Mwnthai Narzary, Apurbalal Senapati, Maharaj Brahma, Sanjib Narzary, Pranav Kumar Singh
5	0420U1514	Real Time Detection of Natural Scene Assamese Text using Deep Learning for Recognition and Translation	Monor Enghi, Anjan Kumar Talukdar, Kandarpa Kumar Sarma
6	0420U1560	A Survey on Fault Tolerant Control of Unmanned Underwater Vehicles	Shivani Raj, Basireddy Sandeep Reddy, Arup Deka
7	0406U0445	Sign Language Recognition system for hearing impaired	Swati Sharma, Varun Saxena
8	0331U0192	A Review of various AI models for Epilepsy Prediction using intracranial EEG (iEEG) Signals	Anushka Chaurasia, Dr. Yogita Thakran, Dr. Deepak Kumar
9	0325U0046	Spelling Generation with Text Decomposition Technique in Unicode and its Application in Text to Speech Conversion	Chandamita Nath, Bhairab Sarma
10	0425U1822	Negative-Negative is Positive in the context of Hate Speech	Koyel Ghosh, Dr. Apurbalal Senapati
11	0420U1507	Application of the Internet of Things (IoT): A Milestone towards Smart Agriculture	Bipasha Borkotoky, Aditya Bezbaruah, Bipul Deka
12	0417U0884	Effect of Data Augmentation Technique in Predicting Compaction Parameters of Fine-Grained Soils	Jitendra Khatti, Kamaldeep Singh Grover;
13	0329U0127	Enhancing the Performance of Social Media Mining by Sentiment Analysis	Namrata Ambekar
14	0425U1782	Negativity in a language	Tania Sarkar, Apurbalal Senapati

15	0405U0342	Application of Artificial Intelligence and Machine Learning in Petroleum Industry	Karishma Phukan, Ranjan Phukan
16	0420U1379	Use of Hyperspectral Remote Sensing for Assessing Soil Fertility	Baishaali Sarma, Bipul Deka
17	0426U1933	A Field with a Future-Artificial Intelligence for better Seeds	Bidisha Boruah, Pankhi Priya Neog, Tapan Senchowla
18	0405U0360	Harnessing the Power of GPUs to Accelerate the Topology Optimization of Large 3D Continuum Structures	Shashi Kant Ratnakar, Deepak Sharma
19	0420U1395	Light-fidelity: a futuristic high-speed data transmission technology	Ganesh G. Chaudhari
20	0425U1741	Development of Directional drilling well profile design app using Python	Manna Mukherjee, Prasun Banik
21	0419U1014	Revisiting the Order of Accuracy Analysis in Space Discretization of Lattice Boltzmann Method for Straight Boundaries	Biswajyoti Baishya, Tanuj Srivastava

## **Division 5: Conservation of Biodiversity in North Eastern States**

**(Editors: Prof. Ramagopal V. S. Uppaluri and Prof. Latha Rangan)**

### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1	0401U0216	Use of Squirrels by the tribes of Arunachal Pradesh	Hiranmoy Chetia, Murali C. Krishna
2	0404U0305	Application of Different Allometric equation for Estimation of Above-Ground Biomass and Carbon Stock in Narpuh Wildlife Sanctuary, Meghalaya.	Pynshailang Syiemiong, Shiva Shankar Chaturvedi
3	0405U0336	Application of GIS in Delineating Conservation Priority Sites in the Landscape (A Case-Study of Meghalaya)	Ridhima Solanki, Anjali Mehra, Shreya Sethi
4	0405U0349	Assessment of phyto-diversity and analysis of aquatic flora of Chandubi tectonic lake in Assam, India	Arupjyoti Das, Bhabajit Deka, Koushik Nandan Dutta
5	0405U0376	Ethnomedicinal uses of plants of Meghalaya	Gouranga Boruah, Sarfaraj Ahmed, Samima Nasrin Rahman, Mamun Rashid Barbhuyan, Dr. Sudarshana Borah and Aditya Bora
6	0405U0413	Ethnomedicinal uses of plants of Tripura	Azaharul Islam, Dipankar Sarkar, Wahidur Alom Choudhury, Phulan Jyoti Dutta, Dr Sudarshana Borah, Aditya Bora

7	0411U0622	Phytochemical and biopharmaceutical importance of <i>Alpinia nigra</i> and its bioactive compound, labdane diterpene	Ishani Chakrabartty, Latha Rangan
8	0412U0717	Distribution mapping and diversity assessment using Internal transcribed Spacer region, <i>matK</i> and <i>rbcL</i> of <i>Ilex venulosa</i> from Meghalaya	Amilia Nongbet, N.K. Chrungoo
9	0420U1160	Analysis of diversity of indigenous germplasm of okra ( <i>Ablemoschus esculentus</i> L. Moench) under Garo Hills condition of Meghalaya	Arindam Barman, Neha Sangma
10	0420U1154	Phenotypic and genotypic characterization of predominant lactic acid bacteria isolated from traditionally fermented Brassica leaf (Gundruk)	Arindam Barman, Nillo Yedi
11	0420U1202	Mapping and Quantifying the Impact of COVID-19 induced Lockdown on Eco-Sensitive Zone Deepor Beel	Mustak Ali, Amlan Saikia, Monisha Das, Kunal Kr Borah, Dipankar kr Sarma, Runjun Baruah, Utpal Sarma, P.L.N Raju
12	0420U1209	Morphological Characterization of Bottle gourd [ <i>Lagenaria siceraria</i> (Mol.) Standl.] Germplasms In Garo Hills, Meghalaya	Susmita Chakraborty
13	0420U1284	Biodiversity Conservation and Ecosystem Services in Traditional Homegarden of Eastern Himalaya region of West Bengal.	Biplov Chandra Sarkar
14	0420U1457	Effect of COVID 19 Pandemic on seasoned Yak herders- a simple case study	Khriengunuo Mepfhuo, Joken Bam, Vijay Paul, Mihir Sarkar
15	0420U1460	A study on various factors affecting the pigmented rice value chain of North East India with a focus on black rice value chain	Rubeka Idrishi, Siddhartha Singha, Latha Rangan
16	0424U1671	Trend of critically endangered Chinese pangolin decline in Yangoupokpi Lokchao Wildlife Sanctuary, Manipur, India	Yengkhom Roamer Zest, Awadhesh Kumar
17	0425U1719	Evaluation of Antifungal and Plant Growth Promoting Potential of Endophytic Actinomycete <i>Streptomyces</i> sp. DNLA13 isolated from Orchidaceae	Juri Saikia, Debajit Thakur
18	0425U1813	Exploration of Actinobacteria from Protected Forest Ecosystems of Assam for the production of Microbial Secondary metabolites	Rajkumari Mazumdar, Debajit thakur

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0410U0541	In vitro embryo culture and regeneration of wild seeded banana ( <i>Musa balbisiana</i> cv. Changthir)	Premabati Thangjam, Robert Thangjam
2	0420U1191	Drought Stress on Vegetable Crops and Its Mtigation Strategies	Felicia War, Arindam Barman

3	0420U1207	Bacterial Wilt in Vegetable Crops and its Mitigation Strategies	Amy D Shira, Arindam Barman
4	0420U1291	Floral diversity of North Guwahati region with special reference to traditionally used medicinal plants	Alok Senapati, Latha Rangan
5	0420U1332	Host diversity of phytoplasma in Assam	Dibya Sree Dutta, Manoj Kumar Kalita, Palash Deb Nath
6	0420U1405	Detection and quantification of polyphenolic compounds isolated from medicinal plants in BHK-21 cell lines through HPLC	Rashmi Singh, Sachin Kumar, Latha Rangan
7	0420U1467	Awareness of mithun husbandry among respondents of mithun rearing states of NE- An online based survey	Khriengunuo Mepfhuo, Mihir Sarkar
8	0421U1558	Moringa Farming - A unique climate resilient crop for food security vis-a-vis entrepreneurship development	Naseema Rahman, Naba J. Deka, Binod Kalita, Amal C. Sarmah
9	0425U1841	Chromolaena odorata, an invasive weed in North East India: A short review	Nainika Senapati, Aditi Baruah
10	0426U1870	Turning rich Biodiversity of North East (NE) India into tourism prospect	Susmita Phukan, Rittika Baruah, Jijnashi Kashyap
11	0429U2047	A Scientific Study of the probable reasons causing the loss of Citrus indica from the ecosystem	Upasana Deb, Sheena Haorongbam

### **Division 6: Disaster Management**

**(Editors: Prof. Sudip Mitra, Prof. Kaustubh Dasgupta, Prof. Arindam Dey and Prof. Rajshree Bedamatta)**

### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1	0401U0214	Assessment of Selected Hill Slopes Stability in Aizawl Municipal Area, Mizoram, India	K Zirsangzeli, Rebecca Ramhmacchuani
2	0404U0259	Design of Transitional Shelter Kit as Disaster Response	Kankana Narayan Dev, Amarendra Kumar Das
3	0409U0522	Spatiotemporal Analysis of Groundwater Status Using Remote Sensing and Geographic Information System in Assam	Debaditya Gupta, Satyam Raj, Sudip Mitra
4	0408U0497	Impact Assessment of Plastic Strips on Compressive Strength of Concrete	Snehal Kaushik, Sandip Shekhar Nath, Titan Das
5	0420U1147	Geo-mechanical Study of Zuangtui Slumping Area in Aizawl, Mizoram	Lalmingsangi, Laldinpuia, V. Vanthangliana
6	0420U1443	Assessment and Analysis of Geotechnical Properties of Saron Veng Landslide, Aizawl, Mizoram	Lallawmsanga, Christopher Lalthazuala, Lalmingsangi and Laldinpuia
7	0420U1524	Building Site Excavation Plan based on LEM Analysis: A Case Study in Aizawl, Mizoram	Laldinpuia



8	0421U1539	Landslide Susceptibility Mapping Based on Machine Learning Algorithms	Meghanadh Devara, Vishwajith M.V., V.K. Maurya, Ramji Dwivedi Lalremruati, Laldinpuia
9	0420U1347	The Role of NGO in Disaster Management- A Case Study of Young Mizo Association, Mizoram	
10	0420U1310	Subsurface Investigation using Vertical Electrical Sounding Method to Evaluate Surface Instabilities in Kohima Town, Nagaland	Meripeni Ezung, C. Nokendangba Chang, Temsulemba Walling, C. Chelladurai
11	0420U1374	Structural and Geotechnical Approach of Characterisation of Causes of Meriema Landslide of Nagaland University, Kohima Campus Approach Road Junction located along the Kohima - Wokha Road Section of the National Highway No.61	Chabungbam Mangi Khuman, Keneisazo Nagi, Heisnam Sanatomba, Soibam Ibotombi, Arenlong Aier, Notoka K
12	0421U1625	Imprints of neotectonic activities along Dibang valley, North East India: Insights from morphotectonic indices and river profile analysis	Uma Narayan M, Rishikesh Bharti, Archana M Nair
13	0420U1474	Catastrophic mass movement and Glacial Lake outburst floods hazard in High Mountain Asia: From large scale assessment to local disaster risk management- insights of reconstructed real-life events to anticipated future events	Ashim Sattar, Saket Dubey, Simon Allen, Holger Frey, Umesh K Haritashya, Christian Huggel, Wilfried Haeberli, Anil V . Kulkarni
14	0420U1308	Climate Change and vulnerability assessment of the state Sikkim: a sectoral analysis at district level	Surbhi Vyas, Anamika Barua, C. Mallikarjuna
15	0420U1271	Integrated planning of Blue, Green and Grey Infrastructure for flood resiliency– a comparative study of Kozhikode and Kochi city, Kerala, India	Ar. Archana Ashokan, Dr. Shyni Anilkumar
16	0420U1247	Critical Zone Mapping for Hazard Susceptibility Analysis	Alok Kumar, Arnab Kumar Pal, Adnan Ahmad, Dhiritilekha Deka, Archana M Nair
17	0420U1165	An assessment of the impacts of Covid-19 on the livelihood of the people around rural, urban and periurban areas of Kamrup district, Assam	Gaurishankar Bhattacharyya, Ankita Paul, Sudip Mitra
18	0420U1170	Role of Climatic Variables on Forest Fire in the state of Mizoram	Dhruval Bhavsar, Kasturi Chakraborty, K K Sarma, S P Aggarwal
19	0419U1022	Precipitation analysis and rainfall forecasting for Kamrup Rural district	Arnab Paul Choudhury, Debaditya Gupta, Sudip Mitra
20	0423U1666	Compact GNSS modules for Disaster Monitoring System	Somnath Mahato, Surajit Kundu, Anindya Bose
21	0425U1690	Design of horizontal drains for Chanmari slope stabilization at Sikkim	Chatterjee, D., Charan, O. S., Sharma, P
22	0425U1717	Impact of Heavy Precipitation on Landslide due to climate change and probable remedial measure	Joyita Golder, Sudipto Halder, Gupinath Bhandari

23	0425U1810	Establishing rockfall hazards through the characteristics of moving rock blocks	Manohara K. N., A. Ujjwal, A. Dey, Sreedeeep S
24	0425U1729	Landslide susceptibility mapping of Tehri reservoir region using geospatial approach	Gaurav Tripathi , Achala Shakya , Ritambhara Kumari Upadhyay , Suraj Kumar Singh , Shruti Kanga , Sandeep Kumar Pandey
25	0425U1839	Unmanned Aerial Vehicle Based Post Disaster Assessment in Hilly Terrain	Dahal, A., Gurung, S.
26	0425U1830	Surveillance in disaster management: PSO based task assignments for UAVs	Arabinda Ghosh, Omkar Singh, Anjan Kumar Ray
27	0405U0347	Urban flood assessment and development of localized flood early warning system to improve urban flood resilience: A case study of Guwahati	Prasoon Singh, Vinay SP Sinha, Saurabh Bharadwaj, Lu Li, Raju Kumar
28	0406U0447	Pushover Analysis for Seismic Requalification of Pile Foundation	Bidisha Borthakur, Arup Bhattacharjee
29	0406U0472	Disaster risk resilience of urban dwellers: a case study of Greater Guwahati, Assam, India	Shrutidhara Kashyap, Ratul Mahanta
30	0408U0510	Disaster Risk Resilience in the context of a Public Health Crisis	T. Sundararamam, Daksha Parmar
31	0412U0753	Tunnels, the sustainable means of transportation pathways in natural disaster-prone Darjeeling-Sikkim Himalaya	Pratap Chandra Dhang
32	0414U0818	Extreme Events, Resilience and Disaster Management: Lessons from Case Studies	Rajarshi Majumder
33	0417U0869	Disaster Management of Railway track washouts in the Northeast Region	Saibaba Ankala
34	0420U1345	Air Pollution, Crop Residue Burning, and Diffusion of Sustainable Agricultural Practices	Vijesh V. Krishna, Dhanyalekshmi Pillai, Monish Deshpande
35	0420U1071	Landslide Early Warning and Susceptibility Zonation of Guwahati City through Local and Regional Scale Slope Stability Analyses	Arindam Dey, A Murali Krishna, Chiranjib Prasad Sarma
36	0420U1316	Participatory GeoSM-NatE application in the city of Guwahati in India	M. Mukherjee, A. Kumar, S. R. Edupuganti, D. Garg, B. Saha, A. Sabhapandit, D. Saikia, T. I. Marjoribanks, L. Boshier, S. Dutta, V. Chembolu, X. Xia, M. Sohail, J. Jiang, X. Tong
37	0428U2016	Building Resilience against Impending Mega Earthquake in the North East	P.G. Dhar Chakraborti
38	0405U0411	Seismic Risk Mitigation of RC Frame Building in North-East India using Buckling Restrained Braces	Akash Kumar, Needhi Kotoky
39	0420U1204	Damage Detection using experimentally obtained frequency response data with an application of Artificial Neural Network-based Improved Mode Shape Curvature	Sonu Kumar Guptaa, Surajit Das

40	0425U1828	Spectral analysis and source parameters determination of earthquakes in the Indo-Burma regions.	Zosangliana Ralte Saitluanga, Santanu Baruah
41	0403U0241	Design and Construction of Self-Balancing Retaining Wall for Protection Landslide in Itanagar, Arunachal Pradesh	Atop Lego
42	0503U2192	Integration of Seismological, Geophysical and Geological data for the estimation of 3rd Generation Seismic Hazard Map of North-Eastern India	Saurabh Baruah
43	0421U1616	Achieving Dust-Storm Resilient Infrastructure through Sand Dune Stabilization – A Critical Review	Pradeep Kumar Dammala

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0412U0686	Blue-Green Infrastructure Failure & Success in the Indian Context	Debdut Sengupta, Rajib Shaw, Sudip Mitra
2	0421U1576	Lessons Learnt from the 2021 Chamoli Disaster, India and the Future Path	Vishal Singh, Shubham Maurya, Arinam Dey
3	0420U1274	A Critical Review of 2014 Rainfall Induced Mudslide Disaster at Malin, India	Shubham Maurya, Arindam Dey
4	0425U1752	Urban Flood Management with Sustainable Drainage System in Kokrajhar Town, Assam	Agar Basumatary, Debshri Swargiary, Soumen Maji
5	0426U1875	Landslide Remote Sensing Data with Qgis	Dr. Vidya Patil, Ms. Nadini Jagtap
6	0327U0102	Seismic characteristics in the vernacular architecture of Meghalaya	Aman Sharma, Tejas Pawar, Shiva Ji
7	0420U1333	Infrastructure-less IoT Communications in Disaster Management	Arijit Dutta

## Division 7: Healthcare Research & Related Technologies

(Editors: Dr. Lalit Mohan Pandey, Dr. Raghvendra Gupta, Dr. Rajkumar P. Thummer and Dr. Rajiv Kumar Kar; Assisting Team: Ms. Atreyee Borthakur, Mr. Aman Bharadwaj, Ms. L. Gayatri Sharma, Ms. Mudrika Singhal, Mr. Vartik Shandilya and Mr. Chinmaya Panda)

## Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0325U0032	Paper-based Selective Detection of Methanol and Formaldehyde	Smita Das, Pranab Goswami, Lightson Ngashangva
2	0325U0039	Gold nanoparticles: A therapeutic approach in murine carcinogenesis	Nabanita Maity, Mahuya Sengupta

3	0325U0049	Photoresponsive transformation from spherical to nanotubular assemblies: anticancer drug delivery using macrocyclic cationic gemini amphiphiles	Subhasis Dey, Soumya Chatterjee, Anjali Patel, Nirmalya Pradhan, Diship Srivastava, Niladri Patra, Arindam Bhattacharyya, Debasish Manna
4	0325U0067	Mass production of N-alkylamides in the stirred tank reactor by in vitro cultivation of adventitious roots of <i>Spilanthes paniculata</i>	Krishna Kant Pachauri, Rakhi Chaturvedi
5	0325U0079	Europium Doped Iron Oxide Nanomaterials for Cancer Treatment	Rushikesh Fopase, Lalit Mohan Pandey
6	0329U0119	Leptospiral ErpY-like protein inhibits membrane attack complex formation on the bacterial surface by acquiring factor H and I.	Saswat hota, Manish Kumar
7	0331U0187	Development of mesoporous silica nanoparticles for controlled release of BCS Class III drug	Hafiz Ahmed, Amit Alexander
8	0405U0329	Bioprospecting of <i>Cordyceps bassiana</i> for its therapeutic properties	Supriya Sharma, D.K. Sarmah and Apurba Das
9	0406U0462	Generation of the recombinant version of a bioactive human MEF2C transcription factor from <i>E. coli</i>	Krishna Kumar Haridhasapavalan, Pradeep Kumar Sundaravadivelu, Udayashree Voorkara, Vishwas Kaveeshwar, Rajkumar P Thummer
10	0408U0501	Role of Piezo1 in mechanobiology of MSCs	Amit Sharma, Jina Bhattacharyya, Bithiah grace jaganathan
11	0410U0533	Influence of various organic acids towards the physical and qualitative properties of wound dressing applicable film	Aritra Das, Ramagopal Uppaluri, Chandan Das
12	0411U0640	Roles of metastasis suppressor gene, OGR1 and casein kinase 2 $\alpha$ intronless gene, CSNK2A3 in megakaryocytic differentiation	Naorem Tarundas Singh, Lisam Shanjukumar Singh
13	0412U0722	Aptamers as a healthcare tool for point-of-care diagnosis of tuberculosis	Satakshi Hazra, Sanjukta Patra
14	0414U0819	Efficacy of Various Feedback Gains by the Active Dynamics Vibration Absorber for Tremor Suppression due to Parkinson Disease	Sibananda Mohanty, S K Dwivedy
15	0417U0876	An unprecedented synthesis of spiro tetrahydrofuranyl lactams from 2-(4-hydroxybut-1-yn-1-yl) benzonitriles and aldehydes	Sudip Shit, Anil K. Saikia
16	0418U0917	Experimental study of the performance of bioglass deposited and textured deposited surface over AZ31 magnesium alloy for biomedical application	Vivek Singh Yadav, Lalit Mohan Pandey
17	0418U0935	Mechanistic Insights into the Hydrolysis of Ru and Os Based Anticancer Drugs and Their Interaction with Biomolecules: A DFT Study	Amit Kumar Pradhan, Paritosh Mondal

18	0418U0938	Diagnostic and prognostic significance of Epstein Barr Virus, Serum Albumin/Globulin Ratio in patients with Nasopharyngeal cancer	Deepak Singh Lourembam, T. Dhaneshor Sharma, Lisam Shanjukumar Singh
19	0419U1049	Pharmaceutical Additive Manufacturing: Journey Begins from the Gateway of Northeast	Subham Banerjee
20	0419U1052	Finite Element Analysis of the Hip Joint Implant	Mirsaidin Hussain, Subramani Kanagaraj
21	0420U1092	Design and Implementation of an Underactuated Hand Exoskeleton for Neurorehabilitation	Nilavjyoti Sarmah, Shyamanta M. Hazarika
22	0420U1099	Delivery of anti-tubercular drug with biocompatible silver nanocarriers	Bhabatush Biswas, Tarun Kanti Bandyopadhyaya, Tridib Kumar Bhowmick
23	0420U1136	Affordance-driven Action Observation during Motor Imagery: An EEG Study	Supriya Bordoloi, Prarthana Saikia, Cota Navin Gupta, and Shyamanta M. Hazarika
24	0420U1163	Evaluation of ER, PR and HER-2 receptor expression in breast cancer patients in a regional cancer centre in North-eastern India	Monalisa Hawaibam, Deepak Singh Lourembam, Sushma Khuraijam
25	0420U1189	Ageing and peroxisome dynamics in <i>Saccharomyces cerevisiae</i>	Rachayeeta Deb, Shirisha Nagotu
26	0420U1238	<i>Fusobacterium nucleatum</i> induces tumour stemness switch phenotype in Oral Cancer Stem Cells	Partha Jyoti Saikia, Ibrahim S Akeel , Lekhika Pathak, Shirsajit Mitra, Bidisha Pal, Debabrat Baishya, Bikul Das
27	0420U1279	Combined influence of material properties of bone and implant on bone growth over macro-textured implant surface	Rajdeep Ghosh, Souptick Chanda and Debabrata Chakraborty
28	0420U1300	Health Monitoring System using Wrist Pulse Detection.	Avinash Kumar, Omnish Kumar
29	0420U1356	Economically viable solution of Portable Spectrophotometer for Glucose and Blood traces detection in simulated Human-Urine for early disease diagnosis	Mohd. Mansoor Khan, Arup Borah, Ramesh Kumar Sonkar
30	0420U1420	On-Demand Droplet Formation in Lab-on-a-chip Platforms	Dhruv Wankawala, Pranab Kumar Mondal
31	0420U1447	Identification of a novel Immunosuppressive and inflammatory stemness pathway in cancer stem cells: implication in cancer immunotherapy	Lekhika Pathak, Partha Jyoti Saikia, Shirsajit Mitra, Bidisha Pal, Joyeeta Talukdar, Sanjukta Patra, Biikul Das
32	0420U1483	MYC modulated HIF-2 $\alpha$ induces altruistic stemness in ABCG2+ leukemia stem cells	Shirsajit Mitra, Lekhika Pathak, Partha Jyoti Saikia, Bidisha Pal, Bikul Das
33	0422U1642	OGR1 inhibits migration of prostate cancer cells through the downregulation of casein kinase 2 alpha	Puyam Milan Meitei, Adhikarimayum Lakhikumar Sharma, Naorem Tarundas Singh, Lisam Shanjukumar Singh
34	0424U1675	Use of Site-Directed Mutagenesis to study the Effects of Deamidation on the functional properties of Peroxiredoxin 6 protein	Pushpa Kakchingtabam, Dr Hamidur Rahaman

35	0425U1835	Modulation of Angiogenesis by Berberine using Zebrafish model	Naveen S, Jhansi Nathan
36	0426U1930	DR-FL: A Novel Diabetic Retinopathy Grading with Federated Learning Using Fundus Images	N Jagan Mohan, R Murugan, Tripti Goel

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0322U0008	Interaction of bovine serum albumin with pyrene derivatives: Insights from spectroscopic and molecular dynamics simulation analyses	Selvaraj Sengottiyar, Kakoli Malakar, Arunkumar Kathiravan, Marappan Velusamy, Alicja Mikolajczyk, Tomasz Puzyn
2	0324U0015	Immunoinformatics Mediated Screening of Rotavirus A epitopes for Potential Peptide Vaccine Development	Pooja Rani Kuri, Pranab Goswami
3	0325U0031	Development of a hydrolase mimicking peptide amphiphile and its immobilization on silica surface for stereoselective and enhanced catalysis	Payel Dowari, Malay Kumar Baroi, Tanushree Das, Basab Kanti Das, Saurav Das, Sumit Chowdhuri, Avinash Garg, Ananya Debnath, Debapratim Das
4	0325U0045	Sulfonium-based liposome-encapsulated antibiotics deliver a synergistic antibacterial activity	Anjali Patel, Subhasis Dey, Kamal Shokeen, Tomasz M. Karpiński, Senthilkumar Sivaprakasam, Sachin Kumar, Debasish Manna
5	0325U0047	Identification of potential microRNAs in Mycobacterium leprae and their interaction with human genes	Durbba Nath, Supriyo Chakraborty
6	0325U0052	Multi-stimuliccontrolled release of a transmembrane chloride ion carrier from a sulfonium-linked procarrier	Sribash Das, Oindrila Biswas, Nasim Akhtar, Anjali Patel, Debasish Manna
7	0325U0054	Stimuli-induced generation of the active chloride-phosphate anionophore from its inactive proanionophore	Oindrila Biswas, Priyanka Mazumder, Avigyan Naskar, Soumya Srimayee, Sachin Kumar, Niladri Patra, Debasish Manna
8	0325U0061	Stroma-Leukemia Interaction Studies	Trishna Anand, Jina Bhattacharyya, Dr. Smita Das, Dr. Damodar Das, Dr. Sewali Deka Talukdar, Bithiah grace jaganathan
9	0325U0062	Role of RhoA signaling in Breast cancer metastasis	Renu Sharma, Bithiah grace jaganathan
10	0325U0063	Mechanotransduction in colon cancer metastasis	Nikhil Kulkarni, Aswanth Harish M, Bithiah grace jaganathan

11	0326U0088	Carboxyl SAMs mediated modification of Ti6Al4V implant surfaces for biomedical applications	Aman Bhardwaj, Lalit Mohan Pandey
12	0326U0090	Magnetic Hyperthermia in cancer treatment	Mehak, Lalit Mohan Pandey
13	0326U0095	Inhibition of Thermal and Shear induced Aggregation of Albumin (Bovine serum albumin) by Centella asiatica extract	Laipubam Gayatri Sharma, Lalit Mohan Pandey
14	0327U0105	Glycosyl Ortho-[1-(p-MeOPhenyl) Vinyl] Benzoates (PMPVB) as Universal Donors for Oligosaccharide synthesis	Suvendu Halder, Rupa Bai Addanki, Pavan K. Kancharla
15	0328U0109	Understanding the Role of microRNAs in the Post-Transcriptional Regulation of RNPS1 gene	Bhagyashree Deka, Ayushi Rehman, Kusum Kumari Singh
16	0404U0268	3D printing of coronary arteries and in-vitro flow loop construction	Mudrika Singhal, Udit Nayan Saha, Raghvendra Gupta
17	0404U0302	Synthesis of N-Nitroso-2, 6-Diphenylpiperidin-4-One Semicarbazone and its Characterization, Antioxidant Activity and Molecular Docking with its Binding Site.	Ashmita Goswami, Subrajit Das, Bhanita Das, Kamalochan Barman
18	0405U0326	Production of bioactive recombinant human UTF1 transcription factor from E. coli	Chandrima Dey, Khyati Raina, Rajkumar P. Thummer
19	0405U0335	Heterologous expression and purification of codon-optimized human PAX4 transcription factor from E. coli	Gloria Narayan, Akriti Agrawal, Rajkumar P Thummer
20	0405U0339	Identification of UPF3B variants as a disease marker in humans.	Ajay Narwade, Pratap Chandra, Ayushi Rehman, Kusum Kumari Singh
21	0405U0368	Lipid Based Nanoparticles as an advance drug carrier: A Review	Tutu Kalita, Lalit Mohan Pandey
22	0405U0371	A study about the pattern of adverse effects of various oncology drugs in a tertiary care hospital of North East India	Lakshyajeet Nath, Urmi. Choudhury, Mangala Lahkar
23	0405U0373	In-vitro and in-vivo antidiabetic activity of Camelia sinensis collected from Maheswari Tea Estate, Dhemaji, Assam	Sameeran Gam, Lakhyajeet Nath, Nilutpal Sharma Bora, Bhargab Jyoti Sahariah
24	0405U0384	Formulation development and evaluation of antioxidant of POGOSTEMON BENGHALENSIS by in vitro model	Jyutia Nargish, Mridul Kalita, Koushik Nandan Dutta
25	0405U0395	A Historical Review on Therapeutic Strategies for Covid-19	Nayanmoni Baruah, Hemanta Kumar Sharma, Pallab Kalita, Aditya Bora, Kamalochan Barman, Bhanita Das, Jayita Das, Quri Kiron Hazarika, Sudarshana Borah
26	0406U0451	Assessing the Contribution of Lysine to the UV-visible Spectra of Charged Amino Acid Rich Proteins by Acetylation	Himanshi, Simangka B Saikia, Apoorva Badaya, Ravindra Venkatramani, Rajaram Swaminathan
27	0406U0464	Monitoring phosphorylation in proteins using Protein Charge Transfer Spectra	Alka Singh, Gadicherla Harikrishna, Rajaram Swaminathan
28	0409U0516	Role of Piezo in regulating metastasis of breast cancer	Sreeja Dattachoudhury, Bithiah Grace Jaganathan

29	0411U0631	Prevention of Biofilm-Associated Infections using Prodigiosin-Loaded Poly (Lactic Acid)	Chethana M, Pankaj Boruah, Amit Kumar, Vimal Katiyar
30	0411U0669	Potential of ATP toward Prevention of hIAPP Oligomerization and Destabilization of hIAPP Protofibrils: An in-Silico Perspective	Rituparna Roy, Sandip Paul
31	0415U0846	Subgrouping and Structural Brain Connectivity of Parkinson's Disease – A Review	Tanmayee Samantaray, Jitender Saini, Cota Navin Gupta
32	0417U0875	Synthesis of Pyrimido[2,1-a] isoindolone and Isoindolo[2,1-a] quinazolinone via Intramolecular Aza-Prins Type Reaction	Subhamoy Biswas, Anil K. Saikia
33	0418U0931	Hydrogen Peroxide-responsive Turn-on Fluoregenic Probes: Direct Linkers Supersede Self-immolative Linkers for Sensing H <sub>2</sub> O <sub>2</sub> .	Abu Sufian, Debojit Bhattacherjee, Tripti Mishra, Krishna P. Bhabak
34	0418U0933	Thioredoxin reductase-triggered fluorogenic donor of hydrogen sulfide	Sulendar K. Mahato, Debojit Bhattacherjee, Pallavi Barman, Krishna P. Bhabak
35	0419U0976	Smartphone-based Electroencephalogram Experimentation in Natural Environment: Opportunities and Challenges	Doli Hazarika, Souptick Chanda, Cota Navin Gupta
36	0419U1048	Understanding the structural properties and water exchange rate of two bis and tris-aquated complexes of lanthanide: A Computational Study	Niharika Keot, Manabendra Sarma
37	0420U1058	An integrative systems biology approach identifies molecular signatures associated with gallbladder cancer pathogenesis	Nabanita Roy, Mrinmoy Kshattray, Susmita Mandal, Mohit Kumar Jolly, Dhruba Kumar Bhattacharyya, Pankaj Barah
38	0420U1100	Cardio-metabolic risk analysis in youths from North East (Tripura)	Nabamita Nath, Dipayan Choudhuri
39	0420U1101	SPIN.DOC plays a role in cellular transformation and generation of cancer stem cells in colon cancers	Khuraijam Mrinalini Devi, Remmei Meiguilungpou, Thiyam Ramsing Singh, and Lisam Shanjukumar Singh
40	0420U1131	Mechanistic Investigations on the Efficacy and Mode of Action of Traditional Medicinal Concoctions for Indication Discovery and Drug Repurposing for the Treatment of Parkinson's Disease	Mouli Sarkar, Vibin Ramakrishnan
41	0420U1135	Expression, Purification and Biochemical characterization of a probable esterase (LipW) from Mycobacterium tuberculosis (Mtb)	Wungnaopam A.N., Khundrakpam Herojit Singh, Hamidur Rahaman
42	0420U1174	Polymerase Chain Reaction (PCR) based detection of virulence factors in <i>Serratia marcescens</i> isolated from food sample	Sayani Roy, Pranab Behari Mazumder, Amitabha Bhattacherjee
43	0420U1183	UPF3B-knockout in HEK-293 cells delays cell proliferation and deregulates the expression of neuron-specific genes	Pratap Chandra, Bhagyashree Deka, Sweta Kumari, Ayushi Rehman, Priyanka Yadav, Kusum Kumari Singh



44	0420U1186	Design and Development of an Underactuated Anthropomorphic Hand: Exploiting Grasp Robustness	Hirakjyoti Basumatary, Mantoo Kaibarta, Shyamanta M. Hazarika
45	0420U1194	Bioprinting: The Current Development of This Additive Manufacturing and Future Challenges	Angkita Talukdar, Barsha Rani Gogoi, Vaishali Bathari, Lipika Phukan, Gaurav Kumar Bhargav, Pallab Kalita, Rubina Chowdhury, Rofiqul Islam
46	0420U1198	Studying the role of ERK inhibition in glioblastoma multiforme	Rumela Mitra, Aswanth Harish, Bithiah Grace Jaganathan
47	0420U1213	Protein Charge Transfer Spectra (ProCharTS) of single chain Integration Host Factor	Nuzelu, L. Rangan, R. Swaminathan
48	0420U1220	Modulation of Blood Lactate, Blood Glucose and Heart Rate of Soccer Players during and after Submaximal exercise	Rupali Katoch, Krishnendu Dhar
49	0420U1246	Low-cost frequency domain photoacoustic tomographic imaging	Bondita Paul, Rusha Patra
50	0420U1248	Characterizing the dual targeting and localization of the peroxisomal protein Pex30	Nayan Moni Deori, Terence Infant, Pradeep Kumar Sundaravadivelu, Rajkumar P Thummer, Shirisha Nagotu
51	0420U1249	Dynamic-mechanical ankle joint for trans-femoral and trans-tibial amputees to increase their stability and range of motion	Vaibhav Jaiswal, Mahesh Jinakala, Kishore Kumar Padi, Subramani Kanagaraj
52	0420U1252	Binaural LCMV Beamforming with External Microphones in Hearing Aid	Deep Manoram Baruah, Bijit Kumar Das
53	0420U1268	Development of an herbal antacid formulation from Banana stem biomass	Gaurav Kumar Bhargav, Rofiqul Islam, Pallab Kalita, Tina Bania, Innocent Sutnga, Pyrkhatlang Myrboh, Angkita Talukdar, Subrata Parajuli, Wandaphi Kharbyngar, Bansara L. Nonglait
54	0420U1280	Fabrication of a wearable device for knee joint health assessment using vibroarthrography	Dhirendra Kumar Verma, Mirsaidin Hussain, Poonam Kumari, S. Kanagaraj
55	0420U1281	Nanotheranostic Approaches in Targeting Lysosomal Proteases in Cancer	Sayantani Mukhopadhyay, Parameswar Krishnan Iyer, Siddhartha Sankar Ghosh
56	0420U1305	Lab-on-a-chip device for diagnosis of vitamin-D	Prateechee Padma Behera, Monika Kumari, Pranab Kumar Mondal, Ravi Kumar Arun
57	0420U1352	Electrical studies of bioactive $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2\text{-K}_{0.5}\text{Na}_{0.5}\text{NbO}_3$ ceramic	Subingya Pandey, Pamu Dobbidi
58	0420U1362	Design variations in Double Oblique Device for Osteosynthesis (DODO) of hip: a novel implant for Northeast population of India	Soumyadeep Sarkar, Pratik Nag, Bhaskar Borghohain, Souptick Chanda
59	0420U1378	A study of Grasp Forces and Posture using a Multi-Sensory Data Glove	Subhash Pratap, Shyamanta M. Hazarika, Kazuaki ITO
60	0420U1398	Study on the use of commercial supplements for diabetic management	Donee Gohain, Premila L. Bordoloi, Moloya Gogoi

61	0420U1412	A Sensing Framework for Slip and Stiffness Estimation during Grasping	Abhijit Dey, Mantoo Kaibarta, Shyamanta M. Hazarika
62	0420U1426	Signatures Associated with Pancreatic $\beta$ -cells Regeneration from Mesenchymal Stem Cells	Priya Bharti Patel, Jeetender Chugh, Shilpy Sharma
63	0420U1429	A Simple Analysis of C2 Di-Indolyl Indolones Compounds Inhibition and Target Identification Against <i>Providencia vermicola</i>	Abhichandan Das, Sanchaita Rajkhowa
64	0420U1437	An Insight into 3D Printing in Pharmaceuticals – A Potential Technology in Developing Personalized Medicine	Taslima Jahan, Himangshu Sarma
65	0420U1450	Exploring ATM or P53 loss in cancer cells for selective sensitization using SPK98	Bhanu Priya, Sivapriya Kirubakaran
66	0420U1466	A Synthesis & Characterization of Stimuli Responsive Nano gel for Drug Delivery System	Sulagna Bhattacharjee, Sachin Bhaladhare
67	0420U1489	Preparation of Health Drink and Their Efficacy Against Certain Bacteria	Anusri Dhar, Aniruddha Sarma
68	0420U1491	Thermo-stable drug-coated PLA-HAp implants for orthopaedic application: an experimental study	Devleena Bose, Vimal Katiyar
69	0420U1508	A Brief Review of Image Classification Techniques for Alzheimer's Disease Detection	Mallika Chouhan, Meenakshi Pareek
70	0420U1513	Mechanistic investigations on the efficacy and mode of action of Ashwagandha, using Cheminformatics-Network medicine approach for the treatment of Osteoarthritis	Vivek Prakash, Amit Bhandari, Ruchika Goyal, Vibin Ramakrishnan
71	0420U1532	Interaction and stability of major withanolids with HSA, Hemoglobin and Lysozyme using computational biophysical modeling	Upasana Pathak, Himangshu Patgiri, Sanchaita Rajkhowa
72	0421U1541	A research cum review on various herbal plant's essential oil extracts having antimicrobial activity	Harshadeep Seal, Abdul Baquee Ahmed, Taslima Jahan
73	0421U1606	Candida Diagnosis Database CDD: A database for organizing the diagnostic aspects of the infections caused by Candida spp.	Ghadir Nofal, Sanjukta Patra
74	0422U1648	Incidence of Suspected Sepsis in Nosocomial Patients with Diabetes and Comparison Between Early Inflammatory Markers	Amrita Roy, Sudip Chakraborty, Sourabh Mitra, Swagnik Roy
75	0423U1653	SPIN.DOC regulates Wnt signaling via interaction with SPIN1	Remmei Meiguilungpou, KhuraijamMrinalini Devi, ThiyamRamsing Singh
76	0423U1669	In-Domain Data Augmentation for COVID-19 Detection using Acoustics Information	Hemant Kumar Kathania, Adhitiya Sharma, Shivam
77	0424U1674	Binding Affinity of Arsenite towards Amide Based Systems: A Theoretical Investigation	Monalisha Sarma, Manabendra Sarma

78	0424U1683	Dual band Compact Antenna Development in WiMAX and Wi-Fi Bands for Healthcare Service Wireless Connectivity	Dheeraj Pandey, Surajit Kundu
79	0425U1742	Nutritional Status of 4 to 15 years old children in slum area under Biswanath district-A pilot study	Julena Saikia, Ruma Bhattacharyya, Moloya Gogoi
80	0425U1755	Hyperelastic analysis of the adventitial layer using isotropic Gent model	Orepalli Ashok, S. Sai Kumar and N. Muthu
81	0425U1846	Assessment of Antianxiety potential of the plant dysphania ambrosioides in Mice	Rupshikha Malakar, Ghanshyam Panigrihi, Rajashri Bezbaruah
82	0425U1851	A Qsar Study of Differential Inhibition of Aldose Reductase by Flavonoid Compounds at Am1 Semi Emperical Level.	Sandipan Choudhury, Supratim Ray
83	0426U1920	Guar gum based Ultra Stretchable Hydrogel for Tissue Engineering Applications	Taposi Trishna Neog, Krishanu Ghosal, Kishor Sarkar
84	0426U1924	Light Sensitive Cationic Copolymer through RAFT Polymerization for Photothermal Therapy of Cancer	Rishik Patra, Rima Saha, Kishor Sarkar
85	0426U1926	Core-shell mediated by RAFT polymerization supramolecular structure of PEGMA-co-stearic acid blockl co-polymer for aneffective cancer drug delivery	Kritideepa Nath, Priyatosh Sarkar, Kishor Sarkar
86	0505U2296	Pink Fluorescent Carbon Dots Derived from the Phytomedicine for Breast Cancer Cell Imaging	Gaurav Gopal Naik, Md Bayazeed Alam, Vivek Pandey, Pawan Kumar Dubey, Avanih S. Parmar, and Alakh N. Sahu
87	0506U2512	Opportunity for Startups/Entrepreneurs working in Phyto-pharmaceutical at IIIM-Technology Business Incubator	Ankush Varma & Saurabh Saran
88	0506U2531	TfO-...H-O-H Interactions Assisted Generation of Silicon Cation from Allylsilanes: Access to Phenylallyl Ferrier Glycosides from Glycals	Rupa Bai Addanki, Suwendu Halder and Pavan K. Kancharla
89	0506U2553	Conjugated Polymer Nanoparticles as a Fluorescence Probe for Amplified Detection of Human Serum Bilirubin	Moirangthem Anita Chanu, Parameswar Krishnan Iyer
90	0506U2569	Prevalence and Antibiotic Susceptibility of Isolates of Leucorrhoea Among Females from Kamrup District of Assam	Syeda Tamanna Yasmin, Monika Soni
91	0507U2696	Synthesis of Thiazole-2(3H)-ones via [3,3]-Sigmatropic Rearrangement/5-exo-dig Cyclization of N-propargylamines by using AgSCF3 as electrophiles	Bipin Kumar Behera and Anil K. Saikia
92	0508U2787	Visible-Light Induced Difunctionalization of Styrenes: Synthesis of NHydroxybenzimidoyl Cyanides	Tipu Alam, Amitava Rakshit, Pakiza Begum, Anjali Dahiya and Bhisma K. Patel

## Division 8: Innovative Design for Societal Needs

(Editors: Prof. Sougata Karmakar, Dr. Pratul Chandra Kalita, Dr. Urmi R. Salve and Dr. Sharmistha Banerjee; Assisting Team: Mr. Jitesh Singh Chouhan, Mr. Liladhar Ganvir, Mr. Dubesh Sai Mangam, Ms. Mouly Bhowmick, Mr. Shivram Kumar and Ms. Akanksha)

### Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0404U0264	Innovative Hand-tool Design for Cleaning of Slippery Floor and Broken Glass Pieces in Shopfloor of FMCG Sector	Gurdeep Singh, Sougata Karmakar
2	0404U0289	A sustainable design solution for providing drinking water by harnessing floating solar PV based generation in rural India	Abhijit Sen, Sougata Karmakar
3	0404U0292	An Ergonomic Polishing Machine for Traditional Kalash Polishing Artisans of Hajo in Assam state of India	Krishna Chaitanya Mallampalli, Swati Pal
4	0404U0294	Internet Memes are Impacting Society: Perspectives from Brand Communication to World Peace Promotion	Bhaskar Mishra, Anirban Chowdhury
5	0404U0297	Perceiving Museum as a Way to Living Culture: A Step towards Cultural Sustainability	Pronita Mondal, Dr. Ritwij Bhowmik
6	0404U0299	Patterns and Motifs in Kangra Miniature Painting: A new horizon of Indian Decorative Design	Prosenjit Raha
7	0404U0300	Design for societal need: The case of Improvised Betel Nut Cutter	Saurav Kamal Medhi, Bibhuti Ranjan Bhattacharjya, Sashindra Kumar Kakoty
8	0405U0350	A Novel Hand-operated Cashew nut Sheller	Krishna Chaitanya Mallampalli, Debayan Dhar, Swati Pal
9	0405U0354	Innovation for Effective and Low-cost Processing of Assam Lemon	Prakash Kumar
10	0405U0369	Design Issues and their associated health hazards from metal fumes during the welding process	Harsh Mohan Shrivastava, Srinivasan G
11	0405U0432	Exploring Local Ambiance and Artifact of Assam for Interactive Tourism	Hitesh Sharma, Debkumar Chakrabarti
12	0406U0454	Reducing the Pollution of Mithi River: A Waste Disposal Intervention	Tanya Swaminathan, Arundhati Guha Thakurta
13	0414U0811	An Innovative Design Approach for Better Communication through AR Concept.	Shouvik Sengupta, Sandipan Bhattacharjee2, Bhaskar Saha
14	0414U0829	A Centralized User-Centric Design Approach for Ambulance Service in North East	Hari Brat Saikia, Bhaskar Saha
15	0418U0912	Bamboo as the Sole and Soul of Hangers	Pravinsinh K. Solanki

16	0420U1243	Water Carriage by Women in Hilly Areas of North-East India: Challenges and Future Research Direction	Bhupen Chandra Barman, Vikramjit Kakati, Sougata Karmakar
17	0424U1676	Development of a Sensor based Smart Flush System: Need of COVID 19 and Future	Akshat Maurya
18	0425U1715	Gender Stereotypes in Advertising: Exploring Concepts and Future Direction	Akanksha, Pratul C. Kalita
19	0425U1728	Handicraft Entrepreneurship: Advantage for Young Entrepreneur	Kiran Kumari Mahato, Pratul Chandra Kalita
20	0425U1757	Design of activity-based tool kit for educators using locally available material for effective implementation of Early Childhood Education in rural community of north east India in line with new NEP	Soumen Das, Pratul Chandra Kalita
21	0425U1769	Exploring bamboo craft works of north east region for developing educational toys, furniture & equipment for school and relationship to an Indian design institute for being a driver	Soumen Das, Pratul Chandra Kalita
22	0425U1844	Understanding the effect of technology and innovation aspects of service quality on customer satisfaction and behavioural intention of Coperative banking customer of Assam	Sona Srivastava, Dr. Rama Koteswara Rao Kondasani
23	0426U1865	Advance methods of ornamentation in fabrics woven using Fly-shuttle semiautomatic handloom	Manohar Mahato, Amarendra Kumar Das
24	0503U2220	Utilization of Cow-dung –a sustainable future Biorefinery in India	Shuchi Verma, Ramakant Goyal, A. K. Ray
25	0508U2772	Diverse colouration of silk fabric from Tectona grandis leaf extract and its stabilization through mordant regulated dyeing.	Shristirupa Borah, Parikshit Gogoi
26	0420U1153	Overview of sustainability assessment methods and evaluation tools for the residential sector	Kratika Piparsania, Pratul Kalita

## **Division 9: Low Cost Manufacturing Technologies**

**(Editors: Prof. S.N. Joshi, Prof. U.S. Dixit, Dr. R. K. Mittal and Prof. Swarup Bag)**

### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1	0328U0113	Application of Lasers on Boulder and Marble Material	Antash Kishore Sinha, Shrikrishna N Joshi
2	0403U0239	Toolpath generation on a 5-axis Computer Numerical Control (CNC) based	Atul Singh Rajput, Sajjan Kapil, Manas Das

		Magnetorheological Fluid Assisted Finishing (MFAF) Process	
3	0403U0244	Durable Functional Material with Modulable Mechanical Property and Water Wettability Utilizing Waste Papers	Arpita Shome, Uttam Manna
4	0404U0261	Application of machine learning in phase prediction of high entropy alloys (HEAs)	Swati Singh, Shrikrishna N. Joshi, Saurav Goel
5	0404U0313	Fabrication and Development of Eco-friendly Low-Cost Abrasive Flow Finishing Medium	Abhishek Singh, M. Ravi Sankar, Vimal Katiyar
6	0405U0324	Swingarm Design Optimization by Generative Approach: Validated with Experiments	Sathiyaseelan Selvaraj, Varatharajan Prasannavenkadesan, Kalimuthu Ramanathan, Sundaram Geetha
7	0405U0407	Electrochemical Deposition based $\mu$ -Additive Manufacturing system: A feasibility study	Anand Mohan Pandey, Sajan Kapil, Manas Das
8	0405U0424	Implementation of Discrete Element Method for Analysis of Roller-type Powder Recoaters in Powder Bed Fusion	Ambrish Singh, Sajan Kapil, Manas Das
9	0405U0425	Surface modification techniques in electric discharge machining: A review	Binoy Kumar Baroi, Tapas Debnath, Jagadish, Promod Kumar Patowari
10	0408U0499	Effect of SiC particles on Fabricated Al and Mg-based Metal Matrix Composites Using Powder Metallurgy	Pallab Sarmah, Promod Kumar Patowari
11	0409U0518	Fabrication of Spiral Micromixer using Wire-EDM and Soft Lithography Technique	Ekta Tripathi, Pallab Sarmah, Promod Kumar Patowari, Sukumar Pati
12	0415U0911	Investigations on the Toolpath Generation for Robotic Wire Arc Additive Manufacturing	Ritam Sarma, Sajan Kapil, Shrikrishna N. Joshi
13	0418U0838	Phosphonium-based halogen-free ionic liquid as lubricant additives: Machining performance and economical assessment	Arun Kumar Bambam, Kishor Kumar Gajrani
14	0418U0910	Corrosion behavior and mechanical properties of ER70S-6 alloy cladding on aluminum using a cold metal transfer process	Bappa Das, Uday Shanker Dixit, Biranchi Narayan Panda
15	0404U0291	Novel design method for improvement of in-plane energy absorption characteristic of auxetic Re-entrant honeycomb structure	Niranjan Kumar Choudhry, Biranchi Panda
16	0405U0359	Design and fabrication of an extrusion system for cement paste 3D printing	Shubham Maurya, Biranchi Panda, Uday Shanker Dixit, Arun Ch. Borsaikia, Biswajeet Barman
17	0420U1069	Development of low-cost membrane separation technologies	Pravin G. Ingole, Sachin Karki, Diksha Yadav, Moucham Borpatra Gohaina, b
18	0420U1074	Thermo-mechanical Simulation on Residual Stress Measurement in Dissimilar Friction Stir Welding	Naorem Ronaldo Singh, Pardeep Pankaj, Pankaj Biswas
19	0420U1157	Friction Stir Spot Welding of Honeycomb Core Sandwich Structure	A. Kumar, R. G. Narayanan, N. Muthu

20	0420U1158	CO <sub>2</sub> Laser Cutting of White Pat Silk – A Preliminary Work	Evenmore Myllem, Shrikrishna N. Joshi
21	0420U1231	Microstructure and mechanical characterizations of friction stir butt-welded Inconel 718 alloy by considering the effect of welding speed	Sanjay Raj, Pankaj Biswas
22	0420U1241	Numerical modelling and simulation of micro machining of biomedical materials using Nd:YAG millisecond pulse laser	Brijesh Kumar Singh, Sajan Kapil, Shrikrishna N. Joshi
23	0420U1255	Parallel kinematics-based mechanism and its industrial application in CNC machine tool development	Priyanka Duarah, Mayur Singh, Shrikrishna Nandkishor Joshi
24	0420U1261	Microchannel Fabrication on Polycarbonate using Laser-Induced Plasma Assisted Ablation (LIPAA) with Copper Metal Target	Upasana Sarma, Shrikrishna N. Joshi
25	0420U1278	Performance Improvement of Printed UWB Antenna Using Frequency Selective Surfaces	Anett Antony, Bidisha Dasgupta
26	0420U1409	Utilization of Friction Stir Welding to Fabricate 3D Objects in Metal Additive Manufacturing	Ankan Das, Himangshu Kalita, Sajan Kapil, Pankaj Biswas
27	0420U1417	Development and Characterization of Bi-porous Metallic Wick for Loop Heat Pipes	Chandan Nashine, Nadaf Arman Mohaddin, Rohit Kumar, Sandip Kumar Sarma, Manmohan Pandey
28	0420U1423	Analysis of Numerical Method for Modal Analysis of Thin Walled Structures for Achieving Low Cost Manufacturing	Gururaja S, Kundan K Singh, Brajesh K Panigrahi, Rinku K Mittal, Abhishek Poonia
29	0420U1453	Design Optimization of Analog Circuit using Multi-Objective Genetic Algorithm and SPICE Framework	Purvi Das, Babita Jajodia
30	0420U1501	Study of machinability of stainless steel with formed microrod of Ti grade 2	Tanmoy Majumder, Promod Kumar Patowari
31	0420U1519	Method and apparatus for high frequency induction welding of ferromagnetic metal plates	Sunil Kumar Biswal, Ankan Mishra, Sukhomay Pal, Swarup Bag
32	0421U1540	Ultra-Precise Single Point Diamond Turning Process and Its Low Cost Alternative Methods	Borad M Barkachary, Shrikrishna N. Joshi
33	0421U1612	Fabrication of Cost Effective Bi -porous Composite Wick for Loop Heat Pipes	Toni Kumari, Chandan Nashine, Manmohan Pandey
34	0328U0110	Response of coconut coir filler reinforced epoxy composite towards cyclic loading: Fatigue property evaluation	Faladrum Sharma, Rahul Kumar, Sumit Bhowmik
35	0425U1718	Effect of polishing time on the surface property of Maraging Steel on Electropolishing	Abhinav Kumar, Ranajit Mahanti, Manas Das
36	0425U1801	Influence of Ni addition on Abrasive wear behaviour of plasma-sprayed Duplex stainless-steel coatings	S. Chockalingam Singaravelu, E. Edward Anand, S. Ramabalan
37	0425U1853	Feasibility of Stone Dust as a Construction Material for Affordable Housing	Atul Mehta, Debaraj Bailung Sonowal, Anil Kumar, Bharat Jyoti Sonowal, Dhurba Jyoti

			Das, Mohar Lal Goala, Sneha Talukdar
38	0426U1912	A Small scale stretch forming setup development to study the forming behaviour of sheet metal experimentally	Vivekananda Haldar, Sukhomay Pal
39	0429U2026	Estimation of wire surface quality index during wire electric discharge machining using image processing technique	Sanghamitra Das, Shrikrishna N. Joshi

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0325U0058	Electrolyte-assisted Greener Approach for the Synthesis of Silica Nanoparticles	Arighna Sahaa, Snehasis Bhaktab, Goutam Biswasa,
2	0325U0059	A microPAD based fluorescent biosensor for ethanol detection	Malaya Mili, Phurpa Dema Thungon, Pranab Goswami
3	0421U1610	Circularly Polarized Modified P-Shaped Microstrip Antenna with Slotted Modified Ground Plane	Mehtaz Marin, Dr. Reshmi Dhara, Sanoj Mahato
4	0421U1611	Circularly Polarized Modified F-Shaped Compact Microstrip Antenna with symmetrically inverted modified F-shaped Ground Plane	Abhinash Kumar Singh, Dr. Reshmi Dhara, Sanoj Mahato
5	0421U1613	Mushroom-Shaped Printed Monopole Antenna for UWB Application	Sanoj Mahato, Dr Reshmi Dhara
6	0421U1614	A Circularly Polarized Assymmetric Wide Slot Microstrip Antenna for Wireless Communication Application	Tejaswi Kumar, Dr Reshmi Dhara, Sanoj Mahato

## Division 10: Policies for Research & Innovations

(Editors: Prof. Sukanya Sharma, Prof. Ramgopal V. S. Uppaluri, Dr. Vipul Dutta and Dr. Abhishek Kashyap)

## Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0329U0121	Extracting Science, Engineering and Technology from the Ancient Literature of Mahapuranas	Lalit M. Pandey, Uday Shanker Dixit
2	0329U0126	Ensuring local institutional sustainability around a UNESCO natural world heritage site in India	Manisha Ashraf, Adyasha Nayak, Ruchi Badola, Sukanya Sharma, S.A Hussain
3	0404U0308	De-homogenizing North-East India: Need for a Heritage Education Policy	Moubani Bagchi, Sukanya Sharma



4	0406U0474	Prevalence of Polycystic Ovarian Syndrome and Associated Risk Factors in the Barak valley, Northeast India	A. Yasmin, S Roychoudhury, A.P. Choudhury
5	0408U0500	Implementation of the National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in Meghalaya	Alacrity Muksor, Dr. Daksha Parmar
6	0419U0958	A comprehensive assessment of biofuel policies of India: Opportunity for North-east India, strategic policy implementation, and challenges	Prangan Duarah, Mihir Kumar Purkait
7	0420U1224	The Longchoks of Sikkim and North Bengal: The need for heritage preservation and awareness	Upasna Chettri
8	0420U1244	Hearing aid and its efficiency among a deaf clan in Meghalaya	Sentijungla
9	0421U1556	Rules, Recommendations, and Requirements: A study of regulations guiding Excavation and Exploration of Archaeological sites in India	Eshan Harit, Sukanya Sharma
10	0421U1573	Work Force of Tomorrow - East and North East	Partha P Dasgupta
11	0426U1862	Retrospective survey on assessment of dietary strategies as adopted by COVID-19 tested population	Tanvi Nariyal
12	0401U0215	Interventions and women's participation in a cervical cancer screening program: Evidence from a field experiment	Hari K. Choudhury, Rupak Kr. Borah, Bhavana Barman
13	0428U2013	Traditional Games of Assam State: Revamping for Nextgen to Preserve and Popularize the Heritage of North East Region	Anjali Sharma
14	0404U0255	Science, Technology and Innovation Policy (STIP) 2020 and development of the North-East Region	Shubha Tiwari

## **Division 11: Research and Innovations in Sustainable Development Goals**

**(Editors: Prof. Rajshree Bedamatta, Prof. Laishram Boeing Singh, Prof. Anamika Barua and Dr. Sparsh Johari)**

### **Oral Presentation**

<b>Sl no.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1.	0325U0041	Lubrication behaviour of Coconut oil base Bio-Greases using different nanoparticles	Pranav Dev Srivyas, Mir Irfan Ul Haq, Ankush Raina, M.S. Charu
2.	0325U0075	Investigation of Groundwater quality in two different geological conditions	Partha Jyoti Sarmah, Irfan Kamal, Soruj Das, Zico Zemin, Jintu Kalita and Medalson Ronghang

3. 0326U0085 Developing and Analysis of Concrete-Mix Design For Different Weather Condition Jugal Kishor Baruah, Juganta Dulakakharia, Jushmita Choudhury, Prithwib Patgiri, Zipshit Saikia
4. 0404U0247 Screening and evaluation of novel microalga for carbonsequestration potential and aqua feed application Debasish Das, Ratan Kumar
5. 0404U0304 Design and Construction of Self-Balancing Retaining Wall for Protection Landslide in Itanagar, Arunachal Pradesh Dr. Atop Lego
6. 0405U0316 Biopolymernanocomposite film as a smart humidity sensorforfood packaging applications Devasish Chowdhury, Sazzadur Rahman
7. 0405U0318 Application of Guar Gum and its Derivatives in Polymer Composites Dr. Gopal Arora, Jaiprakash, A.P. Gupta
8. 0405U0323 Prospects of utilizing bio waste-pineapple leaf fiber for textile products T. Roshini, Sharan Madhu
9. 0405U0327 Catalytic Hydrodeoxygenation of bio-oil produced from co-pyrolysis of agricultural and plastic waste Kaustubha Mohanty, Vasu Chaudhary
10. 0405U0337 Commercial Biohydrogen production for use as Biofuel: Review Kaustubha Mohanty, Priyanka Tripathi
11. 0405U0366 KRiShI': A Manually Curated Knowledgebase on Rice Sheath Blight Disease Akash Das
12. 0405U0417 Synthesis of green nanoparticles from plants and their application in water-based drilling fluids Akashdeep Hazarika, Angshuman Chetia, Debashree Dutta, Borkha Mech Das
13. 0405U0421 Sustainable Processing of Acacia Concinna for Enhanced Oil Recovery Applications Stuti Dubey, Pathari Yash Subhash, Subrata Kumar Majumder
14. 0405U0422 A Comprehensive Review on BIM-LCA Integration for Sustainable Infrastructure Development Rhijul Sood, Boeing Laishram
15. 0406U0440 Optimization of saccharification and fermentation of alkali pretreated sugarcane tops forhigher scale bioethanol production using microbial consortium Kaustubh Chandrakant Khaire, Puneet Pathak, Vijayanand Suryakant Moholkar, Nishikant Bharadwaj, Arun Goyal
16. 0406U0473 Poverty and Inequality in North East India: Understanding the Interrelationships and Complementarities Joydeep Baruah
17. 0407U0477 Promoting Sustainable Infrastructure Development through BIM-LCA Integration: AComprehensiveReview Rhijul Sood, Boeing Laishram
18. 0407U0490 A Customized Low-Cost Sensor for Aerodynamic Heat flux Measurement Anil Kumar Rout, Niranjan Sahoo, Pankaj Kalita, Vinayak Kulkarni
19. 0412U0748 Health Emergencies and Health Workforce Surge Capacity – Policy Dilip Singh Mairembam, Varun Kakde, Rakshita

		Response and Options for Resilient Health Systems	Khanijou, Rajshree Bedamatta
20.	0413U0781	Performance of Coir Geocell Under Dynamic Loading	Kannan P, Monowar Hussain
21.	0415U0842	Innovation System of handloom artefact of Assam, a case study of Gamosa	Mridul Dutta, Arunima Kalita, Trideep Borsaikia
22.	0418U0893	Development of Outdoor Furniture Product Using 3D concrete printing	Dodda Srinivas, Uday Boddepalli, Dhrutiman Dey, Bhavesh Chaudhari, Biranchi Panda, T.G. Sitharam, G. Indu Siva Ranjani
23.	0419U0952	Lesser known medicinal and pharmacological properties of Myristica fragrans (nutmeg) as well as its scope and challenges in cultivation in Assam as well as other north-eastern states	Neha Agarwal, Sruti Deka
24.	0419U0974	Strategic biorefinery approach for bioethanol production from rice-straw using green pretreatment method and recombinant enzyme cocktail for high saccharification efficiency	Premeshwori Devi Maibam, Arun Goyal
25.	0420U1070	Design and Development of Battery Operated Weeder	D. S. Karale, Ankita Shinde, N.P. Awate, Shital Bachanwar
26.	0420U1134	Approach to an efficient delignification method for elephant grass using alkaline solvent for its application in biorefineries	Aishwarya, Arun Goyal
27.	0420U1140	Institutionalising Sustainability in Mega Infrastructure Projects: A Configurational Analysis	Nicola Thounaojam, Ganesh Devkar, Boeing Laishram
28.	0420U1206	Applications of Brewers spent grains (BSG) in food industry	Akanksha Agrawal, Darshayeeta Baruah
29.	0420U1208	Bioconversion of crude glycerol into 1,3-PDO using Clostridium pasteurianum as a whole cell factory: Green solution for chemical industry	Sahil Dhull, Soumen Kumar Maiti
30.	0420U1216	Assessing the Efficiency for Water Splitting Reaction: A Step Towards Sustainable Development	Himangshu Pratim Bhattacharyya, Manabendra Sarma
31.	0420U1223	Consolidated bioprocessing for enhanced bioethanol production from acid pretreated sugarcane bagasse slurry using consortia of Saccharomyces cerevisiae and Pichia stipitis	Jitendra Singh, Soumen Kumar Maiti
32.	0420U1233	Ambient air quality in Northeast India: PM2.5 chemical characterization	Payel Kundu, Darpa S. Jyethi, Raza Rafiqul Hoque
33.	0420U1253	Treatment of real rubber processing industry effluent using moringa oleifera stem bark powder and pseudomonas sp.; comparison of their pollutants removal efficiency	Bheem Pratap, Vidisha Kashyap, Animesh Debnath
34.	0420U1292	Feasibility study of cloth pad as a menstrual absorbent in Nagaland,	Sandhya Seetharaman

- Sikkim and Tripura in India and subsequent establishment of cloth pad production units in the North East Region
35. 0420U1309 Photovoltaic-thermal collectors with closely spaced tubes: Experimental analysis and recent Technological advancements Akash Dilip Kamble, Dr. Dudul Das, Dr. Pankaj Kalita
  36. 0420U1330 Integrated Farming System in Agriculture: For Doubling Farmers Income by 2022 Dhiraj Bhattacharjee, Archita Ojah
  37. 0420U1367 Site-Specific Nutrient Management: A Need-Based Approach to Sustainable Agriculture Ankita Nath, Nirupoma Gogoi Barua, Parismita Dutta
  38. 0420U1371 Sustainable Management of Bacterial Wilt Disease in Tomato by Exploring the Pathways associated with Ligno-suberin Wall Polymer Anurag Kashyap, Montserrat Capellades, Jorge Rencoret, Marc Valls, Nuria S. Col
  39. 0420U1407 In-silico structural characterization and functional analysis of a putative xylanase of family 30 Glycoside Hydrolase from *Ruminococcus flavefaciens* (RfGH30) Shubha Singh, Arun Goyal
  40. 0420U1444 Fabrication of Microchannel for Heat Transfer Application Rohit Kumar, Chandan Nashine, Nadaf Arman Mohaddin, Manmohan Pandey
  41. 0420U1543 Assessment of Thermal Comfort and Operational Energy Cost of Foam Concrete with Different Walling Materials for Typical Residential Building in Guwahati Chandrashekhar D. Wagh, Gandhi Indu Siva Ranjani, Vishal Shrivastava
  42. 0420U1559 Flow characteristics in a compound channel based on geometrical changes and obstruction due to vegetation in Alluvial Rivers Sukhjeet Arora, Harish Patel, Shovit Yadav, Bimlesh Kumar
  43. 0420U1561 Effect of Seepage on Alluvial Channel's Morphology Harish Patel, Sukhjeet Arora, Bimlesh Kumar
  44. 0420U1621 Bio-geophysical and socio-economic impacts of climate change in the Eastern Himalayas: an evaluation of the state-of-the-art Adani Azhoni, Pooja Chabi, Sufia Rehman
  45. 0424U1682 Estimation of bio-oil from bacterial and fungal biomass associated with a fermented fish food 'Nafam' of the Bodo community Avra Pratim Chowdhury, Diganta Narzary, Mohan Chandra Kalita
  46. 0424U1684 Laboratory evaluation and simulation study of a chemical enhanced oil recovery method for its application on a depleted oil field reservoir of Upper Assam Shilpi Sarmah, Subrata Borgohain Gogoi
  47. 0424U1708 The 2030 SDG Agenda and Aspirational Districts Programme of India – How are the Northeastern States Performing? Mahsina Rahman, Smriti Rekha Singha
  48. 0424U1753 Unsteady flow model of Gaurang River at Kokrajhar using HEC-RAS 6.0 Tunija Basumatary, Soumen Maji

49.	0424U1761	Dissolution and precipitation effect on salinity ingestion during flow through biotic and abiotic porous media	Bihung Narzary, Soumen Maji, Medalsong Ronghang
50.	0424U1843	A Review on BIM in Support of Sustainable and Green Building	Amey Chaudhari, Rhijul sood, Boeing Laishram
51.	0424U1854	Application of technical imaging for research based sustainable cultural heritage conservation and management	Antareen Talukdar
52.	0424U1855	Impact of Climate Change on rice productivity in Assam	Jemima Hussain, Jijnashi Kashyap, Armeena Sultana

## Poster Presentation

Sl no.	Abstract No.	Abstract Title	Authors
1.	0331U0171	Strength of autoclaved aerated concrete (AAC) and its masonry: a review	Amit Raj, Arun Chandra Borsaikia, Uday Shanker Dixit
2.	0404U0263	Co2 Laser Cutting of White Pat Silk –A Preliminary Work	Shrikrishna N. Joshi
3.	0405U0365	Formulation development and evaluation of antioxidant of Pogostemon Bengalensis by in vitro model	Jyutia Nargish
4.	0418U0919	Magnetic nanocellulose from Cyperus rotundas grass in the absorptive removal of rare earth element cerium (III): Toxicity studies and interpretation	Tasrin Shahnaz, Selvaraju Narayanasamy
5.	0418U0926	Et-BAC Catalysed Synthesis of $\alpha$ , $\alpha'$ -Diarylated Ketones through 1,6-Conjugate Addition of p-Chlorobenzaldehyde to p-Quinone Methides: A DFT Study	Paritosh Mondal
6.	0418U0932	Interaction of spherical particle in laminar flow	Sushant Bhagwat
7.	0420U1088	Thin-film nanocomposite membranes for the removal of heavy metal ions	Sachin Karki, Moucham Borpatra Gohaina, Diksha Yadav, Pravin G. Ingole
8.	0420U1095	Isolation and Characterization of Manganese Peroxidase from Fungal sources	Rohida Amin Hoque, Hardeo Singh Yadav, Meera yadav
9.	0420U1111	Fractional Order IMC-PID Controller Design for a Cryogenic Distillation Process	Gorakala Saikumar, Prof. Prabirkumar Saha
10.	0420U1125	Base-Delta Extended (BDE) Data Compression Technique for On-chip Data Communication	Vivekananda G, Thejaswini P
11.	0420U1188	Comparative Study of Cryptographic and Data Compression Algorithms	Vivekananda G, Thejaswini P, Priya R, Krishna Prasad B S
12.	0420U1298	Hydrogel from a short tau-derived peptide	Shubhangini Singh Verma, Nitin Chaudhary

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|-----|-----------|---|--|
| 13. | 0420U1365 | Aggregate stability and storage of carbon in relation to few agricultural practices   | Parismita Dutta, Dilip Kr. Patgiri, Ankita Nath  |
| 14. | 0420U1369 | Green synthesis of nano fertilizers: a recent approach for sustainable crop production  | Namrata Rajbonshi, Binoy Kumar Medhi, Nilay Borah  |
| 15. | 0420U1406 | Development and Characterization of ITO coated glass microchannels for high speed flow visualization  | Nadaf Arman Mohaddin, Sandip Kumar Sarma, Chandan Nashine, Rohit Kumar, Manmohan Pandey  |
| 16. | 0420U1459 | Relative Moisture Movement Behaviour of Preformed Foam Concrete Made with Two Different Natural Surfactants   | Khwairakpam Selja, Indu Siva Ranjani Gandhi  |
| 17. | 0420U1492 | Two-stage integrated process for bio-methanol production coupled with methane and carbon dioxide sequestration  | Krishna Kalyani Sahoo, Debasish Das  |
| 18. | 0424U1750 | Study on Thermal Comfort and Operational Energy Cost of Foam Concrete in comparison with Different Walling Materials for Typical Residential Building in Guwahati | Chandrashekhar D. Wagh, Indu Siva Ranjani Gandhi, Vishal Shrivastava, Khwairakpam Selija |
| 19. | 0424U1756 | Subsurface Flow Characteristics in and Around Kokrajhar, Assam  | Pulok Borah, Soumen Maji   |
| 20. | 0424U1817 | Disease Burden and Health Data in India   | Nayanakhee Sarma,  |
| 21. | 0424U1840 | Deep eutectic solvents with MWCNT/GO functionalized nanofluids for heat transfer application  | Papu Kumar Naik, Nipu Kumar Das, Tamal Banerjee  |
| 22. | 0426U1889 | Recycled Plastic Waste Derived Biopolymers for Tissue Regeneration  | KishorSarkar, Debleena Ghoshand, Krishanu Ghosal   |
| 23. | 0426U1898 | Durability of Vital Components Of Engine Operated By Alternative Fuel: An Early Replacement Requirement   | Debapratim Debnath, Suvendu Mohanty, Swarup Paul   |
| 24. | 0426U1909 | In vivobioresorbable shape memory polyester derived fromrecycled polycarbonate e-waste for tissue engineering   | Debleena Ghosh, Krishanu Ghoshal, Kishor Sarkar  |
| 25. | 0502U2163 | A microalgal biorefinery approach for bioactive molecules, biofuel, and biofertilizer using a novel carbon dioxide-tolerant strain Tetradesmus obliquus CT02      | Ankan Sinha, Debasish Das  |

## **Division 12: Sustainable Environment**

**(Editors: Prof. Mihir Kumar Purkait, Prof. S.K. Majumder and Dr. Deepmoni Deka)**

### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1	0323U0012	Two liquid phase partitioning bioreactor: A novel method for detoxification of endocrine disrupting phthalates in the environment	Dipak Kumar Kanaujiya, Kannan Pakshirajan
2	0324U0014	Insights into the biodegradation of <i>Parthenium hysterophorus</i> into a value added product through in-vessel composting technique	Krishna Chaitanya Maturi, Ajay Kalamdhad
3	0325U0053	Spatio-temporal variability in Precipitation, Land Surface Temperature and Relative Humidity in the Eastern Himalaya during 2001-2019	Aparna Gupta, Rakesh Kumar Ranjan, Alok Kumar Pandey
4	0325U0071	Isolation and Characterisation of Novel Mercury Resistant Bacteria with scope for Bioremediation and Mercury Sensing Application	Aparupa Thakuria, Reshmi Das, Kundan Kumar Singh, Arup Dutta, Lepakshi Barbora, Pranab Goswami
5	0331U0168	Source and Effect of Ambient Air Quality Meghalaya	Aishi Nath, Ganesh Chandra Dhal
6	0331U0204	A study of solid waste collection, transport, and management of Shillong city, Meghalaya	Krishna Das, Ajay Kalamdhad, Ganesh Chandra Dhal
7	0404U0296	Cellulose nanocrystal (CNC) incorporated Polyvinylidene fluoride (PVDF) nanocomposite membrane for improved performance, antifouling properties and oil water separation	Pankaj Boruah, Raghvendra Gupta, Vimal Katiyar
8	0405U0375	Spontaneous Fenton-like dye degradation in clustered-petal di-manganese copper oxide by virtue of self-cyclic redox couple	Sourav Bhowmick, Mohammad Qureshi
9	0407U0482	Multi-Metal Adsorption and Cyclic Desorption Characteristics of Cu(II) And Zn(II) Based Synthetic Industrial Wastewater Using Commercial Resins	Prabhat Kumar Patel, Lalit Mohan Pandey, Ramagopal V.S. Uppaluri
10	0416U0856	Photocatalytic Degradation of CIP by Waste Pineapple Peel Based Ni/TiO <sub>2</sub> Photocatalyst under Visible Light	Ravi, Animes Kumar Golder
11	0418U0934	A Computational Study on Catalytic Conversions of CO and N <sub>2</sub> O on Rhodium Graphene Framework	Sahidul Iqbal Borbhuyan, Paritosh Mondal
12	0418U0937	Modified Coal Fly Ash for enhanced and cost effective CO <sub>2</sub> capture	Aniruddha Ramadurgam, Inkollu Sreedhar
13	0420U1275	Fabrication of Borate Cross-Linked Graphene Oxide Framework (GOF) Laminated UF Membrane for Heavy Metal Removal	Ankush D. Sontakke, Ankit Tiwari, Mihir K. Purkait
14	0421U1562	Gramin Krishi Mausam Sewa (GKMS) for Climate Resilient Agriculture and allied sector	Naba J. Deka, Naseema Rahman, Binod Kalita, Amal C. Sarmah
15	0422U1647	Degradation of Ranitidine and Diclofenac by O <sub>3</sub> + H <sub>2</sub> O <sub>2</sub> System: Kinetic Parameters and Modelling	Kumar Kartikey Singh, Subrata Kumar Majumder

16	0424U1677	Microalgal Growth in Low-cost Media for Biodiesel Production	Bikram Chakraborty, Velentina Das, Dhanapati Deka, Sinmoy Goswami
17	0425U1751	Propensity for Segregation of Household Municipal Solid Waste: An Empirical Study	
18	0404U0296	Cellulose nanocrystal (CNC) incorporated Polyvinylidene fluoride (PVDF) nanocomposite membrane for improved performance, antifouling properties and oil water separation	Pankaj Boruah, Raghvendra Gupta, Vimal Katiyar
19	0512U3894	Organic solvent resistant nanocomposite membrane from waste plastic for treatment of petroleum industry waste water	Chinmoy Bhuyan, Achyut Konwar, Swapnali Hazarika
20	0419U0998	Ecotopian Television: An Ecocritical Analysis on Environmental Risk and Risk Reduction Discourses in Environmental Documentaries on North-east	Madhumita Chakrabarty

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0325U0040	Characterization of Fine Fraction Mined from Legacy Municipal Solid Waste Dumpsite	Vaishnavi Jahagirdar, Ajay Kalamdhad, Anil Kumar Mishra
2	0325U0050	Experimental study on melanoidin adsorption using surface modified <i>Citrus limon</i> leaf powder (CLLP)	Rahul Verma, Lal Mohan Kundu, Lalit Mohan Pandey
3	0325U0051	Identifying factors of resilience in polymer waste induced climate change using supervised and unsupervised machine learning techniques	Arnab Banerjee, Antariksha Sarkar, Vimal Katiyar, Sreedeeep S
4	0325U0070	Determination of Rutin in <i>Musa</i> Leaves by High-Performance Liquid Chromatography – A Step Towards Sustainability	Imnanaro, Rakhi Chaturvedi
5	0325U0077	Screening of chemicals (alkali and salts) for biosurfactant based <i>ex-situ</i> Microbial Enhanced Oil Recovery	Anurag Mishra, Pankaj Tiwari, Lalit M. Pandey
6	0326U0082	A Quantum Chemical Evaluation of the Extraction Mechanism of Imidacloprid from Aqueous Environment by Hydrophobic Eutectic Solvent	Nabendu Paul, Tamal Banerjee
7	0326U0086	Bioconversion of carbon dioxide to ethanol and other value-added products using anaerobic sludge biomass	Rama Karn, Manoj Kumar, Kannan Pakshirajan
8	0326U0087	Green synthesized Iron oxide nanoparticles using leaf extract of <i>Camellia sinensis var. assamica</i> for the reduction of hexavalent chromium	Aquib Jawed, Animes K. Golder, Lalit M. Pandey
9	0326U0101	Indoor Air Quality analysis of 80-year-old traditional house in Kalabgoor, Telangana, India during the winter	Subhashree Mohapatra, Shiva Ji, Jane Burry
10	0328U0115	A probe with hydrazinecarbothioamide and 1,8-naphthalimide groups for “turn-on”	Sandeep Kumar, Satyajit Mahata, Souradeep Dey,



		fluorescence detection of Hg <sup>2+</sup> and Ag <sup>+</sup> ions and live-cell imaging studies	Biman B. Mandal, Vadivelu Manivannan
11	0330U0143	3-(2-Hydroxyphenyl)imidazo[5,1- <i>a</i> ]isoquinoline as Cu(II) sensor, its Cu(II) complex for selective detection of CN <sup>-</sup> ion and biological compatibility	Satyajit Mahata, Souradeep Dey, Amlan Ranjan Rayasingh, Biman B. Mandal, Vadivelu Manivannan
12	0330U0144	Extraction, Preparation and Performance Evaluation of Plant Mucilage Based Hydrogels for Environmental Applications.	Debolina Ghosh, Deepmoni Deka, Gopal Das
13	0401U0212	Heavy Metal Stress on Plants – A Brief Overview	Neha Gautam, Gopal Das
14	0403U0236	Adsorption of Direct Blue – 6 using Zirconium Metal Organic Framework: Process optimization and molecular insights	Harish Kumar Rajendran, Selvaraju Narayanasamy
15	0403U0245	Well-defined Manganese Complex Catalyzed Dehydrogenative Synthesis of Quinazolin-4(3H)-ones and 3,4-Dihydro-2H-1,2,4-benzothiadiazine 1,1-Dioxides	Debjyoti Pal, Avijit Mondal, Dipankar Srimani
16	0404U0250	Toxicity and Adsorption mechanism of Emerging Contaminants with Corn starch nanoparticles: Case of Ibuprofen and Sulfamethoxazole pharmaceutical drugs	Vishnu Priyan V, Selvaraju Narayanasamy
17	0404U0280	Selective Synthesis of C-3 Alkylated Indoles and Bisindolylmethanes Using Alcohols Catalyzed by Well-defined NNS-Mn Complex	Avijit Mondal, Rahul Sharma, Bishal Dutta, Debjyoti Pal, Dipankar Srimani
18	0404U0281	A benevolent direction to environmental suitability: ionic liquid immobilized MoO <sub>3</sub> nanoparticles used in the efficient visible lightdriven photocatalytic degradation of antibiotics	Debarati Chakraborty, Siddhartha S. Dhar
19	0404U0284	Modified mesoporous graphitic carbon nitride: a novel high-performance heterogeneous base catalyst for transesterification reaction	Meghali Devi, Siddhartha S. Dhar
20	0404U0288	Utilization of waste pine needles for board making with single-use plastic as adhesive	Anannya Morang, Haorangbam Arundeeep Singha and Madho Singh Bisht
21	0404U0286	Reuse of Single-Use Plastic as Adhesive for Making Boards and Fuel Pellets from Bamboo Strips and Waste Pine Needles	Madho Singh Bisht, Santosh Oinam, Nirmala Chongtham
22	0404U0287	Developing plastic tiles and bamboo-plastic boards from single-use plastic.	Haorangbam Arundeeep Singha, Madho Singh Bisht
23	0405U0325	A Sustainable Approach for the Synthesis of Heterocyclic Compounds via Hydrogen Autotransfer or Acceptorless Dehydrogenative Coupling by Phosphine-Free Manganese Complex	Kalicharan Das, Avijit Mondal, Debjyoti Pal, Bishal Dutta, Dipankar Srimani
24	0405U0362	Bioremediation of oil-spill clean-up: Case studies of two major oil spills	Bikashita Shyam, Ranjan Phukan, Chinmoy Das
25	0405U0393	A Study of Mechanical and Thermal Properties of Wild Abyssinia Banana (WAB)	Temam Kadire, Shrikrishna N. Joshi

26	0405U0394	Application of MIL-100 Fe in Pharmaceutical Remediation: A Review	Ahana Dutta, Bishnupada Mandal
27	0405U0419	Extraction Efficiency and Mass Transfer of Carboxylic Acids Using Jetdriven Extraction Column	Bongliba T Sangtama, Subrata Kumar Majumder
28	0406U0455	Sustainable Lutein Production using Microalgae in Autotrophic and Heterotrophic cultivation modes	Surjith Ramasamy, Kannan Pakshirajan
29	0407U0476	Identification, cause of occurrence and remediation of disinfection by-products in treated drinking water	Sumona Koley, Ajay Kalamdhad, Meena Khwairakpam
30	0407U0485	Modeling and prediction of municipal solid waste generation in Northeast India using machine learning approaches	Tinka Singh, Ramagopal V. S. Uppaluri
31	0412U0724	Development of a microbial consortia in stimulation of Methane gas from Depleted Coal in India	Rakesh Kant Kamal, Meeta Lavania, Banwari Lal
32	0413U0778	Atmospheric Degradation of CFC-alternatives initiated by OH-radical for Sustainable Development: A Computational Study of the Reaction Mechanisms, Kinetic Studies, and Atmospheric Implications	Rabu Ranjan Changmai, Manabendra Sarma
33	0413U0790	Material recovery from waste printed circuit board using Pyrolysis and Metal extraction	Bibari Boro, Pankaj Tiwari
34	0414U0810	Synergistic Effect of Metal Complex and Dual Doped Graphitic Carbon Nitride for Superior Photocatalytic Hydrogen Evolution	Bishal Das, Meghali Devi, Siddhartha Sankar Dhar
35	0415U0840	Reductive Alkylation of Quinolines to <i>N</i> -Alkyl Tetrahydroquinolines Catalyzed by Arylboronic Acid	Priyanka Adhikari, Dipanjan Bhattacharyya, Animesh Das
36	0415U0841	Site-selective deoxygenative amination of azine <i>N</i> -oxides with carbodiimides under catalyst-, activator-, base- and solvent-free conditions	Monuranjan Konwar, Bikash Kumar Sarmah, Animesh Das
37	0417U0880	A Facile Bioinspired Route of Spinel type Co <sub>3</sub> O <sub>4</sub> NPs Synthesis using <i>Elaeocarpus Serratus L.</i> Leaves Extract	Anirban Chowdhury, Nageswara R Peela, Animes K Golder
38	0418U0894	Bioinspired Synthesis of Vertically Aligned ZnO Nanomaterials for Electrochemical Sensing of Agriculture Pesticides	Chandra Bhan, Animes Kumar Golder
39	0418U0914	Bioremediation of Antibiotics in surface waters through multi-enzyme driven approach	Tarun Gangar, Sanjukta Patra
40	0419U0949	Identification & characterization of mungbean infecting viruses in India and quantification of viral DNA in agroinoculated host and non-host plant	Kiran Vilas Dhobale, L. Sahoo
41	0419U0973	Centrifugal Size Screening of Bioinspired AgNPs for Ultrasensitive Colorimetric Detection	Swagata Patra, Animes K Golder and Ramagopal VS Uppaluri
42	0419U0994	Construction, expression, purification and biochemical characterization of a chimeric cellulase, <i>AtGH1-L1-AtGH8</i> from	Akshita Kanwar, Parmeshwar Vitthal Gavande, Kaustubh

		thermophilic bacterium <i>Acetivibrio thermocellus</i> ATCC 27405 for lignocellulosic bioethanol production	Chandrakant Khaire, Arun Dhillon, Arun Goyal
43	0419U1005	A Study on Workability, Strength, and Microstructure of Geopolymer Composites Made with Sustainable Materials	M. Leela Sai Rangarao, Arup Kumar Mohapatra, Bulu Pradhan
44	0419U1023	Effect of Sodium nitrate on the growth of <i>Chlorogloea fritschii</i> TISTR 8527 under diurnal light and Polyhydroxybutyrate production	Yashavanth P. R., Soumen Kumar Maiti
45	0419U1024	Microbes for restoring soil health of agricultural lands affected by the oil industry	Mukesh Aakula, Siddhartha Singha, Sanjukta Patra
46	0419U1025	Investigation of Microalgae Growth in Mixture of Kraft Paper Industry Effluent and Biogas Slurry	Isfakur Rasul, Bikram Chakraborty, Dhanapati Deka
47	0419U1040	Development of eco-friendly & affordable biopesticide from Entomopathogenic Nematode against insect pests for organic farming in North East India	Ankita Dey, Piyus Pandey, Baby Singha
48	0419U1041	Biotransformation of isobutyraldehyde to isobutanol by photoautotrophic wholecell biocatalyst	Meenakshi Das, Soumen Kumar Maiti
49	0419U1056	Effect of chemical treatment on decomposition profiles of carbon fiber reinforced polymer composites and its recycling	Sachin Kuriachan E, Pankaj Tiwari, Nelson Muthu
50	0420U1077	Pharmaceutically Active Compounds' (PhACs) Threat: An Environmental Prospective	Ravi Vashist, Animes Kumar Golder
51	0420U1078	Studies on the activity of duckweed species <i>Spirodela sp.</i> And their ability to remediate phenol in phenol contaminated water	Arup Dutta, Devard Stom, Pranab Goswami, Lepakshi Barbora
52	0420U1089	Fluorescent Carbons Dots from bio-wastes immobilized on mesoporous silica as an affordable next generation catalyst for adsorptive reduction of dye	Mirjufa Islam, Tuhin Bhattacharjee, Smriti Rekha Das, Deepmoni Deka, Hiranya Kumar Choudhury, Gitanjali Majumdar
53	0420U1098	Scope and Challenges of using Ecological Management Practices in Urban Watersheds: a case study in the experimental watershed of IITG	Banasri Sarma, Arup Kumar Sarma
54	0420U1124	Enhancement of biomass and lipid production via algal-bacteria consortia by treating rubber wastewater	Angana Chaudhuri, Nongmaithem Debeni Devi, Vaibhav V. Goud
55	0420U1128	Investigating the mechanisms of antifungal drug resistance using the model filamentous fungus <i>Neurospora crassa</i>	Sangeeta Deka, Ranjan Tamuli
56	0420U1155	Investigating potential insect associated bacteria from insects of 43anipur for antimicrobial acitivity	Nikena Khwairakpam, Debananda S. Ningthoujam
57	0420U1164	Valorization of Sawdust for the Adsorptive Removal of Endocrine-Disrupting Chemical Bisphenol A from Water	Ragavan Chandrasekar, Selvaraju Narayanasamy

58	0420U1167	Optimization of keratinolytic protease production by keratinolytic bacteria from feather dumping soil in Manipur, India	Amanda Nongthombam, Debananda S. Ningthoujam
59	0420U1173	Quantification of OCP residues in Cow milk of Dhanbad City, Jharkhand, India	Rituparna Mitra Barman, Arindam Barman
60	0420U1184	Correlative HHV prediction from proximate and ultimate analysis of char obtained from co-cracking of residual fuel oil with plastics	Pamreishang Kasar, Md. Ahmaruzzaman
61	0420U1187	The synergistic effect of a nickel ion on the corrosion inhibition efficiency of purple rice bran extract in acidic media	Abhradip Pal, Chandan Das
62	0420U1217	Comprehensive characterization, development, and application of natural/Assam Kaolin-based ceramic microfiltration membrane	Ankit Agarwalla, Kaustubha Mohanty
63	0420U1256	Pretreatment of Landfill Leachate: A Review	Ashmita Kundu, Ajay Kalamdhad
64	0420U1260	Enhanced biomass production of anthracene degrading microbial strains promote sustainability through accelerated bioremediation of petroleum refinery waste	Prithwi Chayan Chatterjee, Sanjukta Patra, Mohammad Jawed
65	0420U1329	Climate Resilient Agriculture to Combat Climate Change Impacts in NorthEast India	Nayanjyoti Sarma, Mriganko Kakoti, Parishmita Das, Jyotishman Goswami
66	0420U1331	Studies on Production of Pullulan and its Industrial Applications	Kuhelika Das, Vimal Katiyar
67	0420U1383	Evaluation of Compression Behavior of MICP Treated Laterite Soil	Abhijit Deka, Diksha Dutta, Himadri Saloi
68	0420U1386	The impact of climate change on maize yields and its adaptation with changing climatic scenario	Jyotishman Goswami, Tarik Aziz Hazarika, Supriya Kaushik
69	0420U1387	Trend analysis of temperature and precipitation in the state of Sikkim for the past century	Darpa Saurav Jyethi
70	0420U1403	Mechanical strength evaluation of Bamboo-composites for its use in low to medium scale structural components.	Mridusmita Bora, Nirranjan Sahoo, Poonam Kumari
71	0420U1404	Copper-Catalyzed Oxidative Dehydrogenative Reaction of Quinoline-N-Oxides with Donor-Acceptor Cyclopropanes: Installation of a Tertiary Alkyl Motif at C <sub>2</sub> Position	Bikash Kumar Sarmah, Monuranjan Konwar, Animesh Das
72	0420U1436	A comparative study of biological treatment of invasive terrestrial weed using three different composting technologies	Heena Kauser, Meena Khwairakpam
73	0420U1463	Carbon Dioxide Sequestration by Carbonic Anhydrase	Anindita Hazarika, Meera Yadav
74	0420U1484	Biotransformatic Studies of Phenolic Compounds by Purified Peroxidase Enzyme	Shilpa Saikia, Hardeo Singh Yadav
75	0420U1490	Bioconversion of lignocellulosic weed in to nutrient rich compost	Suryateja Pottipati, Ajay Kalamdhad
76	0420U1493	Organic Nitrogen Application on Algal Growth for Biodiesel Production	Bikram Chakraborty, Velentina Das, Dhanapati Deka

77	0420U1504	Millet: A Potential Climate Smart Crop Under Assam Condition	Nishigandha Kakati, Angita Baruah, Chandamita Das, Roshani Yadav
78	0420U1517	Ecosystem restoration through natural farming	Tapan Senchowa, Pankhi Priya Neog, Bidisha Boruah
79	0420U1528	Fox tail millet: An emerging nutri-cereal of Assam	Archita Ojah, Dhiraj Bhattacharjee
80	0421U1544	Flow hydrodynamics influences due to flood plain sand mining in a meandering channel	O.P. Maurya, K.K. Nandi, S. Modalavalasa, S. Dutta
81	0421U1557	Influence of Inorganic Salts on Hydraulic and Volume Change behaviour of Acacia Gum amended Granular Bentonite under Chemo-Mechanical Loadings	Ajeet Sharma, Himanshu Yadav, T.V. Bharat
82	0421U1564	A Simple Microfluidic Viscometer	Chintak Kamalesh Parashar, Anvesh Dixit, Satarupa Dutta, Jiwajyoti Mahanta, Nayanjyoti Kakati, Dipankar Bandyopadhyay
83	0425U1698	Removal of Methylene Blue Dye from Textile Industry Wastewater Using Plantain Pith	Lakshmi Priya P.B, Rosemary Francis, Gayathri B
84	0425U1802	A Review on Effect of Endocrine Disruptors Chemicals on Humans and Wildlife.	Alan Sam Jacob, Chandan Mahanta
85	0425U1806	One-pot Bioinspired Route of Synthesis of SnO <sub>2</sub> NPs for Electrochemical CO <sub>2</sub> - into-Formate Conversion	Anirban Chowdhury, Nageswara R Peela, Animes K Golder
86	425U1748	Bio-intensive approach for sustainable management of <i>Xanthomonas arboricola</i> pv. <i>Pruni</i> causing bacterial leaf spot of stone fruits	Rajashree Chetia, P. K. Borah, B. C. Nath
87	0502U2141	Optimization of Water Scrubber Based Biogas Purification System with Cost-Effective Packing Materials	Arun Sathyan, Rishabh Ranjan, Ajay Kalamdhad, Meena Khwairakpam
88	0504U2262	Numerical analysis of Particulate Matter 2.5 to get the Diffusion Model of North-East India using Anomalous Diffusion Equation	Somnath Das, Dilip Pal
89	0508U2727	Systematic and Real-time Monitoring of Quality and Quantity of Surface Water using Geospatial Technology	Venkatesh Ravichandran, Wasim, S. Prem Kumar, Mihir Kumar Purkait, T. G. Sitharam
90	0508U2756	Construction of galactose metabolism in probiotic strain <i>Lactobacillus delbreuckii</i> subsp. <i>bulgaricus</i> for enhanced D-lactic acid production from whey permeate	Payal Mukherjee, M Sanjeeva Kumar, Senthilkumar Sivaprakasam

### **Division 13: Sustainable Energy Generation and Storage**

**(Editors: Prof. Vijayanand S. Moholkar, Prof. Kaustubha Mohanty and Prof. Vaibhav V. Goud; Assisting Team: Dr. Lepakshi Barborah, Dr. Pankaj Kalita, Dr. T. Ranjith, Dr. E.S.N. Raju P., Mr. Karan Kumar, Mr. Rabindra Banik)**

## Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0325U0043	Paper Based Pencil Drawn Multilayer Graphene-Polyaniline Nanofiber Electrodes for All Solid-State Symmetric Supercapacitors with Enhanced Cyclic Stabilities	Debajyoti Mahanta, Sabina Yeasmin, Simi Talukdar
2	0325U0064	Analysis of food waste as a substantial potential for biohydrogen production	Vijayanand S. Moholkar, Avinash Anand
3	0405U0341	An efficient multifunctional endoglucanase (RfGH5_4) added to the toolbox of biomass conversion to deconstruct the lignocellulose for bioethanol production	Parmeshwar Vitthal Gavande, Arun Goyal
4	0405U0357	Development of Supercapacitor Cells using Low-grade Coal-derived Carbon: Sustainable Utilization of NER Resources	Dhrubajyoti Bhattacharjya, Binoy K. Saikia, Mousumi Bora, Joyshil Tamuly, Santhi Maria Benoy
5	0405U0374	Bioaugmented Polyaniline decorated Poly(lactic acid) nanofiber electrode by Electrospinning technique for real wastewater fed MFC application	Bhanupriya Das, Soundararajan Narendren, Sourav Pratim Kashyap, Jer-Huan Jang, Chin - Tsan Wang, Vimal Katiyar
6	0405U0427	Ammonia Route in Green Hydrogen Blending for Domestic Applications	Suchita C. Barhate, Niranjana Sahoo
7	0408U0504	High performance PANI-PSSNa doped counter electrode for dye-sensitized solar cells	Harsh Chaturvedi, Chandan Dawo
8	0412U0734	Synthesis and Characterization of form-stable biocomposite phase change materials	Pankaj Kalita, Urbashi Bordoloi
9	0413U0805	Detailed Investigation of Pyrolysis Mechanism of Indian Oil Shale	Bhargav Baruah, Pankaj Tiwari
10	0325U0055	Mechanistic aspects of enhanced kinetics in sonoenzymatic processes using three simultaneous approaches	Karan Kumar, Vijayanand S. Moholkar
11	0419U1004	Optimization of process variables for biodiesel production from oleaginous microalgae, <i>Scenedesmus abundans</i> NCIM 2897 using lipase enzyme	Soumen Kumar Maiti, Mahesh R
12	0419U1039	Optimization of a Nano Fluid Based Enhanced Oil Recovery for a Depleted Oil Field of Upper Assam	Subrata Borgohain Gogoi, Miranda Kakoty
13	0420U1171	Thermo-economic analysis of plasma gasification integrated steam and combined cycle based on Refused Derived Fuel (RDF) feedstock	Prabu V, Roni Mallick
14	0420U1172	Development of reforming catalyst for hydrogen generation and its suitability for proton exchange membrane fuel cell	Rajesh Kumar Upadhyay, Punam Priya Borgohain, Pankaj Tiwari
15	0420U1178	A numerical study on a c-Si(p) substrate-based homo-hetero junction solar cell	Himangshu Deka, Arun Kumar Sunaniya, Pratima Agarwal
16	0420U1221	Applicability of amine functionalized graphene oxide nanofluids in multistage flash solar desalination system	Tamal Banerjee, Nipu Kumar Das

17	0421U1607	Designing of artificial photosynthesis catalyst and mechanistic understanding for alternative future fuels	Wangkheimayum Marjit Singh
18	0420U1339	Experimental investigation of a dual fuel diesel engine run on simulated biogas (SBG) and blended biodiesel	Pankaj Kalita, Samar Das
19	0420U1340	Investigation of Pore-scale Flow Dynamics during Two-Phase Flow in Fractured Porous Medium	Vikas Kumar Sharma, Pankaj Tiwari, Anugrah Singh
20	0420U1388	Modelling of a-Si(p)/a-Si(i)/c-Si(n) heterojunction solar cells using AFORS software	Pratima Agarwal, Juhi Kumari, Rahul
21	0420U1435	Study of gas-liquid flow in microchannel for sustainable energy application	Deepak Kumar Mishra, Anugrah Singh, Raghvendra Gupta
22	0420U1449	Effect of feedstocks mixing ratio and temperature on biogas generation from the co-digestion of cattle dung and kitchen waste with addition of biochar	Pankaj Kalita, Shayaram Basumatary, Pranab Goswami
23	0420U1451	Kinetic Study of Ethanol Oxidation Reaction on Low-Platinum Pt-Ag/C Electrocatalysts for Fuel Cell Applications	Nageswara Rao Peela, Sarmistha Baruah, Akshai Kumar A S
24	0420U1500	Development of Novel Drag-based Vertical-axis Wind Rotor Bio-inspired from Orange Sea-pen	Umang H. Rathod, Vinayak Kulkarni, Ujjwal K. Saha
25	0420U1516	Enrichment of fuel properties of rice husk by torrefaction for utilizing as gasification feedstock	Pankaj Kalita, Rabindra Kangsha Banik, Joyshree Konwar
26	0420U1521	Numerical Study of the Effect of Gurney Flaps on the Aerodynamic Performance Augmentation of the H-type Darrieus Wind Rotors	Kabita Naik, Niranjan Sahoo
27	0420U1527	Estimation of Wind Turbine Wake Propagation for Efficient Wind Farm Modelling	Ojing Siram, Niranjan Sahoo
28	0425U1779	Thermogravimetric analysis and pyrolysis kinetics of coal-biomass blends	Vijayanand Suryakant Moholkar, Pankaj Kalita, Debarshi Baruah, Debarshi Mallick
29	0425U1791	A Data Mining Approach to Diagnose Wind Turbine Blade Fault Conditions Using Vibration Signals with Lazy Classifiers	Manas Ranjan Sethi, Sudarsan Sahoo
30	0425U1819	Synthesis of MOF based TiO <sub>2</sub> /GO/UiO-66 Ternary Nanocomposite for Photocatalytic Reduction of CO <sub>2</sub> to Value-added Chemicals	Animes K. Golder, Priyanuj Bania, Bishnupada Mandal

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0325U0022	Effect of structural, dielectric and optical properties of Gd modified LaFeO <sub>3</sub> pervoskite	B N Parida, R K Parida, Nabasmita Saikia, R L Hota

2	0418U0920	Using Open-source electronics in aiding algal biofuel research	Kaustubha Mohanty, Saptaswa Biswas, S. Venkata Mohan
3	0326U0099	FeO(OH)/CoCeV (oxy)hydroxide as a water cleavage promoter	Ching Thian Moi, Sourav Bhowmick, Mohammad Qureshi
4	0401U0219	Biomass-based solid materials as efficient catalyst for synthesis of renewable biodiesel	Sanjay Basumatary, Bidangshri Basumatary, Biswajit Nath
5	0405U0343	An investigation on the effect of charging current on energy density of Lithium polymer batteries	Pankaj Kalita, Vijaya
6	0405U0353	Carbon Dioxide Injection for Combined Enhanced Oil Recovery and Sequestration	Chinmoy Das, Ranjan Phukan, Bikashita Shyam
7	0418U0895	Photocatalytic Reduction of CO <sub>2</sub> to Value-added Chemicals Catalyzed by CdS/ CQDs Nanocomposites	Amines K Golder, Pramod Gawal
8	0419U1020	A review on the performance and emissions of diesel engine fuelled with different fuel blends	Md. S. Mujaheed Khan, Niranjana Sahoo
9	0420U1105	Identification of a Surfactant-Polymer (SP) slug for Enhanced Oil Recovery application in mature oilfields	Ankurjyoti Dutta, Shilpi Sarmah, Subrata Borgohain Gogoi
10	0420U1219	Design of a microreactor for biodiesel synthesis	Raghvendra Gupta, Mohammad Anzar Hussain
11	0420U1276	Current Energy Challenges in India and Proposed Novel Low Cost, Flexible, Thin and Transparent Solar Cell Solutions	Avinash Kumar, Anka Datta
12	0420U1306	Optimization and Simulation of Bifacial Heterojunction Solar Cell with Gradient Doping Using Afors-Het	Gaurav Singh, Pratima Agarwal
13	0420U1511	Systematic Literature Review of Pyrolysis technology for the treatment of Municipal Solid Waste (MSW)	Silvia Saikia, Ajay S. Kalamdhad
14	0421U1555	Distinguishing the Intermediate Behavior of Wind Turbine Wake from near to far wake regimes	Ravi Kumar, Ujjwal K. Saha, Niranjana Sahoo
15	0421U1563	Microbial pretreatment using Pseudomonas putida for biogas augmentation and hydrocarbon degradation from activated refinery sludge	Shinjini Paul Choudhury, Ajay S. Kalamdhad
16	0420U1314	Designing of Iron (II) based artificial water oxidation catalyst of polypyridyl ligand	Wangkheimayum Marjit Singh, Emelda Ahongshangbam
17	0421U1633	Facile Hydrothermal Synthesis of Au-Mn <sub>3</sub> O <sub>4</sub> decorated Graphene Oxide Nanocomposites for Energy Storage Application	Gitish Kishor Dutta, Siddheswar Rudra
18	0425U1815	Simulation of Bed Hydrodynamics of a Dual Fluidized Bed System	Pankaj Kalita, Joyshree Konwar, Rabindra Kangsha Banik
19	0425U1818	Can indigoids hold the key for efficient singlet fission	Abdul Wahab, Bidyut Das, Smiti Rani Bora, Dhruva Jyoti Kalita



## Division 14: Sustainable Transportation and Urban Development

(Editors: Prof. Akhilesh Kumar Maurya and Dr. Nipjyoti Bharadwaj)

### Oral Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0420U1384	Variability of Critical Speed Positions on Horizontal Curves of Highways in Hilly Terrain	Kuldeep Kalita, Akhilesh Kumar Maurya
2	0420U1481	Modelling Heterogeneous Non-Lane Based Traffic: Review and Considerations	Surya H R, Akhilesh Kumar Maurya, Shriniwas S Arkatkar
3	0425U1842	Study of vehicular interactions and safety in merging sections in mixed traffic condition	Sharif Hossain, Uttarayan Roy, Anuj Kishor Budhkar
4	0406U0457	Conceptual Design of Electric Vehicle with Regenerative Braking System	Basant Kumar Mishra, Gaurav Trivedi, U.S. Dixit
5	0418U0900	Brand Switching Intentions & Analysis of Critical Factors of Car Industry in context of Assam	Dipu Goswami, Vivek Kumar, Rama Koteswara Rao Kondasani
6	0405U0363	Computational Analysis of Crude Oil Pipeline Transportation	Bondita Robidas, Madhurjya Phukan, Subrata Borgohain Gogoi
7	0417U0864	A Review on development of Underwater Vehicles for Transportation	B. P. Bonthala, B. Panda, U.S. Dixit
8	0420U1322	Detection of Semantic Attack in C-ITS	Ajay Kumar, Pankaj Kumar, Ashok Singh Sairam
9	0423U1655	Modelling and CFD Simulation of Hull of an Underwater Vehicle	Pratik Raj, Uday S. Dixit
10	0425U1816	An experimental investigation on performances and emission characteristics of IC engine using Jatropha oil biodiesel blended with CNT	Manabjyoti dutta, Manjula Das Ghatak, DipekSen
11	0420U1520	Experimental Investigation of Bio-inspired Lift Enhancing Effectors on the Wings	Anand Verma, Vinayak Kulkarni
12	0405U0410	Pavement Structural Analysis and Cost-Benefit Assessment of Bituminous Concrete Mixtures with Pyrolytic Chars from Tyre and Plastic Wastes	Abhinay Kumar, Rajan Choudhary, Ankush Kumar
13	0405U0423	Behaviour of Rubberized and Composite Rubberized Asphalt Binders under Steady and Dynamic Conditions	AnkushKumar, Rajan Choudhary, AbhinayKumar
14	0420U1355	A Four-dimensional Combinatorial Optimization problem in a hilly region under Road Restoration	Madhushree Das, Apurba Manna, Arindam Roy, Samir Maity
15	0425U1780	Management of roadway stability on a hill slope by the use of lightweight EPS Geofoam	Gurusamy K, Nayan Jyoti sarma, Arindam Dey
16	0425U1804	Improving the strength of subgrade for unreinforced unpaved roads resting on c-φ soil: A Finite Element study	Nayan Jyoti Sarma, Arindam Dey

- 17 0417U0872 Global Trends in Sustainable Design of Long Span Bridges Saibaba Ankala

## **Division 15: Teaching Learning Technologies**

**(Editors: Prof. Hemant B. Kaushik, Prof. U.S. Dixit, Prof. John Jose and Prof. Bithiah Grace Jaganathan)**

### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1	0327U0104	Importance of Scientific Writing for Enhancing the Science Education in Northeast India	Shyaman Saloi, U.S. Dixit
2	0413U0793	Pedagogical Approaches in Teaching Continuum Mechanics to Graduate Students – A Personal Perspective	Sachin Singh Gautam
3	0418U0907	Importance of Biology for Engineers	Lalit M. Pandey, Chinmaya Panda, Shreya R.
4	0419U0987	Displaying Dynamic Changes in Graph in an Interactive Classroom	Rajaram Swaminathan
5	0420U1108	Mathematical Finance: Pedagogical Perspectives and Opportunities	Siddhartha Pratim Chakrabarty
6	0420U1126	Design Intervention to Teach Life Skills	Smriti, Mriganka Madhukaillya
7	0420U1159	Impact of Additive Manufacturing Technology on Education: A Review	Faladrum Sharma, Uday Shanker Dixit
8	0420U1203	From Chalk and Talk to 21st Century Readiness for Teaching-Learning	Richa Parasher, Mona Khanna, Saumya Tripathi
9	0420U1228	Research Methodology: Revisiting Indian Knowledge Systems	Rajeshwar Mukherjee
10	0420U1254	The Question Concerning Technology in Northeast India	Cristina Bogdan, Leon Tan, Mriganka Madhukaillya,
11	0420U1283	Gamification of Education	Spandan Das, Mriganka Madhukaillya
12	0420U1421	Application of Multimedia Based Tools for Training and Education of Special Children	Shraddha Pal, Biraj Das, Dristilima Kalita
13	0423U1652	Innovations in Teaching & Learning: Need of the Hour	Sunil Pandey

## **Division 16: Technologies for Rural Development**

**(Editors: Prof. Sanjukta Patra, Dr. Sudip Mitra, Dr. Siddharth Singha and Dr. Pankaj Kalita)**

### **Oral Presentation**

<b>Sl. No.</b>	<b>Abstract No.</b>	<b>Abstract Title</b>	<b>Authors</b>
1	0325U0056	Placement of Booster Chlorinator based on water age analysis for the dead-end sections of drinking water distribution network	Senthilmurugan Subbiah, Dinesh kumar gautam Shanmugam V
2	0331U0175	Doubling Farmers' income through promotion of Organic Farming at All Kling Darbar, Ri-Bhoi District, Meghalaya	Saikat Majumdar, Gayatri Saikia, Dr. Papiya Dutta, Dr. Sanjib Kumar Dutta
3	0404U0307	Enhancing Farmer Adoption of Sustainable Crop Residue Management	Vijesh V. Krishna
4	0405U0367	Production of biochar from Areca nut husk: Structural and physicochemical properties, sustainability and role in the circular economy	Aman Chourasia, Ashmita Das, Sudip Mitra
5	0405U0379	Development of sustainable adsorbent from agricultural wastes for the efficient removal of Nickel (II) present in the aqueous system	Ashmita Das, Aman Chourasia, Sudip Mitra
6	0418U0885	Development of a Hand Tractor Powered Digger Cum Leaf Topper for Onion Crop	Hifjur Raheman, Lokesh Kumawat
7	0419U0978	A Modified Gender Friendly Paddy Weeder Suitable for Hill Agriculture	Sapunii Sebastian, Karuna Kalita
8	0419U0985	Utilization of green banana powder as a carrier material for encapsulation of probiotic cells	Anurag Singh, Namram Sushindrajit Singh
9	0419U1015	Value addition of compost to enhance its disease suppressive ability against plant diseases	Jyoti, Meena Khwairakpam
10	0420U1066	Innovation in nucleus engineering and golden freshwater designer pearl production: A first report	Akalesh Kumar Verma, Namram Sushindrajit Singh
11	0420U1068	Development of an Electronically Controlled Metering and Conveying Mechanism for Mat Preparation in Paddy Nurseries	Vinod Choudhary, Mahendra Jatoliya Rajendra Machavaram

12	0420U1106	Roles of invertebrates during the composting process	Phurailatpam Sujata, Meena Khwairakpam
13	0420U1150	Utilization of Brahmaputra river bed material in treating domestic wastewater using Vermifiltration	Ankit Kumar, Anshul Kumar Meena Khwairakpam
14	0420U1175	A Study on the Efficiencies of nature-based packaging and coating materials on citrus fruits of North-East India	Himjyoti Dutta, Sayantan Chakraborty, Tridip Kumar Hazarika, Siddhartha Singha
15	0420U1245	Induction of RNA mediated resistance against Cucumber mosaic virus on exogenous application of dsRNA	Anindita Saikia, Gowtham Kumar Routhu, Dr. Munmi Borah
16	0420U1363	Study the effects of storage temperature, relative humidity, and packaging material on the shelf life of the milled black rice packed in the different flexible packaging systems	Siddhartha Singha, C, Shashikumar, Sudip Mitra
17	0420U1410	design and development of battery operated weeder	D. S. Karale, Ankita Shinde, N.P.Awate, Shital Bachanwar
18	0420U1473	A Vedic Jiva Upakara Tantra (Vedic altruism) based telemedicine for rural health care in India	Bikul Das, Tutumoni Baishya, Lekhika Pathak, Rupam Das, Sailen Baishya, Partha Saikia, Shirshajit Mitra, Nihar Ranjan Das, Tapan Das, Marcie Black , Joel Therrien, Hem Bhai
19	0420U1479	Market Assessment & Process Engineering of a Traditional Fermented Dairy Product: A Product for Rural Entrepreneurship	Siddhartha Singha, Vinny Kohli and Neha Jha
20	0426U1881	Protective role of leafy vegetables in rural areas: critical review of biology & processing	Siddhartha Singha, Esha Bala
21	0425U1703	Effect of nanoparticles on morpho-physiology of Eri silkworm, Samia cynthia ricini (Boisduval)	Hia Kalita, Sikha Haritha, Bimal Kumar Sahoo, Mahesh Pathak, R. K. Patidar, Kennedy N., Pranab Dutta
22	0425U1737	Synergistic Effect of Insecticides and Metarhizium anisopliae (Metchnikoff) Sorokin on Sucking Pests in Rice	Bimal Kumar Sahoo, Sikha Haritha, Hia Kalita, Mahesh Pathak, R. K. Patidar, Kennedy N, Pranab Dutta
23	0425U1754	A review on downdraft gasifiers for small scale thermal applications	Dr. Pankaj Kalita, Karan Kumar Bharti, Debarshi Baruahkaran
24	0425U1823	Development of manual vegetable transplanter for small and marginal farmers	Jaya Sinha, S. K. Patel

## Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0330U0156	IoT based automation of Agro and Fish farming	Goutam Saha, Wanbanker Khongbuh, Rohit Kumar Das
2	0405U0321	MPAT: A curated database of Medicinal Plants Against Tuberculosis Scope and application of information technology towards rural health and development	Sanjukta Patra, Risha Hazarika

3	0405U0418	Design and development of porous radiant burner for biogas for household applications	Pankaj Kalita, Naseer Ahmad Mir, Siddhartha Singha
4	0420U1060	Potential of biogas from various biomass sources in North-Eastern region of India	Prakash Singh, Ajay Kalamdhad
5	0420U1093	RNA based Biopesticides - A novel management strategy against Potato virus Y in potato and Cucumber mosaic virus in Bhut jolokia	Gowtham kumar Routhu, P. D. Nath, Sundaresha Siddappa, Munmi Borah
6	0420U1196	Detection of Citrus tristeza virus (CTV) in different age groups of Assam lemon (Citrus limon Burm) by molecular approach	Dikshita Saikia, Siva Roopa Kumar KSD, Anurag Kashyap and Palash Deb Nath
7	0420U1199	Potential Prospects of Vertical Vegetable Farming	Arindam Barman, Hozerana Chuane R Marak
8	0420U1230	Exploring plant resources and bio-agents against Phytophthora spp. in citrus	Mridupol Handique, Sukanya Gogoi and Dr. Popy Bora
9	0420U1303	Exploring the effect of Allamanda extract on mycelial growth enhancement of Oyster mushroom	Tanushree Das, H.K. Deva Nath, D.K. Sarmah
10	0420U1304	Compatibility Studies of Biocontrol Agents (BCAs) with agro-chemicals	Pooja Bharadwaz, B. C. Nath
11	0420U1372	Role of plant growth promoting rhizobacteria against Fusarium oxysporum f.sp lycopersici causing Fusarium wilt in tomato	Lopamudra Giri, Daisy Senapoty and Pranjal Kr Kaman
12	0420U1396	A Field with A Future- Artificial Intelligence for Better Seeds.	Bidisha Boruah, Pankhi Priya Neog, Tapan Senchowa
13	0420U1398	Applications of Artificial Intelligence to Track Plant Diseases	Donee Gohain
14	0420U1425	Effect of size reduction on field-level solid food analysis for safety and quality assessment	Siddhartha Singha, Mindewar Amey Shiram
15	0421U1535	Nanotechnology: A Cutting-Edge Technology for Sustainable Agriculture	Indrani D. Borah, Shibani R. Borah
16	0421U1537	Nanotechnology -A cutting Edge Technology for Sustainable Agriculture	Shibani R. Borah, Indrani D. Borah
17	0421U1542	Citrus Jambhiri	Siddhartha Singha, G Victor Kumar and Dr. Tejpal Dhewa
18	0421U1549	Exploration of citrus fruits as promising treatment of dyslipidemia and obesity for rural population	Siddhartha Singha, Arunima Dhar
19	0425U1735	Characterization of microbial diversity and dynamics during the process of compost	Sanjana Sinha, Angom Sarjubala Devi
20	0425U1762	Development of Web Page and Android Application for IoT Enabled Agricultural System	Alok Kumar, Sushant and Surajit Kundu
21	0425U1765	Development of IoT enabled Multi-sensor unit for Agricultural Applications	Arjun Mandal, Arun Kumar, Anusha Dogra, Dheeraj Pandey, Surajit Kundu
22	0425U1847	Diversity of native Bacillus spp. of mid hills of Meghalaya with special reference to Bacillus thuringiensis (Berliner)	Sainath Reddy Desam, Kennedy N, MSV
23	0426U1879	Rural Sustainable Development with Solar Energy Options	Satyanarayana, Sudharshan KR Vidya Patil, Bravimraj Desai, Nipul Girase

- 24 0430U2080 Exploring diversity of *Bacillus thuringiensis* in the NER for mining novel insecticidal genes" (on going project) Desam Sainath Reddy, Kennedy Ningthoujam, Sudharshan K R

## Miscellaneous

(Coordinator: Dr. S. S. Gautam)

### Poster Presentation

Sl. No.	Abstract No.	Abstract Title	Authors
1	0508U2783	Low-temperature and low-energy biomass conversion to fuel and chemicals	Parikshit Gogoi, Yulin Deng
2	0509U2846	Pyrolysis of <i>A. Indica</i> in a benchtop tubular reactor: Fuel characterization	Gaffer Ahmed, Nanda Kishore
3	0509U2848	Analytical Pyrolysis of Tube Waste: Reaction Kinetics Study	Draksharapu Rammohan, Nanda Kishore, Ramgopal V. S. Uppaluri
4	0509U2849	Kinetic and Thermodynamic Studies on Pyrolysis Behaviour of Plastic Waste Using Thermogravimetric Analysis	Annapureddy Praveen Kumar Reddy, Draksharapu Rammohan, Nanda Kishore
5	0509U2850	Kinetic and Thermodynamic Studies on Pyrolysis Behaviour of <i>Peltophorum Pterocarpum</i> via Thermogravimetric analysis	Narra Thejaswini, Draksharapu Rammohan, Nanda Kishore
6	0509U2851	Hydro-Liquefaction of <i>Lemna Minor</i> (Duckweed) and Methanol Co-Feed at Low Hydrogen Pressures in Stirred Autoclave Reactor	Sneha Acharya, Nanda Kishore
7	0509U2871	Phytochemistry, Pharmacological properties and traditional uses of <i>Moringa oleifera</i> plant: An overview	Smrity Moni Baishya, Nabiulla Ali, Netra Sharma, Taslima Jahan
8	0509U2954	Peptide conjugated liposome targeting $\alpha\beta3$ integrin for potential alleviation of atherosclerosis	Nusalpu Puro, Deep Jyoti Das, Rinku Baishya
9	0509U2956	A photovoltaic device based on polymer with metal oxide nanocomposite in active layer	Seema Verma, Chandra Mohan Singh Negi, Saral Kumar Gupta
10	0509U2975	Diversity and Seasonal Variations of Bacterial Endophytes of Medicinal Plants of North-East India: A Review	Priyanka Deka, M. S. Dkhar
11	0509U2976	Synthesis, Single-crystal XRD, spectral and computational analysis of 2-(3,4-dimethoxyphenyl)-1H-phenanthro[9,10-d]imidazole as Electron-transport and NLO material	Peter Solo, M. Arockia Doss
12	0510U3044	A Prevalent Study of Hepatitis C Virus Infection in a Tertiary Health – Care Setting of Mizoram, India.	Lalrinpari Sailo, Swagnik Roy, Gracy Laldinmawii, Zomuanpui Colney
13	0329U0128	Microwave Synthesis of Gold Nanoparticles Using Pomelo Extract	Shyamal Mandal, Jesmin Akter, Dewan Mahammad Sahil, Saifunnar Khatun, Rohit Kumar Ram, Juwesh Binong

14	0509U2904	Design and Development of Real time Application Using Bluetooth and FPGA	Thingom Devcandra Singh
15	0510U3088	Oxidative dehalogenation of halophenols by high-valent nonheme iron(IV)-oxo intermediates	Umesh Kumar Bagha and Chivukula V. Sastri
16	0510U3240	Bio-medical and e-waste management services by EML Healthcare Private Limited Bhopal	Sagar Pawar, Rutuja Chavan, Sandesh Sanjeev Phalke, Varun Mishra, Ashok Singh
17	0510U3244	Time & space savior agro-techniques for Swertia chirayita conservation-through-cultivation: a critically-endangered temperate-Himalayan medicinal plant, at Meghalaya region of India	Jitendra Kumar Shukla, Kishor Basor, Bharti Kashyap, Pulok K. Mukherjee
18	0510U3244	Delayed Dual Emission from Single Component Two-Dimensional Assembly of Copper Nanoclusters	Priya Das, Arun Chattopadhyay
19	0510U3269	Essential Oil Evaluation of Large Cardamom ( <i>Amomum subulatum</i> ): A high value cash crop from Shillong, Meghalaya, India.	Kishor Basor, Jitendra Kumar Shukla, Pulok K. Mukherjee, Nilava Debabhuti
20	0510U3355	Ginsenoside profiling in endophyte-free and endophyte-treated plants of <i>Panax sokpayensis</i> , a species from Sikkim Himalaya	Shweta Rai, Pardeep Kumar Bhardwaj, Pulok K. Mukherjee
21	0510U3366	Biomedical Activity of Ag Coated Bionanocomposites Film	Rebika Baruah, Archana Yadav. Archana Moni Das
22	0510U3380	Industrial solid waste valorization through integrated novel biological approach	Jayeeta Hazarika, Suryateja Pottipati, Bhaskar Borgohain, Meena Khwairakpam
23	0510U3395	Twin-graphene as an Anode Material for Na and Mg-ion Batteries.	Harkishan Dua, Utpal Sarkar
24	0510U3414	Enrichment of Online Learning through Social Networks	Rahul Chandra Kushwaha
25	0510U3419	Penta-graphene as an Efficient Sensor for Detection of Formaldehyde	Nirmal Barman, Jyotirmoy Deb, Utpal Sarkar
26	0510U3426	Use of domestic microwave in the synthesis of copper oxide nanoparticles and its application in photocatalysis of Methyl Orange.	Nikhil Parasar, Bidhan Mohanta
27	0510U3428	Value addition of underutilized fruit <i>Elaeagnus latifolia</i> : a high value plant species of Northeast region of India with immense nutritional and ethno-medicinal properties	Evanylla Kharlyngdoh, Jitendra Kumar Shukla, Kishor Basor, Longing Basuk Langstieh, Pulok K. Mukherjee
28	0511U3476	In-Domain Data Augmentation for COVID-19 Detection using Acoustics Information	Adhitiya Sharma, Shivam
29	0511U3493	Aggregation induced delayed green fluorescence from assembly of gold nanoclusters: Be used as an advanced probe for “background free” pyrophosphate recognition	Santanu Dolai, Srestha Basu, Anumita Paul
30	0511U3506	Microwave Synthesis of Gold Nanoparticles Using Pomelo Extract	Shyamal Mandal, Jesmin Akter, Dewan Mahammad Sahil, Saifunnar Khatun, Rohit Kumar Ram, Juwesh Binong

31	0511U3536	Evaluating the essential oil content of Cinnamomum tamala leaves from East Khasi Hill, Meghalaya, India.	Kishor Basor, Evanylla Kharlyngdoh, Shweta Rai, Jitendra Kumar Shukla, Pulok K. Mukherjee
32	0511U3539	Ratiometric Visual Detection of Long-Chain Unsaturated Fatty Acids In Commercial Vegetable Oils	Mihir Mann, Satyapriya Bhandari, Arun Chattopadhyay
33	0511U3544	Materials for Sustainable Development	Jyotirmoy Deb, Utpal Sarkar
34	0511U3583	Appropriate seed planter for ginger cultivation in North East India: A Review	Nilkamal Kalita, S.K. Kakoty
35	0511U3599	Frequency of Occurrence of Monsoon Cyclonic Disturbances over South Asia	Abhay Bhattarai, Atri Deshamukhya
36	0512U3660	Applications of Fractional Calculus in daily life	Aniruddha Seal
37	0512U3675	Urban Flood Management with Sustainable Drainage System in Kokrajhar Town, Assam	Sagar Basumatary, Debshri Swargiary, Soumen Maji
38	0325U0069	In vitro callus induction from endosperms of Indian black rice (Oryza sativa L.)	Arabindu Debbarma, Rakhi Chaturvedi
39	0512U3719	$\alpha$ -Nitro- $\alpha,\beta$ -Unsaturated Ketones: An Electrophilic Acyl Transfer Reagent in Catalytic Asymmetric Friedel-Crafts and Michael Reactions	Chandrakanta Parida, Subhas Chandra Pan
40	0512U3725	Preparation of a New Hybrid Reinforced MMC by Using a Commercially Low Cost New Casting Process to check the mechanical property and microstructure	Debashis Podder, Dr. Uttam Kumar Mandal, Dr. Sujoy Chakraborty, Dr. Nabarun Biswas
41	0512U3757	Organocatalytic Asymmetric Synthesis of Cyclic Acetals with Spirooxindole Skeleton	Amit Shikari, Subhas Chandra Pan
42	0512U3763	Optimization of Lactic Acid Production from Pineapple By-Products and an Inexpensive Nitrogen Source Using Lactobacillus plantarum strain 4O8	Joel Romial Ngouenam, Pierre Marie Kaktcham, Chancel Hector Momo Kenfack, Edith Marius, Foko Kouam, Sanjukta Patra, Francois Zambou Ngoufack
43	0512U3774	Organocatalytic Asymmetric Reaction between $\alpha$ -Cyano Enones and Dioxindoles: Synthesis of Dihydrofuran-Spirooxindoles	Subhankar Biswas, Subhas Chandra Pan
44	0512U3776	Organocatalytic Enantioselective Divergent Synthesis of 8-membered ring and Spiro[benzofuran-cyclopentane] from Azadienes and yneones	Rupkumar Khuntua, Subhas Chandra Pan
45	0512U3852	Extraction Efficiency and Mass Transfer of Carboxylic Acids Using Jet-driven Extraction Column	Bongliba T. Sangtama, Subrata Kumar Majumder
46	0512U3861	Investigating the characteristics and functions of MAGOH paralogs	Ayushi Rehman, Anil Mukund Limaye, Kusum Kumari Singh
47	0512U3864	Preparation of nano anti-inflammatory, antioxidant bandages with Tumeric Reduced Copper nano	Nandini Priyam Rajkumari, Kalyani Adhikari, Abdur Rouf, Pratima Roy and Pallabi Goswami
48	0512U3872	Small Fullerenes and Their Applications	Debolina Paul, Utpal Sarkar
49	0512U3889	Functionalized Single-Walled Carbon Nanotube-reduced Graphene Oxide	Monti Gogoi, Swapnali Hazarika



		Nanocomposite Membrane for Enantiomer Separation	
50	0512U3892	A new approach for removal of dyes from textile industry wastewater by functionalized activated carbon polymeric membrane	Rajiv Goswami, Swapnali Hazarika
51	0512U3895	Evaluation of Compression Behavior of MICP Treated Laterite Soil	Abhijit Deka, Diksha Dutta, Himadri Saloi
52	0512U3898	Ionic Liquid Functionalized Clay Based Thin-Film Nanocomposite Membrane for Separation of Polyphenols from Food Industry Waste	Alimpia Borah, Swapnali Hazarika
53	0512U3899	Extraction of Edible Natural Dye and Nutritional Analysis for Food Applications	Krishna Kamal Hazarika, Bharty Kakoti, Alimpia Borah, Swapnali Hazarika
54	0512U3900	Cellulose acetate blended ionic liquid-Poly (vinylidene fluoride) membrane for treatment of textile industry waste	Hrishikesh Sarmah, Swapnali Hazarika
55	0512U3901	Nanoflower CdS-CeO <sub>2</sub> heterojunction as efficient photocatalyst for highly selective C-N coupling reactions	Lisamoni Kalita, Lakshi Saikia
56	0512U3902	The implication of a novel vitamin K dependent protein, Gamma-glutamyl carboxylated Gas6 in mediating the positive role of vitamin K on lowering hyperglycemia in type 2 diabetes	Anjum Dihingia, Jatin Kalita, Prasenjit Manna
57	0512U3931	Resource efficient automatic skin lesion classification along with its FPGA implementation using HLS4ML	Gegerin Konsam, Chandan Karfa, Aheibam Dinamani Singh, Keisham Pritamdas, Mohammad Abderehman
58	0512U3947	Implementation of IoT based Facial Recognition System in vehicles using Raspberry Pi	Kelveen Raj Oinam, Dr. Aheibam Dinamani Singh
59	0407U0478	Visible light assisted generation of molecular hydrogen under photoredox catalytic route at neutral pH	Ladapborlang Mawrie, Sanghamitra Deka, Fazlur Rahman, Nicholus Bhattcharjee, Sarifuddin Gazi
60	0427U1949	Artificial Intelligence-based intervention for lung cancer nodule segmentation	Ananya Bhattacharjee, R Murugan
61		Discovery of Natural Products and Their Structural Chemo-Selective Modification for Pharmacological Applications	Amit Kumar, Sarabjit Kaur, Archana Moni Das and Sheikh Tasduq Abdulla
62		Cooperativity of Non-Covalent Interactions	Y. Bhargav Kumar and G. Narahari Sastry
63		Non-covalent Interactions	Anwesh Pandey and G. Narahari Sastry
64		Mining Chemical Space: What Machine Learning can do, which is not possible otherwise?	Hridoy Jyoti Mahanta, Lijo John and G. Narahari Sastry
65		Development of An Open Source Computational Drug Discovery Software: Molecular Property Diagnostic Suite (MPDS)	Selvaraman Nagamani, MPDS Consortium and G. Narahari Sastry
66		Drug Repurposing: The Prospect and Challenges	Esther Jamir and G. Narahari Sastry

- 67                      Chemical modification of lignin and thereafter grafting with lactic acid for flexible polymer film preparation                      Koushik Dutta and Ajit Singh
- 68                      Protein Hydrolysate from Bio-waste of Indian Silk Industry to Fight Malnutrition                      Ravi Kumar Sahu, Prachurjya Dutta and Jatin Kalita