



2nd International Conference on  
**FUTURE ASPECTS OF  
SUSTAINABLE TECHNOLOGIES**

(Virtual Platform)

Date: 20-21 October 2020

Organised by  
Department of Chemistry,  
Central Institute of Technology Kokrajhar,  
Deemed to be University under MHRD, Govt. of India,  
Kokrajhar, BTR, Assam-783370, India.



**PROGRAMME**

**DAY 1, 20 October 2020, TUESDAY**

TIME	PROGRAM
	<b>11:30-2.30PM (Day 1, 1<sup>st</sup> Session)</b> Session Co-ordinators: Dr. Anamika Kalita Deka /Dr. Arunendu Mondal
11:30-11:45AM	<b><u>INAUGURATION</u></b> <b>Speech of Convener:</b> Dr. Pranjal Kalita, Associate Professor, Dept. of Chemistry, CITK <b>Welcome Speech:</b> Ms. Chiatali Bramha, Registrar, CITK <b>Welcome Speech and Opening of e-Abstract Volume:</b> Prof. Debkumar Chakrabarti, Director, CITK
11:45-12:30AM	<b><u>KEYNOTE SPEAKER</u></b> <b>Dr. Rajiv Kumar</b> Ex-Chief Scientist and Consultant, Tata chemicals and Innovation Center, Ex-HoD of Catalytic Division, NCL,Pune Title: Catalysis for highly selective and sustainable organic transformations.
12:30-1:15PM	<b><u>KEYNOTE SPEAKER</u></b> <b>Prof. Karen Wilson</b> Applied Chemistry and Environmental Science RMIT University, Melbourne, Australia Title: Designing advanced catalytic materials for biorefining of waste biomass
1:15-2:15PM	<b><u>LUNCH BREAK</u></b>
	<b>2:15-6.05PM ( Day 1, 2<sup>nd</sup> Session)</b> Session Co-ordinators: Dr. Bhaskar Saha/Mr.Ranjan Patowary
2:15-2:35PM	<b><u>INVITED SPEAKER</u></b> <b>Dr. Bipul Sarma</b> Assistant Professor, Department of Chemical Science Tezpur University, Tezpur, Assam, India Title: Control Drug Nucleation on SAMs

**2.35-4:05 PM (Day 1, 2<sup>nd</sup> Session)**

**ORAL PRESENTATIONS**

**Session Chair: Dr. Vivek Polshettiwar**

<b>OP1(2:35 - 2:45PM)</b>	<b>Biosynthesis of triangular-shape ZnO nanoparticles using Tecomastans and its antimicrobial activity,</b> Lalthazuala Rokhum, Department of Chemistry, University of Cambridge, Lensfield Road, Cambridge CB2 1EW, UK
<b>OP19(2.45- 2.55PM)</b>	<b>An Invasive Weed Optimization coupled Biomass and Product Dynamics study of Soyabean Waste utilization towards Fungal Lipase Production,</b> Surendra Kumar Parashar, Department of Chemistry and Chemical Engineering, Jaypee University of Engineering and Technology, Guna, Madhya Pradesh, India
<b>OP3(2.55- 3.05PM)</b>	<b>GREEN TECHNOLOGY TO CONVERT PLASTIC WASTE TO FINE CHEMICALS</b> Amita Chaudhary, Institute of Technology, Nirma University, Ahmedabad, India
<b>OP21(3.05- 3.15PM)</b>	<b>Adsorption of Industrial Dye from Its Aqueous Solution by Acid Treated Bioadsorbent White Frangipani,</b> Jahnabi Deka, Department of Chemistry, Gauhati University, Guwahati, Assam, India
<b>OP5(3.15- 3.25PM)</b>	<b>Divergent reactions of Indoles,</b> Pranjal K. Baruah, Department of Applied Sciences, Gauhati University, Guwahati, Assam, India
<b>OP6(3.25- 3.35PM)</b>	<b>Complete oxidation of propene using ceria modified Cu/Hydroxyapatite catalyst: Effect of preparation method and Ce concentration</b> P.M. More, Department of Chemistry, Institute of Chemical Technology, Matunga, Mumbai-400019, India.
<b>OP7(3.35- 3.45PM)</b>	<b>Plumeriarubra f. rubra: A Novel Ligand for Cupric Ion Detection</b> Ankur H. Dwivedi, Department of Chemical Engineering, School of Engineering, Institute of Technology, Nirma University, Ahmedabad-382481, INDIA
<b>OP8(3.45- 3.55PM)</b>	<b>Recovery of Lignin from pulp and paper mill effluent by forward osmosis process</b> S. Basu, National Institute of Advanced Manufacturing Technology (NIMT), Ranchi, Jharkhand-834003, India
<b>OP9(3.55- 4.05PM)</b>	<b>Greener synthesis of acridinium photocatalysts and their application towards efficient organic transformations</b> Biswajit Gopal Roy, Department of Chemistry, Sikkim University, 6th Mile, Tadong, Gangtok, Sikkim – 737102, India
<b>4:05- 4.25PM</b>	<b><u>INVITED SPEAKER</u></b> <b>Dr. Shivendu Ranjan</b>  Faculty of Engineering and the Built Environment, University of Johannesburg, Auckland Park Campus, South Africa  Title: Environmental, Health, and Safety Implications of Nanomaterials: Critical Issues

**4.25-6.05 PM (Day 1, 2<sup>nd</sup> Session)**

**ORAL PRESENTATIONS**

**Session Chair: Dr. Shivendu Ranjan**

OP10(4.25-4.35PM)	<b>Two-step Conversion of Levulinic Acid from Biomass Derivatives Using Autogenous Catalyst and H-Mordenite Zeolite,</b> Bharath Velaga, Department of Chemical Engineering, Indian Institute of Technology Guwahati, India.
OP11(4.35-4.45PM)	<b>Diversity Oriented Synthesis of Biologically Active Heterocycles using Sustainable Technologies</b> Kaushik Chanda, Department of Chemistry, School of Advanced Science, Vellore Institute of Technology, Vellore, India
OP11(4.45-4.55PM)	<b>Design of Environmentally Benign Nano-Lignin Sol for Different Applications.</b> Surojit Gupta, Department of Mechanical Engineering, University of North Dakota, USA.
OP12(4.55-5.05PM)	<b>Biochemical Composition and Nutritional Value of Small Indigenous Fish species <i>Amblypharyngodon mola</i> from Kokrajhar, Assam, India.</b> Dr. Sharmistha Chakraborty, Department of Chemistry, Science College, Kokrajhar, Kokrajhar, BTR, Assam, India.
OP13(5.05-5.15PM)	<b>Towards the upgrading of lignocellulosic biomass: An efficient approach for the synthesis of bio-fuel intermediates over <math>\gamma</math>-Alumina Supported Sodium Aluminate</b> Kempanna S. Kanakikodi, Materials Science & Catalysis Division, Poornaprajna Institute of Scientific Research (PPISR), Bangalore, India.
OP14(5.15-5.25PM)	<b>Effect of Wettability on Vacuum-driven Bubble Nucleation</b> Sushobhan Pradhan, School of Chemical Engineering, Oklahoma State University, Stillwater, OK 74078, USA
OP15(5.25-5.35PM)	<b>Green synthesis of ZnO nanoflowers using <i>Oxalis corniculata</i> extract</b> Hina F Badgular, School of Nano Sciences, Central University of Gujarat, Gandhinagar-382030, Gujarat, India
OP16(5.35-5.45PM)	<b>A broad review on Arginine and its application in dentistry</b> Dr. Antarikshya Das, Kalinga Institute of Dental Sciences. Campus 5, KIIT University, Patia road, Bhubaneswar, Odisha, India
OP17(5.45-5.55PM)	<b>A low-cost rechargeable battery with aluminum and graphite</b> Dr. Shyamal Kumar Das, Department of Physics, Tezpur University, Assam, India
OP18(5.55-6.05PM)	<b>A sustainable approach of tuning Potato waste towards Bioethanol production using Indigenous microbes of Himachal Pradesh, India</b> Mamta Chauhan, Crop Physiology, Biochemistry and Post-Harvest Technology. Division, ICAR-Central Potato Research Institute, Shimla, Himachal Pradesh, India.

**5:00-7:30PM POSTER PRESENTATIONS (Google Meet)**

**Group 1: PP1-PP25** (<https://meet.google.com/xdq-urut-gtq>)

**Group 2: PP26-PP50** (<https://meet.google.com/rib-efzz-ikc>)

**Group 3: PP51-PP77** (<https://meet.google.com/bof-uxji-awq>)

**DAY 2, 21 October 2020, WEDNESDAY****11:30-2.30PM (Day 2, 1<sup>st</sup> Session)**

Session Co-ordinators: Dr. Kaushik Chandra Dev Sarmah/ Mr Ranjan Patowary

<b>11:30-11:50PM</b>	<b><u>INVITED SPEAKER</u></b> <b>Dr. Bharat Baruah</b>  Professor, Kennesaw State University, Atlanta, USA  Title: Fabrication of Composite Materials Containing Nanostructured Metal Oxide Semiconductor and Polymer Capped Plasmonic Nanoparticles: Photocatalysis
<b>11:50-12:10PM</b>	<b><u>INVITED SPEAKER</u></b> <b>Dr. Arunendu Mondal</b>  Associate professor, Department of Chemistry, CIT Kokrajhar, Assam, India  Title: A review on development of metal-organic frameworks (MOFs): Synthetic approach and applications
<b>12:10PM-1:30PM</b> <b><u>ORAL PRESENTATIONS</u></b> <b><u>Session Chair Person: Dr. Vivek Polshwhettair</u></b>	
<b>OP2 (12:10-12:20PM)</b>	<b>An efficient colorimetric sensor for the detection of cyanide ions by hydrazide derivatives.</b> Balamurali MM, Chemistry Division, School of Advanced Sciences, Vellore Institute of Technology, Chennai, India.
<b>OP20(12.20-12.30PM)</b>	<b>Purification Of Crude Bentonite Clay, Characterization And Base Catalytic Application Of Cu-Modified Bentonite Clay</b> Debasis Borah, Department of Chemistry, Bodoland University, Kokrajhar, Assam, India
<b>OP4(12.30-12.40PM)</b>	<b>Diversity Oriented Synthesis of Biologically Active Heterocycles using Sustainable Technologies.</b> Kaushik Chanda, Department of Chemistry, School of Advanced Science, Vellore Institute of Technology, Vellore, India.
<b>OP22(12.40-12.50PM)</b>	<b>Controlling and stabilization of Ru nanoparticles by tuning the nitrogen content of the support for enhanced H<sub>2</sub> production through aqueous phase reforming of glycerol</b> Pranjal Gogoi, CSIR-National Chemical Laboratory, Pune-411008, Maharashtra, India
<b>OP 29 (12.50-1.00PM)</b>	<b>Fabricating Green ZnO Nanoparticles Using Aqueous Extract of Coconut Husk for Photocatalytic Activity</b> Manasi Buzar Baruah, Department of Physics, Central Institute of Technology Kokrajhar (Deemed to be University, MHRD, Govt. of India), Kokrajhar, Assam, India..
<b>1.00-2.00 PM</b>	<b>LUNCH BREAK</b>

	<b>2:20-4.00PM (Day 2, 2nd Session)</b> Session Co-ordinators: Dr. Sahalad Borgoyary/Mr. Sajib Narzary
<b>2.00-2.20 PM</b>	<b><u>INVITED SPEAKER</u></b> <b>Dr. Vivek Polshettiwar</b>  Department of Chemical Science (TIFR), Mumbai, India  Title: "Nanocatalysis: A Key Role for Sustainable Energy and Environment"
<b>2.20-2.40 PM</b>	<b><u>INVITED SPEAKER</u></b> <b><u>Dr. Lakshi Saikia</u></b>  Sr. Scientist, Material Science Division, CSIR-North East Institute of Science and Technology, Jorhat, India  Title: 2D nanocomposite materials for sunlight driven benzene hydroxylation and environmental remediation
<b>2.40-4:00PM</b> <b><u>ORAL PRESENTATIONS</u></b> Session Chair Person: <b><u>Dr. Lakshi Saikia</u></b>	
<b>OP 24(2.40-2.50 PM)</b>	<b>Preparation and characterization of Chitosan based biocomposite thin films using <i>Tectonagrandis</i> as an active component</b> Jutika Goswami, Department of Chemistry, Assam Engineering College, Jalukbari, Guwahati, Assam, India.
<b>OP25(2.50-3.00PM)</b>	<b>Green Synthesis of Fatty Acid Methyl Esters through Entrapped Lipase-mediated Transesterification</b> Vijay Kumar Garlapati, Microbial Biotechnology and DSP Laboratory, Agricultural and Food Engineering Dept, IIT Kharagpur, West Bengal, India.
<b>OP26(3.00-3.10PM)</b>	<b>Magnetically active CuFe<sub>2</sub>O<sub>4</sub> as heterogeneous catalyst for the synthesis of pyrido[2,3-<i>d</i>]pyrimidines, 1,2,3-triazoles and 3, 5-diaryl-1<i>H</i>-pyrazoles</b> Lakhinath Saikia, Department of Chemistry, Rajiv Gandhi University, Rono-Hills, Itanagar, Arunachal Pradesh, India.
<b>OP27(3.10-3.20PM)</b>	<b>Advanced Materials for Vertically Aligned Liquid Crystal Displays</b> Sarmistha Mondal, Department of Electronics and Communication Engineering, Siliguri Institute of Technology, Siliguri, India.
<b>OP28 (3.20-3.30 PM)</b>	<b>Optical, Transport and Magnetic behavior of Ca-modified new double perovskite</b> Sourav Bhattacharjee, Department of Physics, Central Institute of Technology, Kokrajhar (Deemed to be University, MHRD, Govt. of India), BTAD Assam-783370
<b>OP23(3.30-3.40PM)</b>	<b>Experimental Investigation of Biosurfactant with Nanoparticles for Enhanced Oil Recovery</b> Sanket J. Joshi, Oil & Gas Research Center, Sultan Qaboos University, Muscat, Oman
<b>OP30(3.40-3.50PM)</b>	<b>Ethnic Food Beverages: Identification of Sustainable Compounds</b> Anamika Kalita Deka, Department of Chemistry, Central Institute of Technology Kokrajhar (Deemed to be University, MHRD, Govt. of India), Kokrajhar, Assam, India.

<b>OP31(3.50-4.00PM)</b>	<p align="center"><b>Charge-assisted Hydrogen bonds and Nitrile···Nitrile interactions directed assemblies in Coordination Complexes: Anticancer activities and Theoretical Studies</b></p> <p align="center">Pranay Sharma, Department of Chemistry, Cotton University, Guwahati-781001, Assam, India.</p>
<p align="center"><b>4:00-4.15 PM</b></p> <p align="center"><b>Prize Distribution &amp; Valedictory Function</b>(Session Co-ordinator:Dr. Manasi Buzar Baruah)</p>	
<p align="center"><b>4.15-4.45 PM</b></p> <p align="center"><b>Vote of Thanks</b></p>	

**Cisco Webex Software for FAST 2.0 Conference Links**

**Day 1 Schedule 1: 11:30-1:30: Tuesday**

International Conference FAST 2.0. Oral Presentation (Day 1 Session 1)

Tuesday, Oct 20, 2020 11:30 am | 2 hours | (UTC+05:30) Chennai, Kolkata, Mumbai, New Delhi

Meeting number: 170 017 0990

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**Day 1 Schedule 2: 2:30-7:30 Tuesday**

International Conference FAST 2.0. Oral Presentation (Day 1 Session 2)

Meeting number: 170 151 0837

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**Day 2 Schedule 1: 11:30-1:30**

International Conference FAST 2.0. Oral Presentation (Day 2 Session 1)

Meeting number: 170 506 4630

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**Day 2 Schedule 2: 2:30-7:30**

International Conference FAST 2.0. Oral Presentation (Day 2 Session 2)

Meeting number: 170 505 0789

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