

INTERNATIONAL CONFERENCE
ON

ENERGY AND ENVIRONMENTAL TECHNOLOGIES FOR SUSTAINABLE DEVELOPMENT



February 14th- 16th, 2020



Organised By

CHEMICAL ENGINEERING DEPARTMENT

Motilal Nehru National Institute of Technology Allahabad

Prayagraj-211004 (India)

Sponsored By



TEQIP-3



**P
R
O
G
R
A
M
S
C
H
E
D
U
L
E**

CHEM-CONFLUX²⁰

Chem conflux



Conference Schedule

Day 1:
Feb. 14, 2020



Registration

(09:00 – 10:00)



Inauguration

(10:00 – 11:00)



High Tea

(11:00 – 11:30)

Keynote Lecture 1

Prof. Reza Zarghami

(11:30 – 12:30)



Keynote Lecture 2

Prof. Nishith Verma

(12:30 – 13:30)



Lunch

(13:30 – 14:30)



Keynote Lecture 3

Prof. Zainal Ahmad

(14:30 – 15:15)



Keynote Lecture 4

Prof. S. P. Lohani

(15:15 – 16:00)



Tea Break

(16:00 – 16:15)



Poster Session

(16:15 – 17:45)



Dinner

(20:00 – 22:00)



** All Keynote talks will be held in the Institute Seminar Hall **

*International Conference On
Energy and Environmental Technologies for Sustainable Development*



POSTER SESSION

Venue: Design Center

Time: 16:15 - 17:45

Paper No.	Paper Topic and Author (s)
22	Adsorptive removal of diclofenac sodium (NSAID) from its aqueous solution using polyaniline (PANI) <i>Prerna Higgins, Shaziya H. Siddiqui, Rajeev Kumar</i>
34	Graphene and multi walled carbon nanotube composite PVDF membranes via wet phase inversion method for membrane distillation based desalination <i>Ramesh Birmo, Rushikesh Zod and Shrikant Dawande</i>
41	Application of green composites in food packaging <i>Km. Deeksha Jaiswal and G.L. Devnani</i>
43	Effect of oxygen presence on the cathodic recovery of copper in the microbial fuel cell <i>Monali Chhatbar, Arvind Kumar Mungray and Alka A. Mungray</i>
56	Eco-friendly magnetic biopolymer beads for removal of heavy metals from waste water <i>Priti Rani, PS. Jassal</i>
60	Biofuels: past present and future <i>Ishan Srivastava and Himani Agarwal</i>
69	Mathematical modelling for drying potato under type indirect solar dryer <i>Deepak Singh, Dhananjay Singh, Mukul Sengar</i>
71	Pre-treatment of locally isolated microalgae DBRF-1 (<i>Chlorella</i> sp.) for biofuel production <i>Sweta Singh, Atul Grover, Piyush Joshi, Madhu Bala</i>
72	Studies on molecularly imprinted polymer based electrochemical sensors for detection of chemical pollutants <i>Saumya Sharma, S.K Pandey, S.K Gupta, A Srivastava and Ida Tiwari</i>
80	Green approach to biodiesel synthesis from wet microalgae using ionic liquid catalyst in the presence of ultrasound <i>Dipesh S Patle ; Ashutosh Pandey, Kamlesh Banlinge, Vijay Khajone, Pundlik Bhagat</i>
82	Delay compensation using filtered smith predictor: A VRFT Approach <i>Bhagya Shree Sonowal, Suresh Kumar Chiluka, Rajeev Jangid and Uday Bhaskar Babu Gara</i>
83	Ultrasonic intensified biodiesel production from algal biomass: a review of current advancements, issues, and future directions <i>Dipesh Shikchand Patle, Ashutosh Pandey, Sameer Srivastava, Shivendu Ranjan</i>

84	Data based PIDcontroller design for unstable system based on robustness: A VRFT Approach <i>Rajeev Jangid, Suresh Kumar Chiluka, Bhagya Shree Sonowal and Uday Bhaskar Babu Gara</i>
87	Utilization of rice husk ash : waste to value <i>Rashmi Rupam and Sanjiv Kumar Gupta</i>
93	Recent advances for abatement of CO and CH4 emissions from CNG fuelled vehicles <i>Snehlata Singh, Deepak Yadav and Jitendra Kumar</i>
95	Water disinfection of ground water using acoustic cavitation <i>Maharshi Yadav, Savesh Patel, Jyoti and Vitthal L. Gole</i>
96	Perovskite-based solar photovoltaic cell: A review <i>Sidra Khatoon and Jyotsna Singh</i>
104	A critical review on advances in electrocoagulation process for wastewater treatment <i>Ratnesh Kumar Patel, Shambhoo Sharana, Ravi Shankara and Prateek Khare</i>
105	Microwave assisted extraction of bioactive compounds: A Review <i>Nikhita Yadav, Shubham Sharma, Jaison Sam Joys and Sushil Kumar</i>
106	Alkali treated natural fibers:application in polymer composites <i>Juli Pandey and G.L. Devnani</i>
107	Synergistic extraction of gallic acid with two different extractants tri-n-octylamine and aliquat-336 dissolved in 1-decanol <i>Shitanshu Pandey, Sushil Kumar</i>
108	Production and characterization of liquid fuel from argemone mexicana seed by thermal pyrolysis <i>Satya Prakash Pandey and Sachin Kumar</i>
112	Coagulation-Ultrafiltration hybrid system for river water treatment <i>Arun Arya; Malla Akash; Sadhana Sachan</i>
113	A review on release mechanism of fluoride in Raebareli district and its remedial measures <i>Pragya Singh, Dr. Abhishek Saxena</i>
121	Concurrent phycoremediation of common effluent treatment plant wastewater-Vapi, Gujarat by suspended and immobilized consortium of microalgae <i>Ashita Rai, M.H. Fulekar, Vinayak V. Pathak</i>
125	Thermal regulation of solar photovoltaic modules by incorporating phase change materials to enhance the yield <i>Priyanka Verma, Sidra Khatoon, Vishwadeep Chakraborty, Satish Kumar Yadav, Rajendra Bahadur Singh and Jyotsna Singh</i>
129	Scope for BIM-based solution in municipal solid waste management infrastructure: A review <i>Gaurav S. Narlawara and P. G. Sonavane</i>
130	Performance study of the membrane-less septic tank MFC <i>Jain Suransh; Alok Kumar Tiwari; Arvind Kumar Mungray</i>
133	Status and future of biodiesel industry in India; a Delphi analysis perspective <i>Dipesh Kumar and Bhaskar Singh</i>
134	Fuel cells & sustainable development in India: A review <i>Sandeep B. Mundhe, Raunak S. Khandelwal and Prakash G. Jadhav</i>

143	Adsorption isotherm of trichloroethylene onto activated carbon <i>Shradha V Nikam and D Mandal</i>
145	Studies on biodiesel:an alternative to fossil fuels <i>Riya Gautam, Satyendra Nath Tripathi, Srashti Tripathi and Tej Pratap Singh</i>
147	Comparative study on life cycle impacts of commercial and organic cotton cloth menstrual pad <i>Harender kumar, Er. Hemant Bherwani, Er. Ankit Gupta</i>
150	Role of nanoparticles/membranes for purification of waste water <i>Jyoti Yadav, Pratima Chauhan</i>
151	In situ synthesis of fatty acid methyl ester from microalgae: a dry route approach vs a wet route approach <i>Aman Kumar, Sushil Kumar, Dipesh S Patle</i>
153	Solid lubrication is an alternative cutting fluid to hydro carbon based cutting fluid <i>B.Singarave, L.Suvarna rajub and Ch.Divya</i>
155	Design of packed bed reactor in ammonia production plant using Aspen Plus <i>Fahad Al Hinai, Ganesh Patil, Lakkim Rao, Parimal Bhambare, Santosh Walke</i>
156	Root cause analysis of drop in fuel economy for CVT driven two-wheeler using shainin® component search TM approach <i>Dhruv Panchal, Jaimin Gadhiya, Bhaveshkumar Patel</i>
157	Reactive extraction of pimelic (heptanedioic) acid from dilute aqueous solutions using Tri-n-Octylamine in biocompatible diluents mixture <i>Arvind Jaiswal, Shitanshu Pandey, Dipesh S. Patle and Sushil Kumar</i>
158	Frankincense essential oil extraction using steam distillation, hydro distillation and solvent extraction methods: a comparison <i>Abdalla Ayoub Abdalla, Parimal S. Bhambare, Ganesh N. Patil and Santosh Walke</i>
159	Comparison of simulation studies for ethyl acetate esterification process by reactive distillation <i>Ganesh N. Patil, Nirmala Gnanasundaram</i>
160	Assessment of the status of municipal solid waste characterizations and management strategies (mswm) for the lucknow city- capital of Uttar Pradesh, India <i>Neha Gupta, Gaurav Sachan</i>
161	Energy consumption analysis in a hospital building in the composite climate area <i>Ankish Aman, Om Prakash, Saurabh Ranjan</i>
163	Application of ZnO doped iron oxide nanoparticles in degradation of Rhodamine-6G from waste water <i>Arijit Dutta Gupta , Mandavi Gosami and Harinder Singh</i>
165	Recent advances in sustainable technology for 3-D printing filament from recycled plastic <i>Richa Pandey, Dr Sweta and Mainak Mandal</i>
166	Status and challenges of municipal solid waste management in Ranchi, City, Jharkhand, India: - A review <i>Ankish Aman, P.K. Srivastava</i>
169	Study on the effect of supplementary cementitious materials as cement replacement on the properties of concrete <i>Pooja Jha, A.K.Sachan and R.P.Singh</i>

- 172 **Variation of water quality characteristics of river Ganges at Prayagraj (ALLAHABAD), U.P.**
Satyendra Nath, Priya S. Gidhi and Mohd Nafees
- 173 **Bionanocomposites in packaging : recent developments and future trends**
Aayush Gupta and Amaan Anjum
- 174 **Additive manufacturing applications in disaster shelter procurement and fast fabrication**
Richa Pandey, Neeta Kumari
- 212 **Methanol sensing using catalyst free nickel foam modified with solvo-thermally synthesized magnetite (Fe₃O₄) nanoparticles**
Bhim Sen Yadav, Anand Kumar Vishwakarma, Naresh Kumar
- 213 **Banana fiber reinforced epoxy composite a good solution for various technological applications**
Zeeshan Nusrat and Anshuman Srivastava
- 214 **Critical success factors of green supply chain management and their impact on environmental sustainability: An AHP approach**
Ravi Kant Singh and Ubaid Ahmad Khan
- 215 **A review on post remediation value added utilization of contaminated vetiver plant**
Pawan Kumar, Roop Kishor and V P Singh
- 216 **Valorisation practices in sustainable utilization of rice husk ash: a review**
Roop Kishor, Pawan Kumar and V P Singh

CHEM-CONFLUX²⁰

Chem conflux



Conference Schedule

Day 2:
Feb. 15, 2020



Breakfast
(09:00 – 10:00)

Keynote Lecture 5
Prof. Devendra Mohan
(10:00 – 10:45)



Keynote Lecture 6
Prof. P. K. Mishra
(10:45 – 11:30)



Tea Break
(11:30 – 11:45)



Oral Presentations
(Parallel sessions 1-5)
(11:45 – 13:30)



Lunch
(13:30 – 14:30)



Keynote Lecture 7
Dr. Gaurav Mishra
(14:30 – 15:10)



Keynote Lecture 8
(15:10 – 15:50)



Tea Break
(15:50 – 16:00)



Oral Presentations
(Parallel sessions 1-5)
(16:00 – 17:30)

Gala Dinner with Cultural Program
(20:00 – 22:00)



** All Keynote talks will be held in the Institute Seminar Hall **

**International Conference On
Energy and Environmental Technologies for Sustainable Development**



ORAL PRESENTATIONS

Time: 11:45 – 13:30

Venue / Oral Sessions

Paper Topic and Author (s)

LHC-2/ SESSION 1:

Renewable and Alternative
Energy/ Fuels



Invited talk by Dr. Jyotsna Singh

- **Some investigations on concrete funnel solar cooker (Paper no. 21)**
Jignesh Mehta and Abhishek Parmar
- **Performance analysis of solar energy operated crop cutting machine (Paper no. 29)**
Abhay Singh, Rahul Dev and Sanjoy Kumar Samdarshi
- **Study on kinetics-thermodynamics and environmental parameter of biodiesel production from waste cooking oil and castor oil using potassium modified ceria oxide catalyst (paper no. 36)**
Tania Roy and Prof. Yogesh Chandra Sharma
- **Biodiesel production from microalgal oil using barium-calcium- zinc mixed oxide base catalyst: optimization studies (paper no. 37)**
Reena Singh and Yogesh Chandra Sharma
- **Studies on process optimization of biodiesel production from mahua oil using Strontium Titanate as heterogeneous basic catalyst: kinetics and thermodynamic study (Paper no. 40)**
Shalini Sahani and Yogesh Chandra Sharma
- **In-situ Transesterification of microalgal biomass: A simulation study (Paper no. 68)**
Mukhtar Ahmed, Zainal Ahmad and Dipesh Shikchand Patle
- **Performance improvement of solar cavity receiver using selective coating (paper no. 79)**
Inderjeet Singh and Santosh B. Bopche
- **A review of recent advances in evacuated tube solar collectors (paper no. 181)**
Amit Ranjan

LHC-3/ SESSION 2:

Biomass Utilization and
Bioenergy



Invited talk by Dr. R. K. Singh

- **Impact of chlorpyrifos on microbial community structure of aerobic biomass in sequencing batch reactors (Paper no. 13)**
Rajneesh Kumar, Gurvinder Kaur Saini and Mohammad Jawed
- **Esterification of cellulose-derived levulinic acid using methanesulfonic acid supported on silica gel (MeSO₃H-SiO₂) as the catalyst (Paper no. 44)**
Sharath B.O., Nivedha Vinod, Viraj M.G. and Saikat Dutta
- **Meta-heuristic algorithms based control for a TISO fuel cell system using PSO (Paper no. 81)**
Govind Anil, S Srinath and G Uday Bhaskar Babu
- **Selective catalytic oxidation of biomass-derived furfural to 2-furanone by using heteropolyacids supported molecular sieves as catalyst and hydrogen peroxide as oxidant (Paper no. 98)**
Ritesh Tiwari, Dr Sib Sankar Mal and Dr Saikat Dutta
- **Poly (vinyl alcohol) hydrogel membrane as electrolyte for direct borohydride fuel cells (Paper no. 188)**
N. A. Choudhury, S. K. Prashantb, S. Pitchumani, P. Sridharb, and A. K. Shukla
- **Biogas production potential from goat manure in context of Nepal (Paper no. 194)**
Rajeev Pandey, Bipasyana Dhungana, Sunil Prasad Lohani

LHC-4/ SESSION 3:

New Technologies for Energy Conservation



Invited talk by Dr. Rahul Dev

- **Performance characteristics of variable compression ratio diesel engine fuelled with various blends of sal oil methyl ester & diesel (Paper no. 10)**
Satish Ragit, Aman Sharma and Krishnendu Kundu
- **A review of development and application of solar photovoltaic powered refrigeration system (Paper no. 14)**
Gangadhar Amratwar and Umesh Hambire
- **CFD simulation of PEM fuel Cell for identification of hot spots (Paper no. 32)**
Venu Vinod Ananthula and Venkata Suresh Patnaikuni
- **Green extraction of betacyanin from beetroot peel using Microwave and Ultrasound technology (Paper no. 39)**
Alok Sharma, Bidyut Mazumdar and Amit Keshav
- **Ultrasound assisted extraction of polyphenols from polyalthia longifolia leaves (Paper no.109)**
Manish Kumar, Bharathi Dasari and Sivasankar Thirugnanasambandam
- **Palladium nanoparticles as oxygen reduction reaction catalyst in air cathode microbial fuel cell (Paper no. 135)**
Alok Tiwari, Jain Suransh, Alka Mungray and Arvind Mungray
- **Role of electro-active microorganisms in bioelectricity generation (Paper no. 186)**
Roma Agrahari, Sanchita Gupta and Radha Rani
- **Bioelectricity production and decolourization of Reactive black 5 by Pseudomonas gessardii EE in a dual chamber Microbial Fuel Cell (DMFC) (Paper no. 187)**
Roma Agrahari, Sanchita Gupta, Geetanjali, Dr. Radha Rani

LHC-7/ SESSION 4:

Energy Integration and Management



Invited talk by Dr. Rajeev Dohare

- **Battery technologies and its future prospects (Paper no. 65)**
Shashi Kala and Ashutosh Mishra
- **Does energy efficiency-employment nexus exists for India? Empirical evidence using a multi-sectoral panel data (Paper no. 66)**
Bamadev Mahapatra
- **Energy efficient performance of journal bearing with surface pockets (Paper no. 67)**
Bhaskar Anand, Faisal Rahmani, Aditya Kumar and Tushar Gupta
- **Design and implementation of a three phase sine wave inverter using high gain DC-DC converter for PV/ Wind applications (Paper no. 92)**
Pranjit Kumar Roy and Ajoyjit Ghosh
- **Heat energy storage using parabolic dish collector in LiNO₃ phase change material (Paper no. 99)**
Brajesh Kumar
- **Sustainable management of molasses based distillery effluent: A steps towards ethanol-gasoline blending goal in India (Paper no. 138)**
Sushil Shukla, Ashutosh Tripathi and Pradeep Mishra

LHC-8/ SESSION 5:

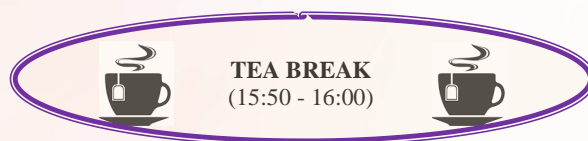
Modeling, Techno-Economic Feasibility, and Life Cycle Assessment



Invited talk by Dr. Smita Raghuvanshi


- **Biodegradation of benzene using isolated bacterial species: Optimization and kinetic study (Paper no. 7)**
Ravi Kumar Sonwani, Ram Sharan Singh, Balendu Shekhar Giri and Birendra Nath Rai
- **Techno-economic evaluation of wastewater reuse in Kanpur city (Paper no. 27)**
Archana Sharma and Dipteek Parmar
- **Towards sustainable hydropower through hydrological models and expert systems (Paper no. 50)**
Subhendu Ghatak
- **Life cycle sustainability assessment of crude oil refineries in India (Paper no. 62)**
Shilpi Shrivastava and Seema Unnikrishnan
- **Model based control strategies to control voltage for PEM fuel cell (Paper no. 94)**
M Snehal and G Uday Bhaskar Babu
- **Batch distillation for separation of ternary zeotropic mixtures: dynamics and control (Paper no. 117)**
A.K Buroolia, G Radhika, K Raghu Raja Pandiyan, A Seshagiri Rao, Patle D.S and G Uday Bhaskar Babu
- **Technoeconomic feasibility of waste cooking oil derived biodiesel, a renewable fuel (Paper no. 136)**
Bhaskar Singh

- **Numeric and experimental investigation of Fe₂O₃ based nanofluids in direct absorption solar collector (Paper no. 144)**
Nehal Bhambore, Parag Thakur, Rahul Bhad and Shriram Sonawane
- **Pipe optimization of branch water supply systems using open source software (Paper no. 185)**
Avnish Shukla and Dipteek Parmar
- **Optimization of reactive black B decolourization by electrocoagulation using RSM and ANN (Paper no. 201)**
Kajal Gautam, Suantak Kamsonlian and Sushil Kumar



ORAL PRESENTATIONS

Time: 16:00 – 17:30

Venue/ Oral Sessions	Paper Topic and Author (s)
<p>LHC-2/ SESSION 6:</p> <p>Water and Wastewater Treatment</p>  <p>Invited talk by Dr. Suresh Gupta</p>	<ul style="list-style-type: none"> • Compative study and analysis of soil biotechnology with other waste water treatment techniques (Paper no. 5) <i>Nilesh Ahire and Suhas Pandit</i> • Removal of glyphosate from water by catalytic wet air oxidation using Fe nanoparticles-dispersed carbon nanofibrous activated carbon beads (paper no. 15) <i>Priyanka Gupta and Nishith Verma</i> • Removal of an anionic dye using solvent impregnated resin assisted by ultra-sonication (Paper no. 26) <i>Anjali Awasthi, Muzaffar Iqbal and Dipaloy Datta</i> • Removal of Cr(VI) ions from aqueous solution using Saraca asoca bark powder (Paper no. 30) <i>Anurag Lall and Jyoti Mani</i> • Treatment of Petroleum Refinery Wastewater Using Sequential Anaerobic-Anoxic-Aerobic Moving Bed Biofilm Reactor System (Paper no. 88) <i>Monalisa Satapathy, Biju Prava Sahariah and Anandkumar J</i> • Nested control loop configuration for a three stage biological wastewater treatment process (Paper no. 127) <i>Maheswari P, Shiek Abdul Gaffar, Tejaswini Ess and Seshagiri Rao Ambati</i> • Porous metal-organic framework materials for wastewater remediation (Paper 141) <i>Arti Chouhan and Ashutosh Pandey</i> • Bioremediation applications for removal of reactive dyes from waste water -Emerging techniques & Future scopes (Paper no. 162) <i>Ankita Srivastava, Sushil Kumar and Radha Rani</i>

LHC-3/ SESSION 7:

Climate Change, Health
Care, and Food Processing



Invited talk by Dr. Ramji
Dwivedi

- **Theoretical aspect of adaptation strategies to climate change (Paper no. 42)**
Juna Probha Devi, Anamika Barua and Chandan Mahanta
- **Extraction of Limonene from upgraded tire pyrolysis oil (Paper no. 45)**
Harshitha N Anchan and Saikat Dutta
- **Lignin encapsulation by pickering emulsion and in-situ polymerization for corrosion inhibition of mild steel (Paper no. 118)**
Sushmitha Devadasu, Uday Bagale, Shirish Sonawane and Srinath Suranani
- **Characterization and quantification of effluents from industrial & healthcare sectors for heavy metals using flame atomic absorption spectrophotometer (FAAS) (Paper no. 140)**
Pranjali Pandey, Akanksha , Madhuri Kumari and Ravinder Kumar Tomar
- **Groundwater mercury dynamics under variable rainfall intensity, Ganga Alluvial Plain, northern India (Paper No. 189)**
Vandana Devi, Mohmad Mohsin Atique, Satyendra Singh, Anjali Singh, and Munendra Singh
- **A review on oleogelation technique to replacesaturated/solid fats from food products (Paper no. 211)**
Akanksha Upadhyay, Ashwani kumar and Alak Kumar Singh

LHC-4/ SESSION 8:

Solid Waste Management
and Utilization



Invited talk by Dr. V. P. Singh

- **Low temperature steam gasification of kitchen food waste in a fixed bed reactor (Paper no. 120)**
Sanjeev Yadav and Dharminder Singh
- **Co-pyrolysis of corncob and plastic waste: physico-chemical characterization, kinetics, and thermodynamic analysis (Paper no. 152)**
Sanjay Singh and Ashish Sawarkar
- **Kinetics of pyrolysis of banana agro-residue (Paper no. 191)**
Rajnish Kumar Singh and Ashish N. Sawarkar
- **Anaerobic digestion experiences with food waste at Kathmandu University (Paper no. 193)**
Bipasyana Dhunganaa and Sunil Prasad Lohani

LHC-7/ SESSION 9:

Sustainable and Green
Technologies



Invited talk by Dr. Pratik
Sheth

- **Amberlite Resin functionalized with phosphorous based solvent for the separation of Bisphenol-A (Paper no. 25)**
Sakshi Batra, Ankit Arya and Dipaloy Datta
- **Graphene Oxide-Mn₁₂(OAc)₁₆ nanohybrid material as an electrode for electro-chemical applications (Paper no. 48)**
Anjana A V and Sib Sankar Mal
- **Oxidation of C₃-substituted indoles to 2-oxindole and rapid synthesis of 3-hydroxyoxindoles by aldol reaction in WERSA (Paper no. 90)**
Kartikey Dwivedi and L Raju Chowhan
- **Green Buildings- "An assurance to a sustainable existence" (Paper no. 154)**
Bandan Kumar Mishra
- **Sorption of As (III) ion onto the surface of raw and modified coconut husk in fixed bed column (Paper no. 196)**
Shashi Bala Gautam, Siraj M Alam and Suantak Kamsonlian
- **A review on isolation technique of plant based protein using nonthermal Technology (Paper no. 206)**
Alisha, Karunakar Singh and Alak Kumar Singh
- **A review on application of alcohol powder in food industry using non- thermal process (Paper no. 208)**
Prachi Srivastava, Anit Kumar, Alak Kumar Singh, Anjali Mishra, Anubhuti Tripathi and Harinder Singh
- **Cereals and pulses based functional beverage using non-thermal techniques: A review (Paper no. 209)**
Anjali Mishra, Anit Kumar, Alak Kumar Singh, Prachi Srivastava, Anubhuti Tripathi and Harinder Singh

LHC-8/ SESSION 10:

Water Resources
Management and Water
Quality

- **Re-imagining foam flooding: In-situ CO₂ foam flooding for improved oil recovery (Paper no. 23)**
Krishna Raghav Chaturvedi, Tushar Sharma

- **Water quality modeling of river Ganges in Prayagraj (Paper no. 28)**
Ishita Goyal and Dipteek Parmar
- **Analysis and modelling of water quality parameters in Ganga river basin (Paper No. 61)**
Mohammed Talib and Sunil Kumar
- **Analysis of physico-chemical parameters and water quality index (WQI) of Gomti river, Lucknow (U.P., India) using MDSSS (Paper no. 91)**
Suresh Kumar Patel, Pradeep Kumar and Dhananjay Singh
- **Assessment of trace metal species using SEM-EDAX analysis in the sediments of Ganges (Paper no. 142)**
Abhijit Debnath, Prabhat Kumar Singh and Yogesh Chandra Sharma
- **Colorimetric and fluorometric cyanide selective detection in predominantly (Paper no. 198)**
Ashish Raina, Komal Kumar Yadav and Tamal Ghosh
- **Colorimetric detection of carbonate anions in aqueous medium by Azo based derivatives and its application for real sample analysis (Paper no. 200)**
Komal Kumar Yadav, Ashish Raina and Tamal Ghosh
- **Corn-cob derived biochar for hexavalent chromium removal from water (Paper no. 205)**
Tripti Agarwal, Amita Shakya
- **A review on water purification practices utilizing agricultural waste (Paper no. 207)**
Anubhuti Tripathi, Anit Kumar, Alak Kumar Singh, Anjali Mishra, Prachi Srivastava and Harinder Singh

CHEM-CONFLUX²⁰

Chem conflux



Conference Schedule

Day 3:
Feb. 16, 2020



Prayagraj Sangam Visit (Complementary)
(07:30 – 10:00)



Keynote Lecture 9
Dr. Tanmay Basak
(10:00 – 10:40)

** Keynote talk will be held in the Institute Seminar Hall **



Tea Break
(10:40 – 11:00)



Oral Presentations
(Parallel sessions 1-4)
(11:00 – 12:30)



Valedictory Function
(12:30 – 13:30)



Lunch
(13:30 – 14:30)





**International Conference On
Energy and Environmental Technologies for Sustainable Development**



ORAL PRESENTATIONS

Time: 11:00 – 12:30

Venue / Oral Sessions	Paper Topic and Author (s)
<p>LHC-2/ SESSION 11: New Materials for Energy and Environment</p>  <p>Invited talk by Dr. Arvind K. Mungrey</p>	<ul style="list-style-type: none">• Investigation on Removal of Acid Violet 19 Dye by Using Zeolite Synthesized from Fly Ash (Paper no. 19) <i>Riti Thapar Kapoor</i>• Synthesis and characterization of PMMA coated manganese ferrite (MnFe₂O₄) nanoparticle (Paper no. 63) <i>Shabnam Dan and Amit Chattree</i>• Synthesis and characterization of NAA-ZEOLITE ceramic composite membrane (Paper no. 85) <i>Raja C, Ravi R and Anandkumar J</i>• Fabrication of ceramic membrane for purification of cinnamaldehyde (Paper no. 86) <i>Ravi R, Raja C and Anandkumar J</i>• Synthesis of CuO(I&II) nanopaticles by mixed oxidation state Cu precursors and its application for the removal of heavy metal ions from an industrial wastewater (Paper 126) <i>Anil Kumar K, Kusum Kumar B, Suresh Gupta and Jitendra Panwar</i>• Characterization and application of high flux forward osmosis membrane by layer-by-layer self-assembled polyelectrolytes (Paper no. 137) <i>Krushangi Doshi and Alka Mungray</i>• Ceramic membrane for juice clarification application: fabrication and characterization (Paper no. 148) <i>A.Dhivya and Amit Keshav</i>• Recent progress in nanocrystalline bismuth telluride (Bi₂Te₃) for thermoelectric refrigeration application: a review (Paper no. 179) <i>Akash Raj</i>
<p>LHC-3/ SESSION 12: Air Pollution /Noise Pollution</p>  <p>Invited talk by Dr. Anil Mathur</p>	<ul style="list-style-type: none">• Analysis of noise pollution for kota city (Paper no. 24) <i>Kuldeep Kuldeep, Sohil Sisodiya and Anil K. Mathur</i>• Air pollution control with retrofit fgd's and its installation challenges: a review (Paper no. 54) <i>Deepak Tripathi and Agni Siddhanta</i>• Emission properties of 1 mole % Eu₂O₃ doped 3% SrO + 5% ZnO + 30% PbO + 61% P₂O₅ glass for photonic application (Paper no. 77) <i>Ashoke Maity and Samar Jana</i>• Carbon dioxide separation from air using Direct Air Capture Technology (Paper no. 128) <i>Parmanand Dange, Nana Shejwal and Niranjana Deochake</i>• Assessment of the impacts of vehicular emissions on air quality in Kanpur City (paper no. 183) <i>Arzoo Verma and Pradeep Kumar</i>• Assessment of traffic noise pollution indices in Kanpur city (Paper no. 184) <i>Anirudh Mishra and Deepesh Singh</i>

- **Aviation pollution (Paper no. 199)**

Uttkrishiti Singh

LHC-4/ SESSION 13:

Other contemporary topics
relevant to theme-1



Invited talk by Dr. Amit Jain

- **Development of PLA based nanocellulose film for packaging applications (Paper no. 18)**
Raj Kumar Gond and Manoj Kumar Gupta
- **Automation in decision making and design of retrofitting (Paper no. 33)**
Falak Vats, Pankaj Sharma and Sohil Sisodiya
- **Optical properties of Sm³⁺ doped phosphate-tellurite glass (Paper no. 78)**
Joydeb Biswas, Samar Jana, Sourav Ghosh and Ashoke Maity
- **Use of recycled coarse aggregate in self compacting concrete (Paper no. 101)**
Anjali Singh, P.K. Mehta and Rakesh Kumar
- **An experimental Study on the properties of SCC with manufactured sand (Paper no. 102)**
Deep Tripathi, Rakesh Kumar, P. K. Mehta and Vishal Rawat
- **Synthesis and characterization of amphiphilic copolymer composite for marine antifouling/foul-release coating (Paper no. 115)**
Lokeshwar Mahto and Dharm Pal
- **RAP as a material for bituminous road construction - A Review (Paper no. 190)**
Shreya Singh and A.K. Mishra
- **Kinetic Study of the production of biosurfactants with Pseudomonas aeruginosa MTCC 424 Using residual rice bran oil as substratum (Paper no. 202)**
Ashutosh Mishra and Rakesh Kumar Trivedi
- **Numerical simulation of the effect of baffle cut and baffle spacing on shell side heat exchanger performance using CFD (Paper no. 203)**
Swanand Gaikwad

LHC-7/ SESSION 14:

Other contemporary topics
relevant to theme-2



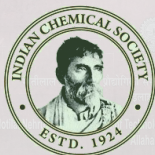
Invited talk by Dr. Dhananjay
Singh

- **Comprehensive smart water-CO₂ Gas (SWAG) injection study for shaly (Paper no. 46)**
Anshul Agarwal, Amol Borkar, Atul Jain, Krishna Raghav Chaturvedi and Tushar Sharma
- **Effect of reinforcing ability of HNT's on the properties of PEEK/PEI blend (Paper no. 47)**
Abrar Ahamad and Pradeep Kumar
- **Organic chlorine containing pesticides' speciation through cost effective biodegradable composite(paper no. 64)**
Sunil Kumar Singh
- **Feasibility study of small scale pumped-storage integrated with renewable energy sources for remote area (Paper no. 73)**
Jyoti Gupta and Arun Kumar
- **Physiochemical approach for the recovery of oil from waste lubricating grease: a review (Paper no. 103)**
Nayna Agrawal, Dr.P.K Chaudhari and Dr.Chandrakant Thakur
- **Iron impregnated silica from rice husk ash for use in adsorption of As(iii) ions from water (Paper no. 116)**
Arijit Dutta Gupta and Harinder Singh
- **Formulation and characterization of graphene ink for printed electronic devices (paper no. 119)**
Anisha Mandal, Bidyut Mazumdar and Arti Mourya
- **A CFD analysis of vertical plate with square pin fin heat sink in natural convection (Paper no. 195)**
Sunil Kumar Gupta, Mrityunjay Kumar Singh and Binayaka Nahak
- **Degradation characteristics and comparative study of BTEX elimination in a biofilter (Paper no. 197)**
Rahul, Rajeev Kumar Dohare, Chandrajit Balomajumder and Rohit

Chem-Conflux²⁰

A multi-disciplinary international conference that intends to cover the thrust areas concerning sustainable development of energy and environment. Energy is essential to the society and it has made the considerable impact on the environment as a consequence of the large scale and pervasive nature of energy related human activities. Despite the fact that energy and environment concerns were earlier local in nature, e.g. issues relating to extraction, transport or noxious emissions, they are currently regional and global such as acid rain and the greenhouse effect. These issues have now become dominating political issues and the subject of international focus and regulation. Therefore, this multidisciplinary international conference is being organized to understand, exchange and disseminate the ideas relating to the energy and environment with the aim of promoting the sustainability. Keeping these facts in view, the present conference is designed to enlighten the participants about latest development of sustainable technologies for energy and environment through Plenary & keynote lectures and oral and poster presentations.

Publication Partners:



DE GRUYTER

Sponsored By



पूर्णतः सहकारी स्वामित्व
Wholly owned by Cooperatives



स्वर्ण जयंती
Golden Jubilee