Environmental Science and Engineering Department
Indian Institute of Technology Bombay

cordially invites you to

Emerging Contaminants : Fate, transport & Remediation Aspects

SYMPOSIUM

SPEAKERS

Prof. Shyam R. Asolekar
IIT Bombay

Prof. Suparna Mukherji
IIT Bombay

Prof. Kaustubha Mohanty
IIT Guwahati

Prof. Ashok kumar Gupta
IIT Kharagpur

Prof. Absar A. Kazmi
IIT Roorkee

Prof. Amritanshu Shriwastav
IIT Bombay

Dr. Karthikeyan Sathrugnan
Regional Technical Marketing Manager of Frontier Laboratories

Dr. K.P Prathish
Senior scientist
NIIST Trivandrum

21st & 22nd Feb | 2-4 PM
Day 1 : Link | Day 2: Link

Last Date of Registration (Free): 20th Feb
Apply: Link

Conveners

Prof. Tabish Nawaz, Prof. Swatantra Pratap Singh, Prof. V. S. Vamsi Botlaguduru

Symposium Schedule

Day 1, 21st February 2022 (2-4 PM) **Meeting Link: Join**

Event	Time	Topic	Speaker
Inauguration	2 PM	Address by the Head	Head, ESED, IIT Bombay
Talk 1	2:10 PM	Dioxin-like POPs emission monitoring from open burning sources in the Indian subcontinent & its health risk prediction	**Dr. K.P. Prathish** CSIR-NIIST Thiruvananthapuram, Kerala
Talk 2	2:30 PM	S&T for Enabling the Circular Economy of Waste Biomass: Closing the Loop through focusing on Emerging Contaminants Posing Challenges for Valorization	Shruti Sharma, B Lekshmi, Dr. Pappu Asokan (CSIR-AMPRI, Bhopal) and **Prof. Shyam R Asolekar,** IIT Bombay
Talk 3	2:50 PM	Emerging contaminants in the aqueous environment and their remediation	**Prof. Ashok Kumar Gupta** and Abhradeep Majumder, IIT Kharagpur
Talk 4	3:10 PM	Photocatalytic Removal of Estrogens from Water using a Visible Light Active Nanocomposite	**Prof. Suparna Mukherji,** Dr. N. Gayathri Menon, Liya George and Prof. Sankara Sarma V Tatiparti, IIT Bombay
Panel Discussion & Closing remarks	3:30-4:00 PM	**Panel discussion**	

Day 2, 22nd Februrary 2022 (2-4 PM) **Meeting Link : Join**

Event	Time	Topic	Speaker
Talk 1	2:00 PM	Sonophotocatalytic process for the degradation of pharmaceutically active compounds	**Prof. Amritanshu Shriwastav**, IIT Bombay
Talk 2	2:20 PM	Simplified Approach for detection, identification, and quantification of microplastics in the environment	**Dr. Sathrugnan Karthik**, Singapore Laboratory Professionals Forum
Talk 3	2:40 PM	S&T for Enabling the Circular Economy of Water Reuse: Closing the Loop through focusing on Emerging Contaminants Escaping through Wastewater Treatment Plants	B Lekshmi, Shruti Sharma, Dr. Pappu Asokan (CSIR-AMPRI, Bhopal) and **Prof. Shyam R Asolekar,** IIT Bombay
Talk 4	3:00 PM	Comparison of removal efficiency and fate of emerging contaminants in wastewater treatment plants	**Prof. A A Kazmi**, IIT Roorkee
Talk 5	3:20 PM	Microplastics in Sea Salt: Source, identification and removal	Naveenkumar A. Yaranal, S. Senthilmurugan and **Prof. Kaustubh Mohanty,** IIT Guwahati
Panel Discussion & Closing remarks	3:20-4:10 PM	**Panel discussion**	

SYMPOSIUM ON

Emerging Contaminants : Fate, transport & Remediation Aspects

SPEAKER:

Dr. K. P. Prathish

Senior Scientist, Dioxin Research Laboratory,
Environmental Technology Division, CSIR-NIIST
Kerala

Dioxin-like POPs emission monitoring from open burning sources in the Indian subcontinent & its health risk prediction

- Dioxin-like POPs emission monitoring from open burning sources in the Indian subcontinent & its health risk prediction
- Comparative evaluation of the ambient air dioxin-like POPs emission during streets waste burning and massive fire breakout incidents at Brahmapuram solid waste dumpyard, Kochi

February 21-22
2 PM -4 PM

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SYMPOSIUM ON

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SPEAKER:

Prof. Shyam R. Asolekar

Environmental Science and Engineering Department, IIT Bombay

S&T for Enabling the Circular Economy of Waste Biomass: Closing the Loop through focusing on Emerging Contaminants Posing Challenges for Valorization

- Untapped resource of lignocellulosic wastes can indeed be considered as a potential raw material for their valorization through the "low-carbon" routes .
- This resource can be meaningfully valorized by setting up 100 – 200 plants (capacity: 25-50 MT biomass processing per day) for manufacturing construction materials from biomass-based polymer composites

February 21-22

2 PM - 4 PM

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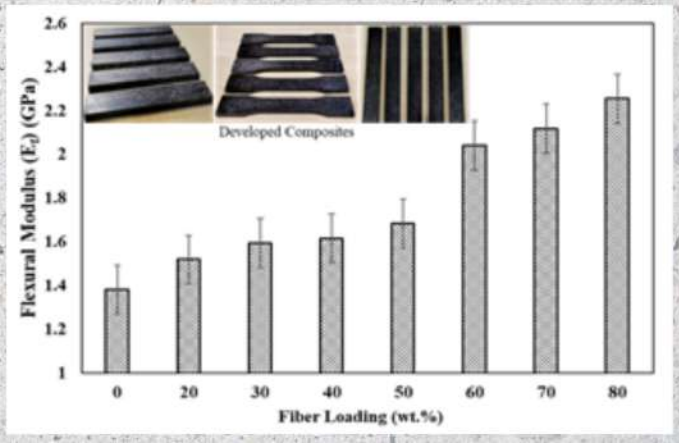

Symposium on

Emerging Contaminants Fate, Transport & Remediation Aspects

SPEAKER:

Prof. Ashok Kumar Gupta

Civil Engineering Department IIT Kharagpur

Emerging contaminants in the aqueous environment and their remediation

- Advanced oxidation processes (AOPs) have recently gained popularity because of their ability to degrade the ECs.
- In AOPs, oxidizing radicals are generated, which react with the ECs to break them down into simpler compounds
- AOPs, such as photocatalysis, advanced oxidation, Fenton processes, and others, have been used to achieve more than 90% removal.

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SPEAKER:

Prof. Shyam R. Asolekar

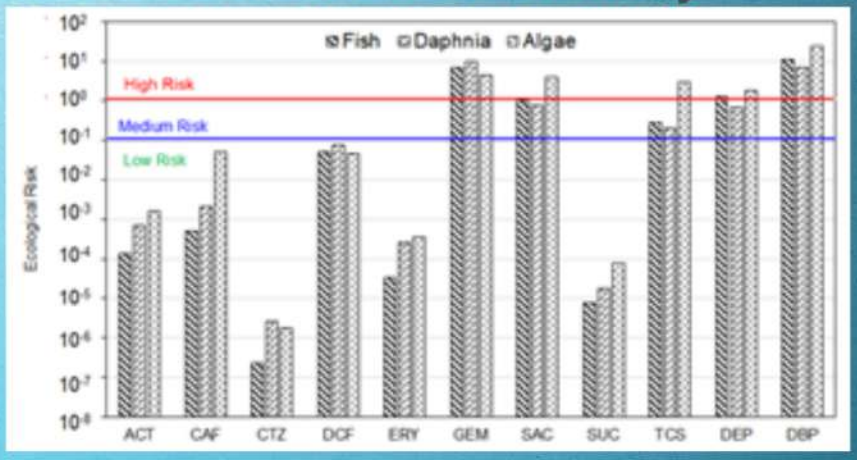
Environmental Science and Engineering Department, IIT Bombay

S&T for Enabling the Circular Economy of Water Reuse: Closing the Loop through focusing on Emerging Contaminants Escaping through Wastewater Treatment Plants

- Removal of ECs such as antibacterial, analgesics, antibiotics, artificial sweeteners, plasticizers, and stimulants from domestic wastewater was investigated using pilot-scale CW to achieve circular economy of water reuse.
- CW-based treatment systems are sustainable and eco-friendly

February 21-22

2 PM - 4 PM



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SPEAKER:

Prof.Amritanshu Shriwastav

Environmental Science and Engineering Department, IIT Bombay

Sonophotocatalytic Process for the Degradation of Pharmaceutically Active Compounds

- Coupling individual sonocatalytic and photocatalytic processes in a hybrid sonophotocatalytic process
- Degradation of ciprofloxacin (CPX) was investigated with low frequency ultrasound and visible light

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SPEAKER:

Dr Sathrugnan Karthikeyan
Frontier Laboratories & Singapore Lab Forum, Singapore

Simplified Approach for detection, identification, and quantification of microplastics in the environment

- world's most popular bottled water brands found that more than 90% contained tiny pieces of plastic
- An analytical pyrolysis GCMS method to determine microplastics in different types of environmental samples will be discussed
- Developed few components like separation column, glass insert, calibration standard and data analysis software.

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SPEAKER:

Prof. Suparna Mukherji

Environmental Science and Engineering Department, IIT Bombay

Photocatalytic Removal of Estrogens from Water using a Visible Light Active Nanocomposite

- Exposure to traces of estrogens can cause endocrine disruption
- Removal of estrogens was investigated using a visible light active TiO2-ZnO photocatalyst and the activity under visible light irradiation

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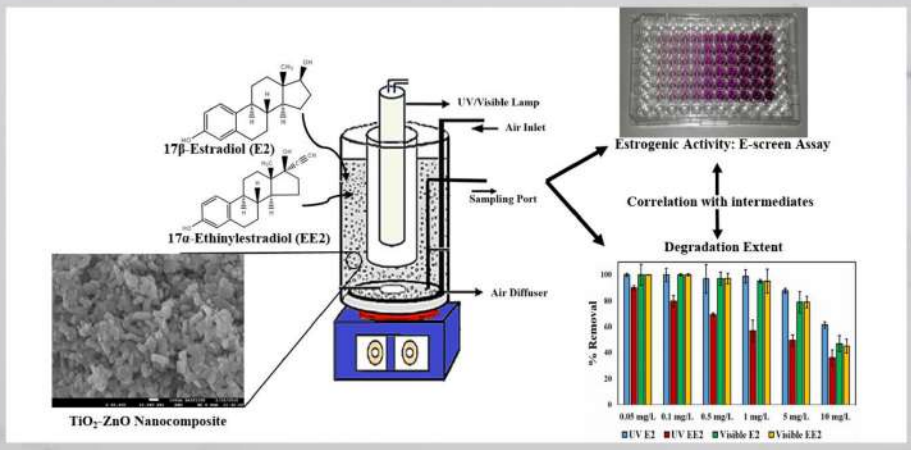

SYMPOSIUM ON

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SPEAKER:

Prof.Absar Ahmad Kazmi

Civil Engineering Department

IIT Roorkee

Comparison of Removal Efficiency and Fate of Emerging Contaminants in Wastewater

- 20 (ECs) pharmaceuticals, personal care product, and an industrial product studied.
- Removal efficiency is dependent on the solids retention time and availability of wide consortium of microbial population.

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SPEAKER:

Prof. Kaustubha Mohanty

Department of Chemical Engineering,
IIT Guwahati

Microplastics in Sea Salt: Source, identification and removal

- Microplastics present in salt, a potential health hazard for humans.
- The visual evaluation performed using optical and fluorescence microscopy.
- The composition of the microplastics analyzed by Raman spectroscopy.

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