

ANALYTICAL PYROLYSIS SYMPOSIUM

(To learn about Py-GCMS applications exclusively)

HYBRID EVENT – JAN 27TH AND JAN 28TH 2022

VENUE: IIT MADRAS, INDIA – OFFLINE & ONLINE

Jointly organized by



Technical Program

27th Jan 2022 (Thursday) – Day 1

Session I – Py-GCMS state of art & Instrumentation

12:00 – 1:00 PM – Registration/Networking Lunch

1:00 – 1.45 PM – GCMS state of art & recent developments
Mr Chandrasekar K, Agilent Technologies, India

1.45 – 2.30 PM – Analytical Pyrolysis Technology- State of art & developments
Prof. R. Vinu, Indian Institute of Technology Madras, India

2.30 – 3.00 PM – Expanding Py-GCMS capabilities for different applications
Dr. Sathrugnan Karthikeyan, Frontier Laboratories, Singapore

Break (30 min)

Session II – Py-GCMS Applications in Plastics & Polymer Industries

3:30 – 4.00 PM – Integrated qualitative analysis of polymer samples by Py-GCMS using both EI and soft ionization techniques
Dr. M Ubukata, Application Scientist, JEOL, Japan

4.00 – 4.30 PM – Py-GCMS Applications in Space Research Applications
Ms Deepthi Thomas, Scientist, ISRO, Trivandrum, India

4:30 – 5:00 PM – Combined UV irradiation and Py-GCMS approach for evaluating deterioration behaviour of EVA encapsulant for PV modules
Dr Shogo Kumagai, Tohoku University, Japan

5:00 – 5.30 PM – Multi modal analytical pyrolysis applied to cultural heritage materials; a focus on natural polymers
Dr. Diego Tamburini, Scientist, The British Museum, UK

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28th Jan 2022 (Friday) – Day 2

Session III – Py-GCMS applications in Rubber Industries

- 12:00 – 1 PM – Networking Lunch
- 1:00 – 1:30 PM – Investigation of oxidative/thermo degradation of rubber products using UV/Py-GCMS
Dr. Ichi Watanabe, Frontier Laboratories, Japan
- 1:30 – 2:00 PM – Title to be confirmed
Mr Gaurang Parikh, Sr Manager, CEAT Tyres, Gujarat, India
- 2:00 – 2:30 PM – Analysis of polymers and additives in rubber products using F-Search and libraries
Ms Anusha Kalamasetti, Frontier Laboratories, India
- 2:30 – 3:00 PM – Composition Analysis and Steric acid Analysis in Tyre products
Ms Christina, Frontier Laboratories, Japan

Break (30 minutes)

Session IV – New and Emerging Applications

- 3.30 – 3.30 PM – Quantitative Analysis of Micro- and Nano-plastics in Environmental Samples using Pressurised Liquid Extraction followed by Pyrolysis Gas Chromatography Mass Spectrometry
Dr Elvis Okoffo, Researcher, The University of Queensland, Australia
- 3.30 – 4.00 PM – Screening of raw materials in textile industries using Py-GCMS
Ms Harshada Thakar, Huntsman, Mumbai, India
- 4:00 – 4.30 PM – Effective use of pyrolyzer and Tandem Micro Reactor for analytical and applied pyrolysis research
Prof. Young-in Kim, Daegu University, South Korea
- 4:30 – 5:00 PM – Fast Pyrolysis and Catalytic Fast Pyrolysis of Endothermic Hydrocarbon Fuels using Curie Point Pyrolysis-GC/MS
Mr. Satya Priyadarshi, Indian Institute of Technology Madras, India

Registration

You are invited to join Analytical Pyrolysis Symposium virtually or physically.

Free Registration: Virtual participation is free. Participants are required to complete the registration to service your seat. Please register using below link

<https://frontier-lab-sea.com/register/>

Paid Registration: Physical participation is invitation based upon mutual agreement. Those who are interested to participate physically, please write to Dr R. Vinu (vinu@iitm.ac.in) or Dr S Karthikeyan (karthik@frontier-lab.com)

Deadline:

Registration deadline for virtual participation – 20 Jan 2022

Registration deadline for physical participation – 10 Jan 2022

For any further details, please write to Dr R. Vinu (vinu@iitm.ac.in) or Dr. S. Karthikeyan (karthik@frontier-lab.com)

About Organizers:

Indian Institute of Technology, Madras, India

Indian Institute of Technology Madras, established in 1959, is one among the foremost institutes of national importance in higher technological education, basic and applied research. Excelling in research and technology, the institute stands on the shoulders of 600+ faculty members of international repute, about 8000+ brilliant students and 1250 excellent administrative & supporting staff. IIT Madras is a residential institute and a self-contained campus located in a beautiful, wooded land of about 250 hectares.

Indian Society of Analytical Scientists (ISAS) - Delhi Chapter

ISAS - Delhi Chapter (www.isasdelhi.org) was established in 1992 to promote the growth of analytical sciences in the country. Delhi Chapter of ISAS has jurisdiction comprising of Delhi, Chandigarh, Punjab, Haryana, UP, Uttaranchal and other contiguous area. The headquarters of ISAS-Delhi Chapter is IndianOil R&D Centre, Faridabad, Haryana. Among 13 chapters of ISAS all over India, ISAS-Delhi Chapter is the most active Chapter of ISAS. Delhi Chapter itself has more than 1400 life members from more than 85 various research institutes, national laboratories, universities, industry etc. The Chapter has organized more than 50 one / two / three - days technical Seminars / Symposia / Conference / Workshops on various contemporary topics of science at diverse locations like Shimla, Agra, Dehradun, Palampur, Rohtak, Faridabad, and Delhi. The society also organizes summer and winter workshops on various analytical techniques for the benefit of students, researchers and faculty members every year. ISAS-Delhi Chapter has been adjudged as the Best Chapter by the parent body four times in the recent past. This Chapter also provides partial financial assistance to students to present research work in International conferences abroad.

Frontier Laboratories, Japan

Frontier Laboratories is a small giant company, making pyrolysis instrument. Frontier Lab's multi shot pyrolyzer combines the capabilities of evolved gas analysis, thermal desorption and pyrolysis. When combined with GCMS, it provides a powerful tool for characterizing synthetic polymers as well as complex natural biopolymer