

AARUPADAI VEEDU INSTITUTE OF TECHNOLOGY

DEPARTMENT OF BIOTECHNOLOGY

**REPORT ON IMPACT OF THERMO CHEMICAL CONVERSION
PROCESSES IN WASTE CIRCULAR ECONOMY**

25-5-2022

Department of Biotechnology has organized a guest lecturer titled “**IMPACT OF THERMO CHEMICAL CONVERSION PROCESSES IN WASTE CIRCULAR ECONOMY**” on 25.05.2022 for the students of Biotechnology. Dr. R. Devika, Professor and Head, Biotechnology welcomed the chief guests and the gatherings. M.Subathra, Assistant Professor, Department of Biotechnology given introduction about the guest Dr.J.Arun, Scientist –C, Centre for waste Management, Sathyabama Institute of Science and Technology, Chennai. The session was mainly focused on the topic like waste to energy, waste to energy planning, Value added materials, Resource recovery and thermo chemical conversion process etc. was briefed by the chief guest Dr. J. Arun. At the end of each session participants question were clarified by the guest speakers and the guest lecture ended successfully by vote of thanks by Dr.Mohanapriya, Assistant Professor, Department of Biotechnology

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BIOMASS CONVERSION TECHNOLOGIES

- From the time of Prometheus to the present, the most common way to capture the energy from biomass was to burn it to make heat. Since the industrial revolution this biomass fired heat has produced steam power, and more recently this biomass fired steam power has been used to generate electricity.
- These methods are used for conversion.
 - ❖ Densification of Biomass
 - ❖ Combustion and incineration
 - ❖ Thermo chemical conversion
 - ❖ Biochemical conversion

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Ramya Gopalakr...

Ramya Gopalakrishnan

Kumar

Amit Kumar

Amit Kumar

SUBATHRA M

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    graph TD
      BR[Biomass Resources] --> PT[Pre-treatment]
      SW[Solid waste] --> TC[Thermochemical conversion]
      PT --> L[Lignin]
      PT --> C[Cellulose]
      PT --> H[Hemicellulose]
      TC --> P[Pyrolysis]
      TC --> G[Gasification]
      B[Biochemical conversion] --> MF[Microbial fermentation]
      B --> AD[Anaerobic digestion]
      P --> GOC[Gas / Oil / Charcoal]
      G --> SYG[Syngas (H2, CO)]
      MF --> EB[Ethanol / Butanol]
      AD --> BGS[Biogas]
      GOC --> HPF[Heat / Power / Fuel]
      SYG --> HPF
      EB --> HPF
      BGS --> HPF
  
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Dr. Arun J

Ramya Gopalakr...

Ramya Gopalakrishnan

Sasikala biotech

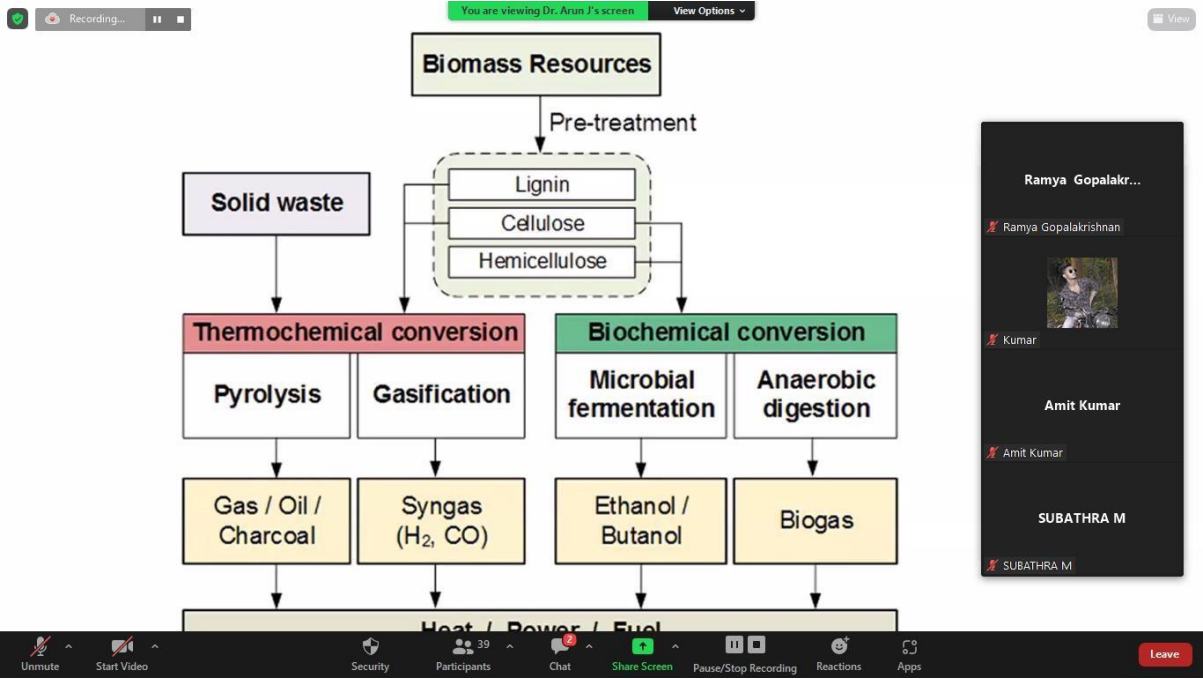
Sumit kumar

Rakesh Ram

Krishna mahtha...

Krishna mahtha bio-t...

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Ramya Gopalakr...

Ramya Gopalakrishnan

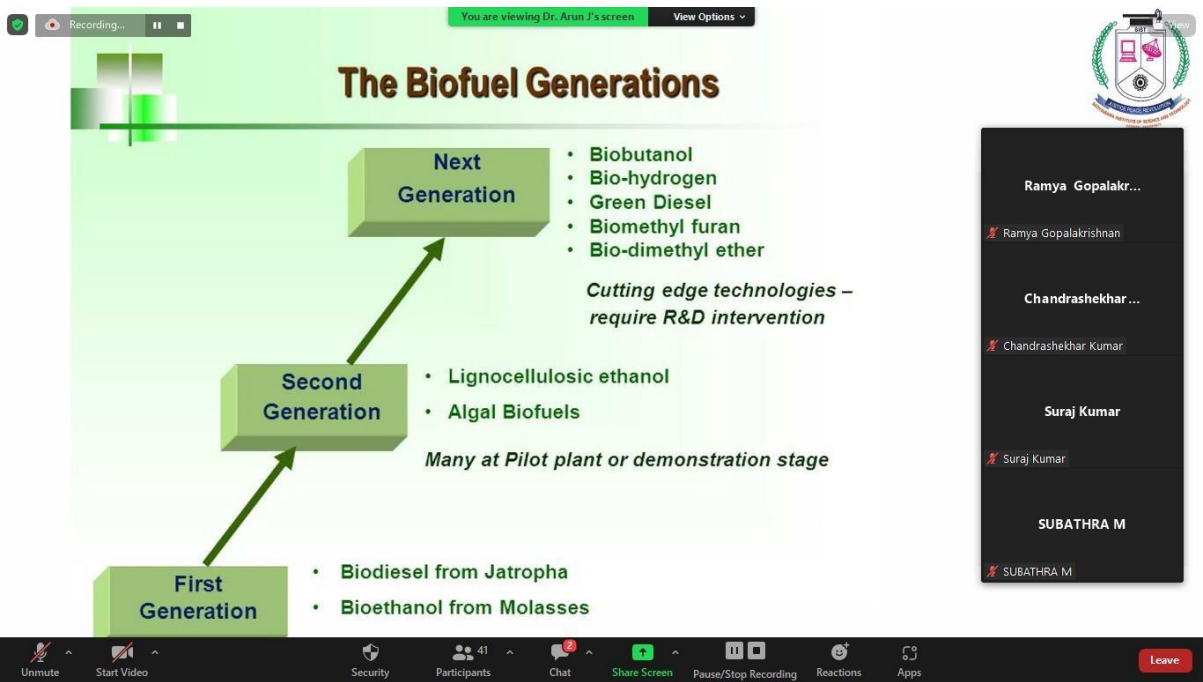
Kumar

Amit Kumar

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Ramya Gopalakr...

Ramya Gopalakrishnan

Chandrashekhar...

Chandrashekhar Kumar

Suraj Kumar



Suraj Kumar

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Zoom Meeting

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Rakesh Ram Rakesh Ram	Krishna mahtha... Krishna mahtha bio- tech	Sintu Kumar Sintu Kumar	Ramya A K Ramya A K	Ranjith Ranjith
GAJALAKSHMI U GAJALAKSHMI U	Praveena.B (bio... Praveena.B (biotech 2nd ye...	Deepak Kumar J Deepak Kumar J	Sasi Jr Sasi Jr	 Jeshuran Samuel J
Nishal Dubey Nishal Dubey	Reena Reena	AVIT AVIT	Mohanapriya Mohanapriya	Priya Priya
S.Ponni S.Ponni	phoolbabu yadav phoolbabu yadav	Deepika Deepika	Parveen Parveen	MANOHAR KU... MANOHAR KUMAR
Pooja Tripathi Pooja Tripathi	Anushiya.S Anushiya.S	 Kumar	Chandrashekhar... Chandrashekhar Kumar	Hemavathi Hemavathi

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