



**SRM MADURAI**  
**COLLEGE FOR ENGINEERING AND TECHNOLOGY**  
Approved by AICTE, New Delhi | Affiliated to Anna University, Chennai



**COLLEGE CODE : 9111**

**COUNSELLING CODE : 5842**

**Department of Mechanical Engineering**  
**&**  
**Quality Circle Forum of India (QCFI)**  
**JOINTLY ORGANIZE A**



**FACULTY DEVELOPMENT PROGRAM ON**  
**“RECENT TRENDS IN ALTERNATE FUELS”**

**30.01.2025**

**Event Speakers**

**Role of Nanotechnology  
in Alternate Fuels**



**Dr. MANIKANDA PRABHU N**

Associate Professor & Head of Department  
Department of Mechanical Engineering

Mahaguru Institute of Technology, Allapuzha, Kerala

**Fuel Characterization  
of Alternate Fuels**



**Dr. KANNAN G R**

Professor

Department of Mechanical Engineering  
PSNA College of Engineering & Technology, Dindigul

Registration Link : <https://forms.gle/hDiFyxrkJTdgEYe9>

Whatsapp Group Invite Link : <https://chat.whatsapp.com/CVYsKI3Zsg7E5IWYgcYbGi>

**Coordinators**

Dr.R.ASHOK KUMAR, HoD - MECH  
Dr.V.JEYABALAJI, AP-MECH

**Co-Convener**

Dr.S.SAMBATH  
VICE PRINCIPAL

**Convener**

Dr.S.DURAIRAJ  
PRINCIPAL

## ONLINE FDP ATTENDANCE – (30-01-2025)

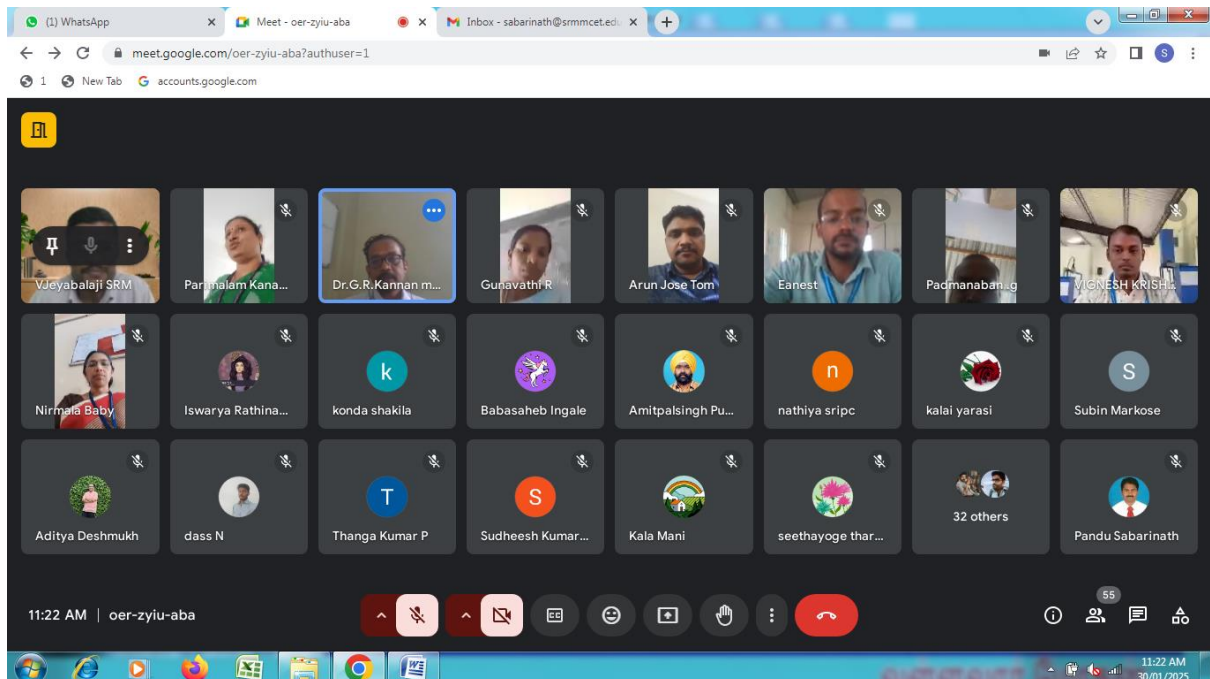
### Session 1 – Dr. G. R. Kannan (Fuel Characteristics of Alternate Fuels) – 10:00 AM – 11:00 AM

The screenshot shows a Google Meet interface. The main window displays a presentation slide titled "FUEL CHARACTERISTICS OF ALTERNATE FUELS" by Dr. G.R. Kannan M.E., Ph.D, Professor, Department of Mechanical Engineering, PSNA College of Engineering and Technology, Dindigul-624622, Tamil Nadu. The slide also includes contact information: Email: Dr.gkannan@gmail.com and Mobile: 9894429432. The meeting is titled "Dr.G.R.Kannan mechanicalstaff (Presenting)". The "People" panel on the right shows 48 contributors, including Pandu Sabarinath (You), Aarya, Aditya Deshmukh, and Anil K Kumar. The bottom status bar shows the time as 10:12 AM on 30/01/2025.

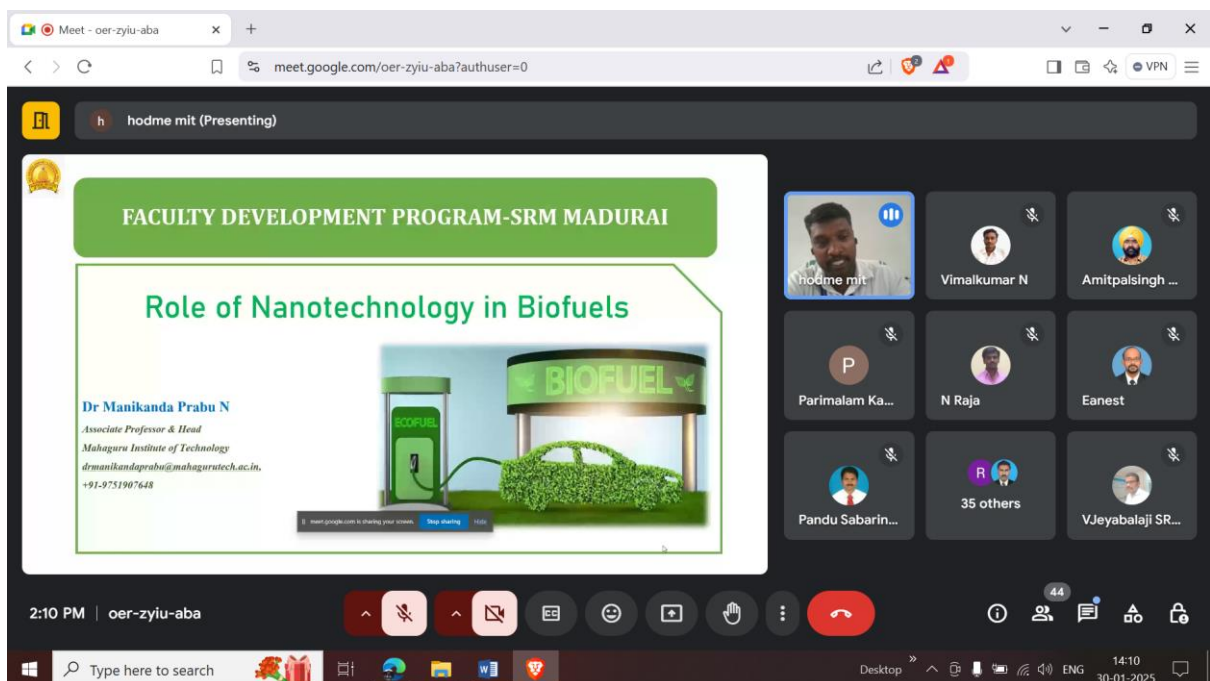
The screenshot shows a Google Meet interface. The main window displays a slide titled "Pour/Cloud/CFPP" with the following bullet points:

- **Pour point (ASTM D97)** is the lowest temperature at which the product continues to flow when it is cooling, without stirring.
- **Cloud point (ASTM D2500)** is the temperature at which components within the fluid under test precipitate on cooling.
- The **Cold Filter Plugging Point (CFPP) (ASTM D6371)** method is used to determine the low-temperature operability of diesel fuel, biodiesel, blends and gas oils.
- The **CFPP** is a critical property used to forecast the lowest temperature at which a fuel will freely flow through filters in a diesel engine system.

The meeting is titled "Dr.G.R.Kannan mechanicalstaff (Presenting)". The "People" panel on the right shows 51 others, including Nagarajan K..., Eanest, Padmanaban .g, VJeyabalaJI SRM, and BNAGAMURALI ... A notification at the bottom right states "Nagarajan Kumaresan and Kala Mani have raised hands" with an "Open queue" button. The bottom status bar shows the time as 10:55 AM on 30/01/2025.



## Session 2 – Dr. N. Manikanda Prabhu (Role of Biotechnology in Biofuels) – 02:00 PM – 03:00 PM



Meet - oer-zyiu-aba

meet.google.com/oer-zyiu-aba?authuser=0

### CHALLENGES IN NANOMATERIALS

- † **Long-term stability** is discovered to be highly dependent on the size of the nanoparticles and their fabrication procedures. A smaller nanoparticle results in a higher surface/volume ratio which in turn reduces sedimentation effects and improves fuel stability. However, there is a propensity for nanoparticles to clump together and form larger particles, thereby limiting the use of nanoparticles with a significant surface area.
- † **Insufficient information on the safety** as well as the impact of various types of nanoparticles on human health. To avoid harm to persons and the environment, a comprehensive study on the safety of nanoparticles is required.
- † Nanoparticle-added biodiesel production processes, must be properly devised to **meet economical** as well as technological criteria.
- † Numerous Nanoparticles have been found to have distinct properties. To optimize engine characteristics, more research into the **interactions** between nanoparticles and base fuel is needed. By allowing two or more nanoparticles to work together, new applications and improved performance may be conceivable. The response mechanisms as well as the associated effects, on the other hand, are not fully known.
- † In order to have a full analysis, the impact of nanoparticles on **tribological behaviour** as well as lubrication mechanisms in engine applications should indeed be researched.

3:01 PM | oer-zyiu-aba

Desktop 15:01 30-01-2025

Meet - oer-zyiu-aba

meet.google.com/oer-zyiu-aba?authuser=0

3:05 PM | oer-zyiu-aba

Desktop 15:05 30-01-2025