



**DEPARTMENT OF MECHANICAL ENGINEERING &
INDIAN INSTITUTE OF METALS(IIM) – KALPAKKAM CHAPTER
WEBINAR ON “NANOMATERIALS FOR ENERGY CONVERSION”- 29.10.2021**

The Webinar on nanomaterials for energy conversion was conducted on 29.10.2021, Dr,T Prakash Assistant Professor, National center for Nanoscience and Nanotechnology Division, University of Madras, Guindy Campus Chennai delivered the webinar. Dr.D.Bubesh kumar, Associate Professor welcomed the gathering. Mr.Akhil, Final year Mechanical Engineering Student introduced the guest. Nearly 50 students participated in the webinar.

Dr. T.Prakash delivered his lecture on the growing needs of human race in present developing world, energy demand is expected to be doubled by year 2050 and the demand of energy will be tripled by the beginning of next century. There is urgent need to develop alternative energy resource (renewable) which are free from conventional fuel fossil or neutral from CO_2 . Nanotechnology is creation of useful materials from the existing material by alloying them to make composite material or making them through control manipulation of 1-100 nm length scale which induce novel properties into material in electrical, chemical, mechanical, optical, and magnetic domain. Renewable energy which can be produced by newly introduced properties of materials at Nano scale has advantages of increased efficiency, electrical storage capacity and decreased amount of pollution from the use of energy. Carbon based nanomaterial find most of its applications in the field of energy applications and have been predicted future applications in the fields of hydrogen storage and electrical energy storage. Batteries and

capacitors are the most prominent applications in the field of energy storage. Solar cells and fuel cells are some more areas of application of carbon based nanomaterial in the field of energy applications. Thus he summarized the various application domains of newly created energy are Photovoltaic, ThermophotoVoltics, Solid State Lighting, Batteries, Thermo Electricity, Photo catalysis, Thermo insulation, Capacitor, hydrogen etc in conversion, conversation and storage of energy.

Mr. Senthil Kumar. Assistant Professor Grade II Presented the vote of thanks.



