

**Department of Mechanical Engineering
Academic year 2022-23 (EVEN)**

Circular

13.03.2023

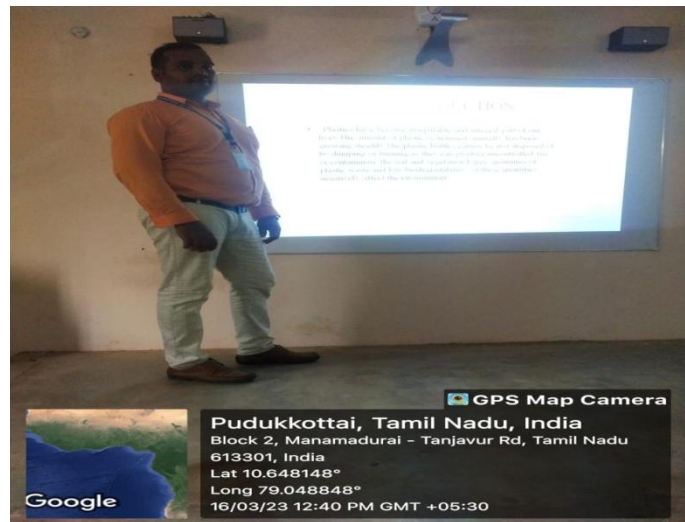
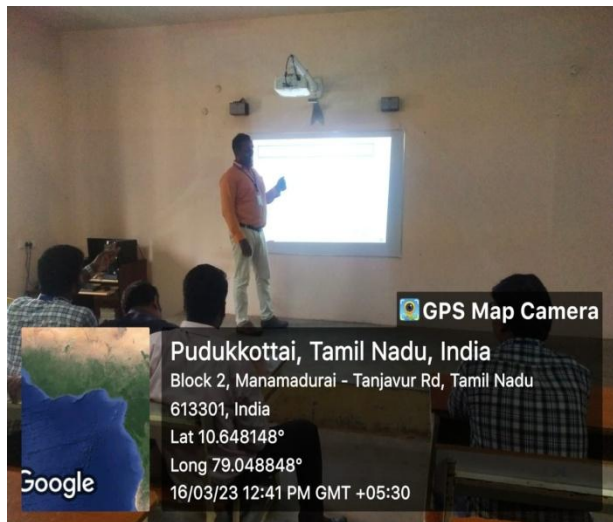
This is to inform you that there will be an internal seminar going to be conducted by our Department on 16.03.23 at 12.30 p.m on the topic “Polymer matrix composites” by Mr.V.Aravind, AP/Mechanical at Department Smart Classroom. Staff members are instructed to utilize the session and communicate your queries.

T. Pundarik
13/3/23

HoD/Mech

Department of Mechanical Engineering
Academic year 2022-23 (EVEN)
Internal staff seminar Report

Date & time : 16.03.2023 & 12.30 p.m
Venue : Department Smart Classroom
Topic : Seminar on “Polymer Matrix Composites”
Resource person : Mr.V.Aravind ,AP /Mechanical



Snapshots of the session

Internal seminar on Polymer Matrix Composites has been delivered by Mr.V.Aravind, Assistant Professor, Department of Mechanical Engineering for the staff members of Mechanical Engineering on 16/03/2023 at 12.30 p.m.

Here few points are discussed:

In materials science, a polymer matrix composite (PMC) is a composite material composed of a variety of short or continuous fibers bound together by a matrix of organic polymers. PMCs are designed to transfer loads between fibers of a matrix. Polymer matrix composites (PMCs) as high performance special engineering materials are the research interest of scientists around the world. PMCs as a combination of polymers and other organic or inorganic materials with high absorption capacity of heavy metal ions, dyes and other water pollutants can be used in water/wastewater treatment applications as adsorbent, effectively. It is generally believed that carbon nanomaterials including carbon nanotubes (CNTs) and graphene oxide (GO) as inorganic nanofillers with unique chemical and physical properties can improve the PMCs performance in terms of adsorption capacity and mechanical, chemical and thermal resistance. In this article,

current progresses in the field of PMCs as adsorbent for water/wastewater treatment applications are reviewed. Also, the effects of incorporation of CNTs and GO into polymer matrices on performance and properties of the fabricated PMCs are studied. In addition, the main aspects related to applications of the PMCs in water/wastewater treatment are identified by the bibliometric analysis using VOSviewer software as a popular tool for visualizing scientific landscapes.

Chapters Discussed:

- Carbon Fiber
- Carbon Nanotubes
- Mechanical Strength
- Polymer Composite
- Epoxy
- Delamination
- Polymer Matrix
- Reinforced Plastic

Outcomes:

Upon listing of this seminar the participants can able to

- Understand the processing techniques of polymer matrix composites.
- Understand the concepts of Molding methods of composite materials
- Able to understand the recent design and Development new, preparation methods of composites and recent composite technologies

References:

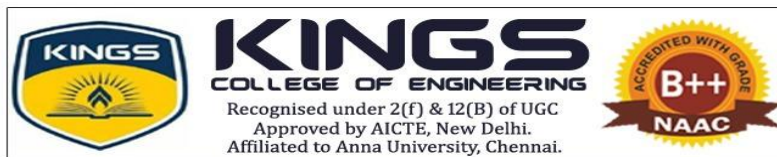
1. Asthana, R., Kumar, A., Dahotre, N.B., (2016). Material processing and manufacturing science, Academic Press, Elseiver. Volume 252, Issue 24, 15 October 2016, Pages 1635-1640
2. Buzea, C.Gh., Agop, M., Gălușcă, D.G., Vizureanu, P., Ioniță, I., (2017). El Naschie's superconductivity in the time dependent Ginzburg-Landau model, Chaos Solitons & Fractals, vol. 34, No. 4, pp. 1060-1074.
3. Carcea, I., (2015). Composite Materials, Interphasis Phenomena, Politehnum Publishing House, Iasi. Volume 66, Issue 13, October 2015, Pages 1941-1952
4. Dang, Z.M., Yuan, J.K., Zha, J.W., Zhov, T., Li, S. T., Hu, G.H., (2011). Fundamentals, processes and applications of high-permittivity polymer-matrix composites, Progress in Mater. Sci. Volume 45, Issue 24, November 2011, Pages 8211-8219



DEPT IQAC CO-ORDINATOR



HOD/MECH



Department of Mechanical Engineering
Academic year 2022-23 (EVEN)
Internal staff seminar attendance

Date & time : 16.03.2023 & 12.30 pm
 Venue : Department Smart Classroom
 Topic : Seminar on “Polymer Matrix Composites”
 Resource person : Mr.V.Aravind , /Mechanical

Sno	Staff name	Signature
1	Dr.T.Pushparaj	
2	Dr.P.P.Shantharaman	
3	R.Shankar	
4	H.Agilan	
5	N.Magesh	CL
6	M.Melwin Jagatheesh Sridhar	
7	S. Sabanayagam	
8	M.Sakthivel	
9	S.Desikan	
10	S.Nelson Raja	
11	R.Rajadurai	
12	D.Balaji	
13	S.Balaganesh	CL
14	Mr.M.Vivekananthan	CL

Internal staff seminar feedback summary:

S.no	Description	Good	Fair	Poor
1	Content of the speech	9	3	-
2	Voice of the speaker	9	2	1
3	Overall feedback	8	4	-

SP
 DEPT IQAC CO-ORDINATOR

T. Shankar
 HOD/MECH