

## OBJECTIVE

Biocomposite as novel material is an emerging field in field of Composites as the current trend of the country is moving towards Clean and Green India under Swatch Bharat Scheme. This is a composite material formed by a matrix (resin) and a reinforcement of natural fibers. The matrix phase is formed by polymers derived from renewable and nonrenewable resources. The matrix is important to protect the fibers from environmental degradation and mechanical damage, to hold the fibers together and to transfer the loads on it. In addition, biofibers are the principal components of biocomposites, which are derived from biological origins, for example fibers from crops (cotton, flax or hemp), recycled wood, waste paper, crop processing byproducts or regenerated cellulose fiber (viscose/ rayon). The interest in biocomposites is rapidly growing and this National Seminar focuses on Preparation, Characterization and its industrial applications (automobiles, railway coach, aerospace, military applications, construction, and packaging) and fundamental research, due to its great benefits (renewable, cheap, recyclable, and biodegradable).

There is a big gap between the manufacturing side and the material testing and characterisation of the Novel Materials. This seminar is aimed to give a clear picture for the participants on Structural, Thermal testing Methods such as SEM, TGA, DSC, FTIR etc. of novel materials in various fields of Science, Engineering and Medicine. This Seminar also sheds light on the theoretical and practical aspects on these testing methods. It is the right time to come up and explore the new ideas and meet the experts and speakers from Academia and Industry in the field of Material Science and conquer the shortcomings during research.

## COURSE CONTENTS

- ❖ Introduction to Novel Materials - Biocomposites
- ❖ Current Status and Future Trends of Biocomposites
- ❖ Preparation, Characterisation and application of Biocomposites
- ❖ Testing Methods for Biocomposites
- ❖ Structural Characterisation, Image analysis of SEM
- ❖ Thermal Analysis of Novel Materials
- ❖ Interpretation of Thermo Gravimetric Analysis (TGA) and Differential Scanning Calorimetry (DSC)
- ❖ Particle Size Analysis, Thermal Conductivity
- ❖ Data Analysis and Interpretation using software tools
- ❖ Principles of Fourier Transform Spectroscopy (FTIR)
- ❖ Preparation of Samples for FTIR and Methodology
- ❖ Characterization and Peak analysis of FTIR results

## VISIT THE SEMINAR WEBSITE

<https://kechem.wixsite.com/pidiliteseminar>

## TARGET AUDIENCE

Academicians, Research Scholars, Students from academic institutes, and Personnel from R&D organization and related Industries.

## RESOURCE PERSONS

Sessions will be handled by experienced faculty members from reputed institutions and Experts from R&D organization and related Industries.

## REGISTRATION FEE DETAILS

Registration Fee:

**Rs.400/-** for Academician/ Industrial Personnel

**Rs.200/-** for Students

- The Course fee includes Course Kit, Certificate, lunch and refreshment to the participants.
- The registration fee must be paid only through online transfer in favour of “**Indian Institute of Chemical Engineers Student Chapter**” Kongu Engineering College.
- For Online/ NEFT Transaction the details are:  
**SB A/C No** : 36698674479 ,  
**IFSC Code** : SBIN0000837 ,  
**MICR** : 638002002,  
**State Bank of India**, Post Box. No.259, 48,  
State Bank Road, **Erode**-638001, Tamil Nadu.

## HOW TO APPLY

The applicant should submit their scanned application in the Goggle Form and proof of payment to reach us on or before 11.03.2019. The link is given below:

<https://docs.google.com/forms/d/1DBDK-w7Ej2EHCvtDHYB5z2QjvFJdalRDUvKSeTC27i0>

## IMPORTANT DATES

Last date for receipt of Applications: 08.03.2019

Intimation of Selection : 11.03.2019

## ABOUT THE LOCATION

The college is situated at Perundurai on the National Highway (NH 47) about 80 km from Coimbatore and 20 km from Erode. It is well connected by air, road and rail.

Indian Institute of Chemical Engineers KEC Student Chapter  
**KONGU ENGINEERING COLLEGE**  
(AUTONOMOUS)  
**PERUNDURAI, ERODE 638 060 TAMILNADU**

**Pidilite Industries Sponsored**  
**National Level**  
**Seminar On**  
**“Novel Materials Synthesis and**  
**Characterization Techniques”**

**(15.03.2019)**

## APPLICATION FORM

Name :  
Designation :  
Organization :  
Gender :  
Age :  
Educational Qualification:  
Address for :  
Communication  
Mobile Number :  
E-mail ID :  
Experience :  
Teaching : \_\_\_\_\_years  
Others (Specify) : \_\_\_\_\_years  
Need Accommodation : YES / NO  
Signature :  
**Online Payment Details**  
Transaction ID:  
Amount:  
Date:  
Bank Name :

### DECLARATION

The above information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the course. If selected, I shall attend the programme for the entire duration. I also undertake the responsibility to inform the Coordinator in case I am unable to attend the course.

Place: \_\_\_\_\_ Signature of the Applicant  
Date: \_\_\_\_\_

### SPONSORSHIP CERTIFICATE

Mr/Ms/Dr \_\_\_\_\_

is an employee of our Institute / Organization and is hereby sponsored. He/She will be permitted to attend the programme in full, if selected.

Place: \_\_\_\_\_ Signature of the Sponsoring  
Date: \_\_\_\_\_ Authority with Office Seal

Application form completed in all respects is  
to be sent to:

**Dr.V.Chitra Devi**  
Professor

**Convenors & IChE KEC Coordinators**  
Pidilite Industries Sponsored  
National Seminar on  
**“Novel Materials Synthesis and Characterization  
Techniques”**

Department of Chemical Engineering  
Kongu Engineering College  
Perundurai Erode-638 060 Tamil Nadu  
**Contact Mobile –9865904404, 9750383957**

**E-mail:** erchitrasuresh@gmail.com,  
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mothil.chem@kongu.ac.in

### ABOUT THE COLLEGE

Kongu Engineering College (KEC) established in 1984, approved by AICTE, New Delhi, accredited by NAAC for 5 years with the grade of “A” and an autonomous institution affiliated to Anna University Chennai, has completed 34 years of dedicated and excellent service in the field of technical education. The college offers 14 UG, 19 PG and 16 research programmes in Engineering and Applied Sciences. It is one of the best self-financing engineering colleges imparting high quality technical education in Tamil Nadu, India, and is well-known for its technical excellence, modern facilities, record of performance with excellent results and enterprising students. Ranked 2nd Position in Tamil Nadu and 26th Position in India among Engineering Institutes in India (including IITs and NITs) by CSR Magazine. Ranked 1<sup>st</sup> Position in Tamil Nadu and 39th position at all India level by “Outlook” magazine, 3<sup>rd</sup> Position in Tamilnadu and 32nd Position in private Engineering colleges in India by “The Week” Magazine. Ranked 2<sup>nd</sup> position in Tamil Nadu and 68<sup>th</sup> position in private Engineering colleges in India by NIRF ranking. It has an active Industry-Institute Partnership (IIP) Cell to interact with industries. Received Sustainable Institute Industry Partnership Award consecutively for two years (2014 & 2015) from the Institution in Society for Educational and Entrepreneurship Development, Chennai. It has got NBA accreditation for most of the UG programmes and is an ISO certified institution. It has also got the Best Engineering College award and the Best Principal Award from ISTE. It has established a Technology Business Incubator (TBI) supported by the Department of Science and Technology, Government of India, and won the National Award presented by the President of India on Technology Day in New Delhi. Its Entrepreneurship Management Development Cell (EMDC) won Best E-Cell, Entrepreneurship Eco System Builder Award 2015 from Ministry of Skill Development and Entrepreneurship at New Delhi, India. Kongu Engineering College has been awarded as the Most Clean Campus for the Year 2017 by AICTE.

### ABOUT THE DEPARTMENT

The Department of Chemical Engineering was started in the academic year 1994 -1995 and offers B.Tech., and M.Tech., Degree programmes in Chemical Engineering. This department is one of the recognized research centers by the Anna University, Chennai. Well-equipped laboratories with advanced simulation software's like ASPEN, HYSYS, HTRI, gPROM and ProSIM's cater to the interests of aspiring students. The department focuses on imparting students with excellent technical knowledge to meet the needs of industries and research as well. The Indian Institute of Chemical Engineers Student Chapter, Kongu Engineering College started in the year 2001 aims to promote advancement of Chemical Engineering Science among the students and professionals. The IChE KEC Student Chapter has been bestowed with Ambuja's Best Student Chapter Award for the year 2017 and consecutively with Pidilite Industries' Best Student Chapter Award for the year 2018.



**Pidilite Industries Sponsored  
National Level  
Seminar On  
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Characterization Techniques”  
(15.03.2019)**

**Chief Patron**  
**Thiru. A.Venkatachalam B.Sc.**  
Correspondent, Kongu Engineering College

**Patron**  
**Prof. S.Kuppaswami B.E., M.Sc. Engg., Dr.Ing.(France)**  
Principal, Kongu Engineering College

**Chairman**  
**Dr. K.Saravanan M.Tech., Ph.D.(Tech.)**  
Professor & Head, Dept. of Chemical Engineering

### **Convenors & IChE KEC Coordinators**

**Dr. V.Chitra Devi (Professor)**  
**Mr. S.Mothil (Assistant Professor)**  
Dept. of Chemical Engineering

Organized by  
Indian Institute of Chemical Engineers  
KEC Student Chapter  
Department of Chemical Engineering  
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