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Mr. P. Arockia Doss, Assistant Professor
Ms. JK. Alphonsa Juliet Helina, Assistant Professor

Resource Persons

- **Dr. REJI PHILIP**
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- **Dr. VIJAYA RAGHAVAN**
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  Scientific Officer
  Nuclear Recycle Board, BARC,
  Department of Atomic Energy (DAE)
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Registration Details

Registration Fee is Rs. 300/-(per participant)
Last Date for Registration : 09:12:2019
Spot Registration available but cannot present oral/poster.
Last Date for Abstract Submission: 09:12:2019
Acceptance intimation of Oral/Poster:10:12:2019
Poster Presentation @ Chemistry Verandhah
Oral Presentation @ Sail Auditorium

Contact : 98425 90384
E-mail : *ncfms2019@gmail.com*

One Day National Conference On

FRONTIERS OF MATERIAL SCIENCE (NCFMS-'19)

December 13, 2019

Venue: SAIL AUDITORIUM
Time : 9.30 am

PG & RESEARCH DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE (Autonomous)
Special Heritage Status Awarded by UGC
Accredited at "A++" Grade (4th Cycle) by NAAC
College with Potential for Excellence by UGC
TIRUCHIRAPALLI – 620002
TAMIL NADU
INDIA

About the Institution

St. Joseph's College (Autonomous), Trichy - the pioneer of all Jesuit Institutions was established in 1844 by the Fathers of Society of Jesus (The Jesuits). It stands as the main land mark of Trichy, which embarks the famousSt. Lourdes Church and is located at the foothill of Rockfort Temple.
This educational establishment has been instrumental in nurturing and transforming thousands of young minds as truly educated men; not only physically fit, but intellectually well equipped; not merely cultured and refined but thoroughly disciplined and professionals.
The College in all its grandeur celebrated its Dodran Bicentenary, this year. **In its 175 years of existence**,

St. Joseph's College (SJC) has always lived up to its motto "Pro Bono Et vero" radiating Goodness to the World and expressing Truth in its endeavour to impart quality higher education.
SJC is an affiliated to and the proud possession of the Bharathidasan University. It is no surprise that has been bestowed the Special Heritage Status a national honour, awarded by the UGC through an exhaustive pan India selection process.
It is the only institution from Tamil Nadu to have been given this rare distinction.

SJC was recognized by UGC as a College with Potential for Excellence (CPE) in 2004 and It has received the DBT's Star College Status in 2015. It has recently crowned itself with **A++ Grade** from **NAAC Accreditation (Fourth Cycle) in 2019.**

About the Department

The DST-FIST sponsored Department of Chemistry, was incepted to St. Joseph's in the year 1906 by **Rev. Fr. Augustin Hass SJ** , with only undergraduate program in chemistry. The pre-university course was introduced in 1956 and Post graduation in Chemistry was introduced as early as 1960 as affiliated College of Madras University.

The Ph.D. Program in Chemistry was introduced in the year 1965. Research flourished in almost all thrust areas. M.Phil. program was introduced in 1983 as affiliated to Bharathidasan University.

The PG Research Department of Chemistry, has produced about 650 M. Phil. and 112 PhD Scholars. Currently 67 scholars are pursuing research for Ph.D.

The Department is presently accommodating 400 undergraduate and postgraduate students every year for their graduation.
The Department of Chemistry houses nine Laboratories, one Store stacked with Lab-wares, Nine Classrooms (AV-enabled) and one huge Staff-room. It is a FIST- and DBT -funded department.

The department is well equipped with a FIST- Instrumentation Laboratory and FIST sponsored Computer Lab. The students of chemistry have ready access to the FIST- department library, shelved with 280 titles of recent books in varied fields of chemistry. Currently, more than 70 Ph.D. Scholars are pursuing their research in Chemistry. As many as 104 Ph.D. Scholars qualified their Doctoral Degree from our Department, till date.

The Department has published more than 750 research papers in many Journals of National and International repute. The faculty members have authored 6 books in selected titles of Chemistry, so far. More than 12 Practical Manuals have been published by the department for private circulation.

The Chemistry Department is actively involved in promoting research in this region of Trichy, by conducting Nation and international seminars and conferences on a regular basis, For the past ten years, The Department has been conducting CSIR-NET/SET/GATE and IIT Coaching classes with astounding results. The twenty two strong teaching faculty and eight efficient Non-teaching staff stay as pillars in uplifting the pride of the Department.

A New Scientific Frontier

Atomic structure and chemical composition were once major focuses of materials science research. However, over the last few decades, this focus has changed dramatically as analytical chemistry, the electron microscope, X-ray diffraction, and a host of spectrometers have been developed that can analyze materials with accuracy.

Because scientists can now understand what materials are made of (chemical composition) and how they work (physical properties), the major focus of materials science has shifted to understanding how materials can be improved and what new materials can be developed to meet society's needs.

These scientific advances caused a revolution in knowledge in materials. What was known about materials only 50 years ago could be printed in several volumes of books; today's advances fill shelves of books. Examples of new materials abound and are reported regularly in newspapers and magazines.

The space shuttle tile, which is used as a heat shield to protect the aluminum shell on the shuttle, is one example of this development of new and improved materials. When NASA (the National Aeronautics and Space Administration) decided to build a space shuttle that would rocket into orbit and eventually plunge through the atmosphere and land on the ground like an airplane, no known insulating material existed that would protect the flight crew from the fierce Re-entry heat, be light enough to coat the entire craft, and be reused a number of times. So, ceramists (materials scientists who work with ceramics) designed special tiles made from high-temperature glass fibers and sintered them to form a rigid, but almost unbelievably light structure.

These tiles are glued to the shuttle with silicone rubber and now do an admirable job of keeping heat away from the crew. The ceramists designed the tiles from "scratch" by adapting their knowledge of glass properties to meet the needs of the space shuttle.

Paper ORAL Presentation / Poster Details

Abstract on A4 paper Font : Times New Roman
Font Size : 12 size
Not exceeding 500 words

Poster Size _ Printed in A3 format