Sri Venkateswara College of Engineering

DEPARTMENT OF CHEMICAL ENGINEERING

NEWSLETTER

THE CATALYST

ACCELERATING YOUR GROWTH

Volume - 2, Issue - IV, April, 2023

Sri Venkateswara College of Engineering

Newsletter

The Catalyst

(Accelerating your Growth rate)

Department of Chemical Engineering

Vision

To be a leader in Chemical Engineering Education and Research by providing balanced learning and fostering research to enable the learners to meet the challenges of process industries and societal needs.

Mission

The Department of Chemical Engineering strives to produce graduates who practice Chemical Engineering professionally and ethically in a competitive global environment and contribute to the betterment of society, thereby focusing on the development of engineers to foster innovation through proficiency and effective communication.

Motivation: Alumni page

Proud Alumnus:
Shri. Shriram V,
B.Tech Chemical Engineering
(2002-2006)

Senior Manager.
Global Market and Cost Intelligence
Ontex, Belgium.

College life is an enriching experience that serves as a foundation for your future career. Make the best use of all the teaching and research resources available to you. Commit yourself to learn and grow.

Come out of your comfort zone: meet people, network, gain insights and grow not only the technical skills but also analytical, critical thinking and communication skills. Don't be afraid to ask questions.

Like anything in life, the 4 years of college will also be full of ups and downs. The vital aspect is not to let these adverse instances knock you down. Bounce back better and stronger – work hard and have a growth mindset.

More importantly, remember to also have fun throughout the learning journey. All the best!

Parent Teacher Meeting - A Day to appraise.

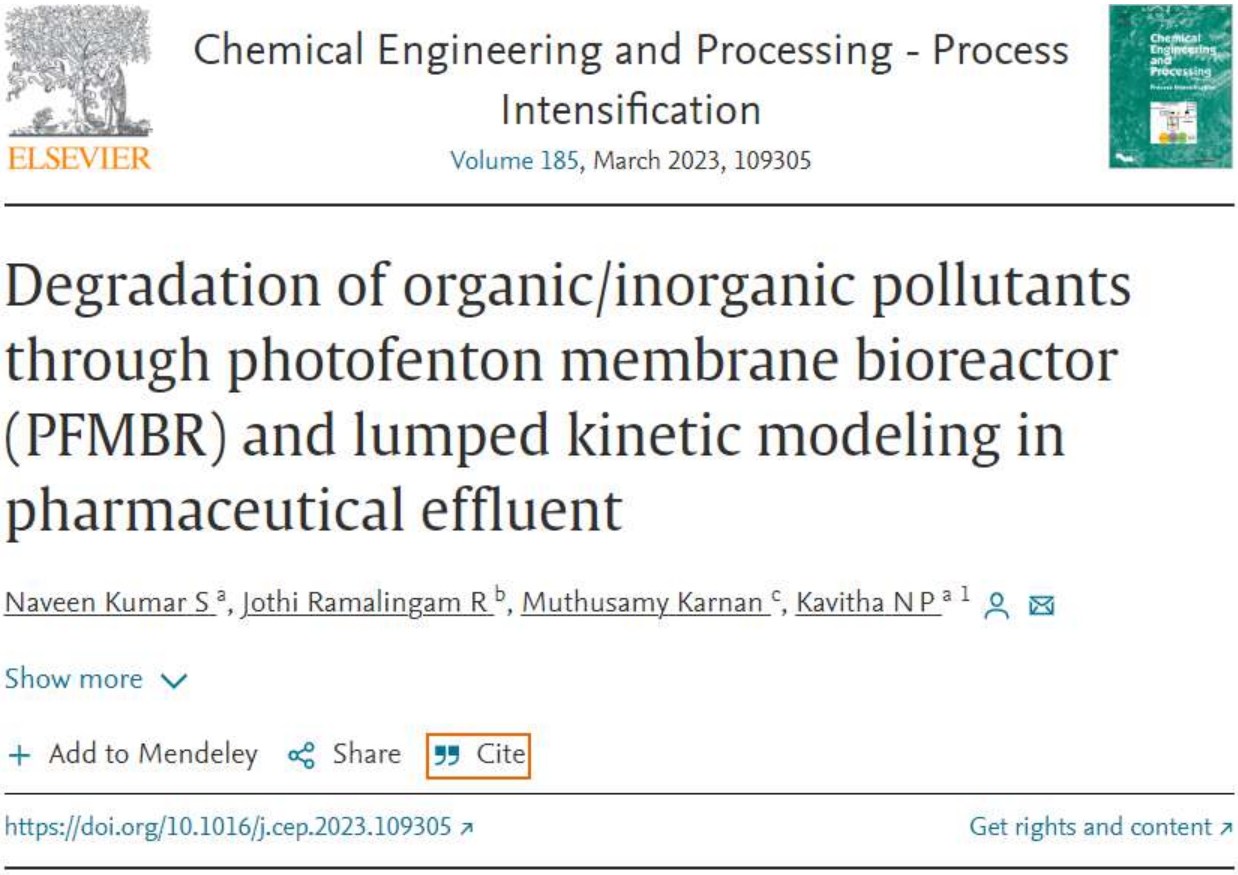
Parents were appraised about their ward on 1st April 2023 about their academic performance, attendance, assessment performance and lack of discipline(if any).

Journal Publication:

Dr. Govindarasu R. et.al.Assistant HoD and Associate Professor, has reported paper publication, titled "STUDY ON THE IMPACT OF HUMAN FACTORS ON HEALTH AND SAFETY PERFORMANCE", in International Journal of Health Sciences, 6(S5), 8081–8093. DOI:10.53730/ijhs.v6nS5.10597

Dr. Govindarasu R. et.al.Assistant HoD and Associate Professor, has reported paper publication, titled "INVESTIGATION ON HUMAN FACTORS INFLUENCING HEALTH AND SAFETY PERFORMANCE IN THE CONSTRUCTION INDUSTRY, in Journal of Northeastern University, 25(04), 288-301",https://dbdxxb.cn/2022-4-balaji-r

Dr. N.P. Kavitha et.al., Assistant Professor, has reported paper publication,in the Elsevier journal of "Chemical Engineering and Processing - Process Intensification"; titled "DEGRADATION OF ORGANIC/INORGANIC POLLUTANTS THROUGH PHOTOFENTON MEMBRANE BIOREACTOR (PFMBR) AND LUMPED KINETIC MODELING IN PHARMACEUTICAL EFFLUENT". Volume 185, 2023, 109305, ISSN 0255-2701,DOI:10.1016/j.cep.2023.109305.



ELSEVIER

Chemical Engineering and Processing - Process Intensification

Volume 185, March 2023, 109305

Degradation of organic/inorganic pollutants through photofenton membrane bioreactor (PFMBR) and lumped kinetic modeling in pharmaceutical effluent

Naveen Kumar S [a], Jothi Ramalingam R [b], Muthusamy Karnan [c], Kavitha N P [a 1]

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https://doi.org/10.1016/j.cep.2023.109305 ↗ Get rights and content ↗

Dr. N.P. Kavitha et.al., Assistant Professor, has reported paper publication,in AIP Conference Proceedings of 3RD SYMPOSIUM ON INDUSTRIAL SCIENCE AND TECHNOLOGY (SISTEC2021), 25–26 August 2021,Pahang, Malaysia; titled "THERMOPHYSICAL PROPERTIES AND MOLECULAR INTERACTIONS OF FUEL OXYGENATE MIXTURE AT DIFFERENT TEMPERATURES VIA JOUYBAN–ACREE MODEL" AIP Conference Proceedings 2682, 050012 (2023); https://doi.org/10.1063/5.0116695.

AIP Publishing **AIP Conference Proceedings**

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Volume 2682, Issue 1
7 February 2023

RESEARCH ARTICLE | FEBRUARY 07 2023

Thermophysical properties and molecular interactions of fuel oxygenate mixture at different temperatures *via* Jouyban–Acree model

Thanusha Thanihaik Kumaar; Ramesh Redrouthu; Ramesh Kanthasamy; Imtiaz Ali; Bamidele Victor Ayodele; Dai-Viet N.Vo; Kavitha Nagarasampatti Palani

Check for updates

+ Author & Article Information

AIP Conference Proceedings 2682, 050012 (2023)
https://doi.org/10.1063/5.0116695

Dr. N.P. Kavitha et.al., Assistant Professor, has reported paper publication,in the Springer journal of "Research on Chemical Intermediates"; titled "DEVELOPMENT OF CHITOSAN@FE2O3/RGO/BI2S3 AS A NEW ECO-FRIENDLY PHOTOCATALYST FOR ENHANCING THE CATALYTIC STABILITY AND SUPERIOR DEGRADATION OF ORGANIC POLLUTANTS". Res Chem Intermed (2023). DOI: 10.1007/s11164-023-05001

Springer Link

Home > Research on Chemical Intermediates > Article

Published: 05 May 2023

Development of chitosan@Fe_2O_3/rGO/Bi_2S_3 as a new eco-friendly photocatalyst for enhancing the catalytic stability and superior degradation of organic pollutants

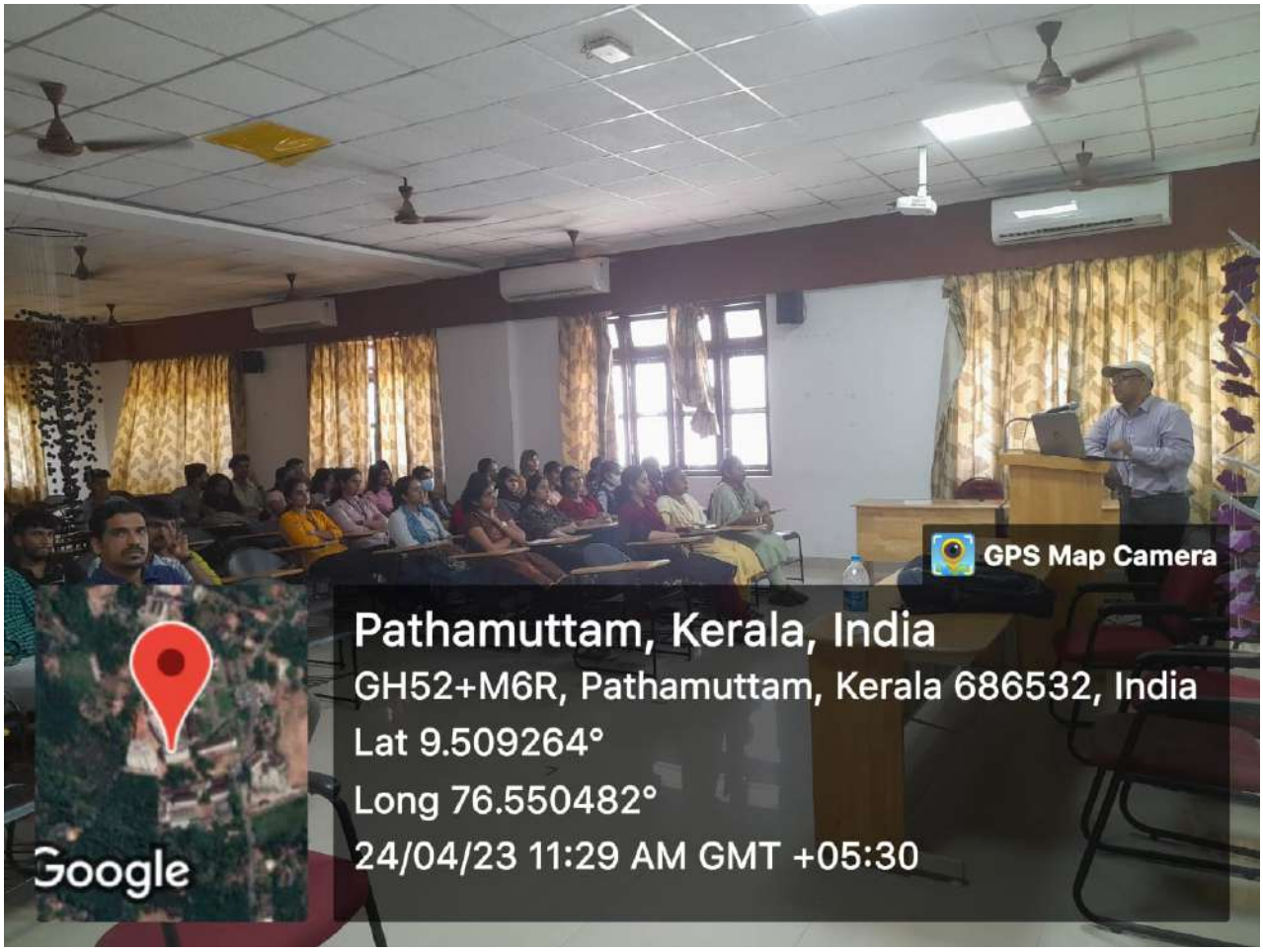
Nithya Ramasamy, Kavitha Nagarasampatti Palani, Asha Mathew & Balasubramanian Natesan

Research on Chemical Intermediates (2023) | Cite this article

11 Accesses | Metrics

SVCE Faculty as Resource Person:

Dr. R. Rajesh @ Nithyanandam , Associate professor, gave a guest lecture on " Mass Transfer and its Significance in Chemical Engineering " dated : 24.04.2023 in Saintgits College of Engineering, Kottukulam Hills, Pathamuttam P. O, Kerala.



Events Organised: Pansophy'23 (Symposium)

The Chief Guest, Dr. K.V Radha lighting the Kuthuvilakku; and addressing the gathering; The Head of Department, Dr. N. Meyyappan giving the Introductory Speech; Event Organiser, Dr. M. Srividhya, AP/CHE, welcoming the assembly; the gallery, made up of faculty and participants from SVCE, as well as exterior colleges.

The Chief Guest for the Valedictory Ceremony, Dr. J. Venkatesan, HoD, Automobile Engg. & Dean - Student Welfare, addressing the gathering; the Head of Department, Chemical Engg., Dr. N. Meyyappan, the Chief Guest, Event Organiser, Dr. M. Srividhya, AP/CHE, and President, Pansophy'23, Mr. R. Kishore Arvind presiding over the ceremony; the Chief Guest felicitating the winners; the gallery, comprised of Faculty and participants from both SVCE and other exterior colleges.

Events Organised: TiChS '23 (National Conference)

Conference Proceedings released by Prof. N. Meyyappan, HOD/CHE, Mr. Kumaran Karunakaran and Dr. Paromita Chakraborthy

Description	Internal Participants	External Participants
No. of Students	51	50
No. of Keynote address	4	
No.of Presented papers	61	

Fostering Research: Awards & Achievements:

Student Ms.Ranjani R, second year B.Tech Chemical Engineering, has presented paper on ISTE annual convention held at Sri Venkateswara College of Engineering by 29/04/2023; and secured first prize. She was guided by Mr. N. Arun Prem Anand, on the title "FUEL CELL AND SUSTAINABLE ENERGY".

The following students have reported the participation in technical events during the month of April 2023, with the guidance from Dr. M.Srividhya, and their names have been decorated in the wall of names below.

Extracurricular activities:

Ms. Hindhuja B, Ms. Navya and Ms. Harini R & Ms.Sneha had participated and won first prize at Rangoli event during Women's day celebration at college on 8th March 2023; and at Tamil New year celebration on 11th March 2023 at campus.

Programmes run by the Department of Chemical Engineering are,

- **B.Tech Chemical Engineering**
- **M.Tech Chemical Engineering**
- **Ph.D**

B.Tech CHEMICAL Engineering

Programme Educational Objectives

PEO1: Understand and apply the basic principles of science and engineering to modern chemical technology.

PEO2: To inculcate problem solving skills, conduct experiments, analyze and interpret the data.

PEO3: To design processes within realistic constraints such as economic, social, ethical, environment, health and safety conditions.

PEO4: To provide opportunities to students to engage in professional societies, and help them to acquire new skills to stay connected with today's fast progressing environment.

PEO5: To provide awareness in critical thinking, environmental, ethical and professional practice including improving communication skills.

Programme Outcomes

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

P10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

P11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOME's

PSO1: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.

PSO2: Execute the chemical engineering principles and modern engineering tools to conduct experiments or design a system for developing quality chemical processes by considering the cost, safety and environmental aspects.

M.Tech CHEMICAL Engineering

***Programme* Educational Objectives**

PEO1: Acquire comprehensive knowledge in Chemical Engineering and research capabilities.

PEO2: Analyze and solve using Chemical Engineering principles and modern engineering tools to conduct experiments for improving the quality of the chemical processes.

PEO3: Design processes within realistic constraints such as economic, social, ethical, environment, health and safety conditions.

PEO4: Provide opportunities to students to engage in professional societies, and help them to acquire new skills to stay connected with today's fast progressing environment.

PEO5: Empower students to become entrepreneurs for Chemical industries.

Programme Outcomes

PO1: Independently carry out research /investigation and development work to solve practical problems.

PO2: Write and present a substantial technical report/document.

PO3: Demonstrate a degree of proficiency over the area as per the specialization of the program. The proficiency should be at a level higher than the requirements in the appropriate bachelor program

PO4: Potential to analyze solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety.

PO5: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO6: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PROGRAMME SPECIFIC OUTCOME's

PSO1: Apply the knowledge of science and mathematics in the field of various transport processes to accomplish the contemporary needs of chemical and allied industries.

PSO2: Execute the chemical engineering principles and modern engineering tools to conduct experiments or design a system for developing quality chemical processes by considering the cost, safety and environmental aspects.

Editorial Team: Dr. N. Meyyappan, HOD/CHE & Mr. S. Jai Ganesh, AP/CHE.
Student Team: Prerna Unnathe N, Ramapriyan A, Sanjana Shree P N. - II year CHE