DEPARTMENT OF

chemical engineering

PROUDLY PRESENTS

EDITION 16
JULY 2015

From the Editors Desk,

Hola!!! We are yet again happy to welcome you all aboard the third edition of Spark for the scintillating year 2015. SPARK is the newsletter of the Chemical Engineering Department which aims to bring forward the buzz from the department in the past few months.The is the "coda "edition of the final years and brings forth the enthusiatic efforts of the Student chapters ACE, IIChe and I-CELL.We hope that the legacy of SPARK would be carried forward by the juniors .We deeply mourn the loss of DR. Kalam who had sparked all our lives. Hope our deeds would SPARK everyone's life!!!

Nanotechnology – the rising Kepler of chemical stream

https://en.wikipedia.org/wiki/Surface_science

Nanotechnology - Perhaps the word may give an impression of something that has to do with minute things. Despite this fact, it has been a phenomenal field of research now-a-days and as ever growing as a big black hole. Starting with what actually nanotechnology is, it is that field which focuses on manipulating matter on a supra-molecular state especially in the nano-scale. The categories of science that falls into this are basically surface science, organic chemistry, molecular biology, semiconductor physics, micro-fabrication and the extent to which nano-tech applies itself in the field of targeted drug delivery is intense.

Some Recent Advancements

Nanotech Detector – Heart Attacks

The technology involves tiny blood stream nano-sensor chips that might sense the precursor of a heart attack. A person with such a tiny chip might get a warning either on their smartphone or other wireless device that cautions them to visit their cardiologist as soon as possible.

The latest versions of the chip measure 90 microns—much smaller than a grain of sand. A doctor or nurse might inject the nano-sensor into a patient's arm, where it would flow down to the distal tip of the finger and embed itself, screening the blood for endothelial cells that are sloughed off of an artery wall in a precursory period preceding a heart attack.

Silver germ killers

Silver nano-particles are increasingly being used in everything from self-sanitizing toothbrushes to clothes. Silver interrupts the bacteria cell's ability to form the chemical bonds essential to its survival. These bonds produce the cell's physical structure so when bacteria meets silver it literally falls apart. For this reason, silver enforced bandages are especially in demand. Bandages with silver ions prevent bacterial growth and speed healing time, making them especially valuable for treating burn and wound victims. Wound dressings containing silver have been an important aspect of healthcare. Silver has actually been proven to promote the growth of new cells, thereby increasing the rate at which wounds can heal. And, unlike other metals with antimicrobial properties, it is not toxic to humans.

Biology at Nano Scale

Over decades, the nature has perfected the art of biology at supramolecular levels. Many of the cells function at the nanoscale range resulting in high performance efficiencies and also with such profound efficacy. An interesting fact – a small genetic strand that rules and decides the total genomic sequence and physical appearances of entire human race, the DNA (deoxy ribo nucleic acid) is only about 2nm in diameter. One medical example of nanotechnology is the bio-barcode assay, a relatively low-cost method of detecting disease-specific biomarkers in the blood, even when there are very few of them in a sample. The basic process, which attaches "recognition" particles and DNA "amplifiers" to gold nanoparticles, was originally demonstrated at for a prostate cancer biomarker following prostatectomy. The bio-barcode assay has proven to be considerably more sensitive than conventional assays for the same target biomarkers, and it can be adapted to detect almost any molecular target.

Conclusion:

With such advancements under its name, it will be a piece of revolution in the field of science particularly more towards targeted drug delivery and tumor detection. And finally comes the astonishing fact to the party that the scientists are currently working on creating a teleporter with the help of nanotechnology.

Nanotech will be the fuehrer of Science and Technology.....


FACULTY BUZZ

- **Dr. M. Subramanian** (Asso. Prof.), Sivaram P. M., Gowdhaman N. and Ebin Davis D.Y., Published a paper titled "Carbon Foot Print Analysis of an Educational Institution", *Applied Mechanics and Materials,* Vol.787 (2015), pp.187 – 191.

DR. M. SUBRAMANIAN

- **Dr. K. Sathish Kumar (Asso. Prof.)** and Dr. P. Senthil Kumar (Asso. Prof.), submitted a research seminar proposal titled on **"One Day National Seminar on "Environmental Issues: Protection, Conservation and Management"** to ***Defence Research and Development Organization*** (DRDO), New Delhi on 14.05.2015.

DR. K. SATHISH KUMAR

- **Dr. K. Sathish Kumar (Asso. Prof.),** Dr. P. Senthil Kumar (Asso. Prof.) and Dr. K. Ramakrishnan (Professor & Head) organized a **One Day National Workshop on "Water and Wastewater Analysis** (WWWA)" on 12.06.2015.
- **Dr. K. Sathish Kumar (Asso. Prof.),** Dr. P. Senthil Kumar (Asso. Prof.), Dr. R. Anantharaj and Dr. K. Ramakrishnan (Professor & Head) organized Three Days Faculty Development Programme on **"Separation Process in Environmental Applications (SPEA)"** on 24.06.2015 To 26.06.2015.
- **Dr. K. Sathish Kumar (Asso. Prof.)** and Dr. P. Senthil Kumar (Asso. Prof.), published the research manuscript titled "Adsorptive removal of Pb(II) ions from polluted water by newly synthesized chitosan - polyacrylonitrile blend: Equilibrium, kinetic, mechanism and thermodynamic approach" in an International Journal titled "Process Safety and Environmental Protection" **IF: 2.551 (ELSEVIER)** on 19.07.2015.
- First DC meeting was conducted for his Full time research scholar **Ms. Carlin Geor Malar** on 23.07.2015.
- Delivered a talk on **"Biodegradable polymers in drug delivery applications"** in FDP conducted by CIT Coimbatore on 24.07.2015.
- Delivered a talk on "**Applications of Nanomaterials**" in SVS Engineering college Coimbatore on 24.07.2015.

DR. P. SENTHIL KUMAR

- **Dr. P. Senthil Kumar** (Asso. Prof.), Published a paper titled "**Adsorption of toxic Cr(VI) ions from aqueous solution by sulphuric acid modified *Strychnos potatorum* seeds in batch and column studies"** in ***Desalination and Water Treatment*** **(IF: 0.993)** on 07.05.2015.
- **Played Cricket Match** for SSN Teaching Staff Cricket Team on 10. 04. 2015 and 02. 05. 2015.

- **Dr. P. Senthil Kumar** (Asso. Prof.) and Dr. K. Sathish Kumar (Asso. Prof.) submitted a research seminar proposal titled on **"One Day National Seminar on "Environmental Issues: Protection, Conservation and Management"** to ***Defence Research and Development Organization*** (DRDO), New Delhi on 14.05.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.), Dr. K. Sathish Kumar (Asso. Prof.) and Dr. K. Ramakrishnan (Professor & Head) organized a **One Day National Workshop on "Water and Wastewater Analysis** (WWWA)" on 12.06.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.), and Mr. A. Saravanan (full time research scholar **)** published a paper titled "**Optimization of process parameters for the removal of chromium (VI) and Nickel (II) from aqueous solutions by mixed biosorbents (Custurd apple seeds and Aspergillus niger) using response surface methodology", *Desalination and Water Treatment* (IF: 0.993)** on 16.06.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.), Dr. K. Sathish Kumar (Asso. Prof.), Dr. R. Anantharaj and Dr. K. Ramakrishnan (Professor & Head) organized Three Days Faculty Development Programme on **"Separation Process in Environmental Applications (SPEA)"** on 24.06.2015 To 26.06.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.) gave a research lecture on **"Adsorption Processes"** in the Industry-Institute Interaction Workshop on "**Adsorption based refrigeration and air-conditioning systems**" conducted by Department of Mechanical Engineering, PSG College of Technology, Coimbatore on 04.07.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.) published a paper titled **"Novel adsorbent from agricultural waste (cashew nut shell) for methylene blue dye removal: Optimization by Response Surface Methodology"**, ***Water Resources and Industry***, Vol. 11, pp. 64-70, 2015. **IF: 1.057 (ELSEVIER)** on 14.07.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.) and Dr. K. Sathish Kumar (Asso. Prof.) published the research manuscript titled **"Adsorptive removal of Pb(II) ions from polluted water by newly synthesized chitosan - polyacrylonitrile blend: Equilibrium, kinetic, mechanism and thermodynamic approach"**, ***Process Safety and Environmental Protection,*** **IF: 2.551 (ELSEVIER)** on 19.07.2015.
- **Dr. P. Senthil Kumar** (Asso. Prof.), Dr. K. Sathish Kumar (Asso. Prof.) and Dr. K. Ramakrishnan (Professor & Head) organized **6th National Conference on Recent Trends in "Chemical, Energy and Environmental Engineering (CEEE)"** as a part of **I CELL activities** on 31.07.2015.

- **Dr. D. Gnanaprakash** (Asso. Prof.), Presented a Paper titled on "**Ocimum Sanctum Extract Coating On Biomaterial Surfaces To Prevent Bacterial Adhesion And Biofilm Growth", *Asian Journal of Pharmaceutical and Clinical Research,*** 2015 Vol: 8 (3),ISSN - 0974-2441 IF-0.523 .

- **Dr. D. Gnanaprakash** (Asso. Prof.), delivered a lecture on "**Extraction and its Environmental Applications**" for Faculty Development Programme on "**Separation Process in Environmental Applications (SPEA)**" at Department of Chemical Engineering, SSNCE.

DR. D. GNANAPRAKASH

- **Dr. D. Gnanaprakash** (Asso. Prof.) attended 10th Petrotech Summer School 2015 titled "**Petroleum Refining and Petrochemicals" conducted by Indian Oil - R & D**., IIPM and Petrotech at Indian Oil Institute of Petroleum Management (IiPM) Gurgaon from 1st June to 5th June 2015.

- **Dr. B. Ambedkar (Asso. Prof.)** made a presentation on **"Power Ultrasonic's Potential Application In Reducing Co_2 Capture Energy Demand"** during **Energy Group Meeting** on 01.04.2015.
- **Dr. B. Ambedkar (Asso. Prof.) acted as a** Jury Member **for Oral Presentation during 2nd National Conference on Recent Trends in "CLEAN TECHNOLOGY FOR SUSTAINABLE ENVIRONMENT** (CTSE)" on 10th April 2015.

DR. B. AMBEDKAR

- **Dr. B. Ambedkar (Asso. Prof.)** delivered lecture on "**Beneficiation of Indian Coals**" for Faculty Development Programme on "**Separation Process in Environmental Applications (SPEA)**" on 24.06.2015, at Department of Chemical Engineering, SSNCE.
- **Dr. B. Ambedkar (Asso. Prof.)** and Dr. R. Anantharaj (Asso. Prof.) published a paper titled on "**Liquid-Liquid equilibrium (LLE) data for ternary mixtures of {[EMIM][$EtSO_4$] + thiophene/benzothiophene +n-hexadecane} and {[EMIM][$MeSO_3$]+ thiophene/benzothiophene +n-hexadecane} at 298.15K", *Journal of Molecular Liquid***, MOLLIQ-D-15-00680R1.

- **Dr. J. Dhanalakshmi** (Asso. Prof.) presented a Research Seminar on the topic "**Separation of Azeotropic Mixtures Using Ionic Liquids**" on 29.05.2015.
- **Dr. J. Dhanalakshmi** (Asso. Prof.) delivered a lecture on topic **'SEPARATION PROCESSES WITH IONIC LIQUIDS"** for Faculty Development Programme on "**Separation Process in Environmental Applications** (SPEA)" at Department of Chemical Engineering, SSNCE.

Dr. J. Dhanalakshmi

- **Dr. R. Anantharaj (Asso. Prof.)** and Dr. B. Ambedkar (Asso. Prof.), published a paper titled on "**Liquid-Liquid equilibrium (LLE) data for ternary mixtures of {[EMIM][$EtSO_4$] + thiophene/benzothiophene+n-hexadecane} and {[EMIM][$MeSO_3$]+ thiophene/benzothiophene +n-hexadecane} at 298.15K",** ***Journal of Molecular Liquid***, MOLLIQ-D-15-00680R1.

DR. R. ANANTHARAJ

- **Dr. R. Anantharaj (Asso. Prof.)** published a paper titled on "**Simultaneous Interaction between Similar or Dissimilar Structure of Aromatic Sulfur and Aromatic Nitrogen Compounds with Imidazolium based Ionic Liquid Using Quantum Chemical Method"** ***Asia Pacific Journal of Chemical Engineering*** **(Accepted) ID APJ-14-0289.R1.**
- **Dr. R. Anantharaj (Asso. Prof.)** and T. Banerjee (Prof. at IIT G) published a paper title on "**Ethylsulphate-based Ionic Liquids in the Liquid-Liquid Extraction of Pyrrole and Pyridine from Isododecane at 298.15K**". ***Chemical Product and Process Modeling*** **(Accepted) DGCPPM 2014-0027.**
- **Dr. R. Anantharaj (Asso. Prof.)**, Ms. S. Sugashini (Research Scholar, NIT T) and Ms. K.M. Meera Sheriffa Begam (Prof. NIT T) published a paper title on "**Removal of Cr (VI) ions using Fe loaded chitosan carbonized rice husk composite beads (Fe-CCRCB): Experiment and Ab-Initio Calculations". *Journal of Molecular Liquids, 380-38, 208, 12015.***
- **Dr. R. Anantharaj (Asso. Prof.),** Mohamed Kamel Hadjkali (UM) and Hanee (UM) published a paper titled on "**Extraction of nitrogen compounds from diesel fuel using imidazolium- and pyridinium- based ionic liquids: Experiments, COSMO-RS prediction and NRTL correlation**". ***Fluid Phase Equilibria*** (Accepted) FPE-D-15-00243R1.

DR. V. JAIKUMAR

- **Dr. V. Jaikumar (Asso. Prof.)** attended **two week ISTE STTP on Environmental studies conducted by IIT Bombay** from 2nd June to 12th June 2015 in Vels University, School of Engineering and Technology, Pallavaram, Chennai .
- **Dr. V. Jaikumar (Asso. Prof.) delivered a lecture titled on "Types of Environmental Pollutions" for Faculty Development Programme on "Separation Process in Environmental Applications (SPEA)" at Department of Chemical Engineering, SSNCE on 26.06.2015.**
- **Dr. V. Jaikumar (Asso. Prof.)** Gaced as the chief guest for inaguration of English Language lab. in "The Hindu Colony Chellammal Vidyalaya Sr. Sec. School, A-36, Hindu Colony, Nanganallur, Chennai 600061 affiliated to Central Board of Secondary Education, New Delhi on 27.06.2015.

- **Dr. N. Varagunapandian (Asso. Prof.)** delivered a lecture on "**ELECTROREDUCTION OF CARBON DIOXIDE TO HIGHER HYDROCARBONS**" for Faculty Development Programme on "**Separation Process in Environmental Applications** (SPEA)" at Department of Chemical Engineering, SSNCE on 24.06.2015.

DR. N. VARAGUNAPANDIAN

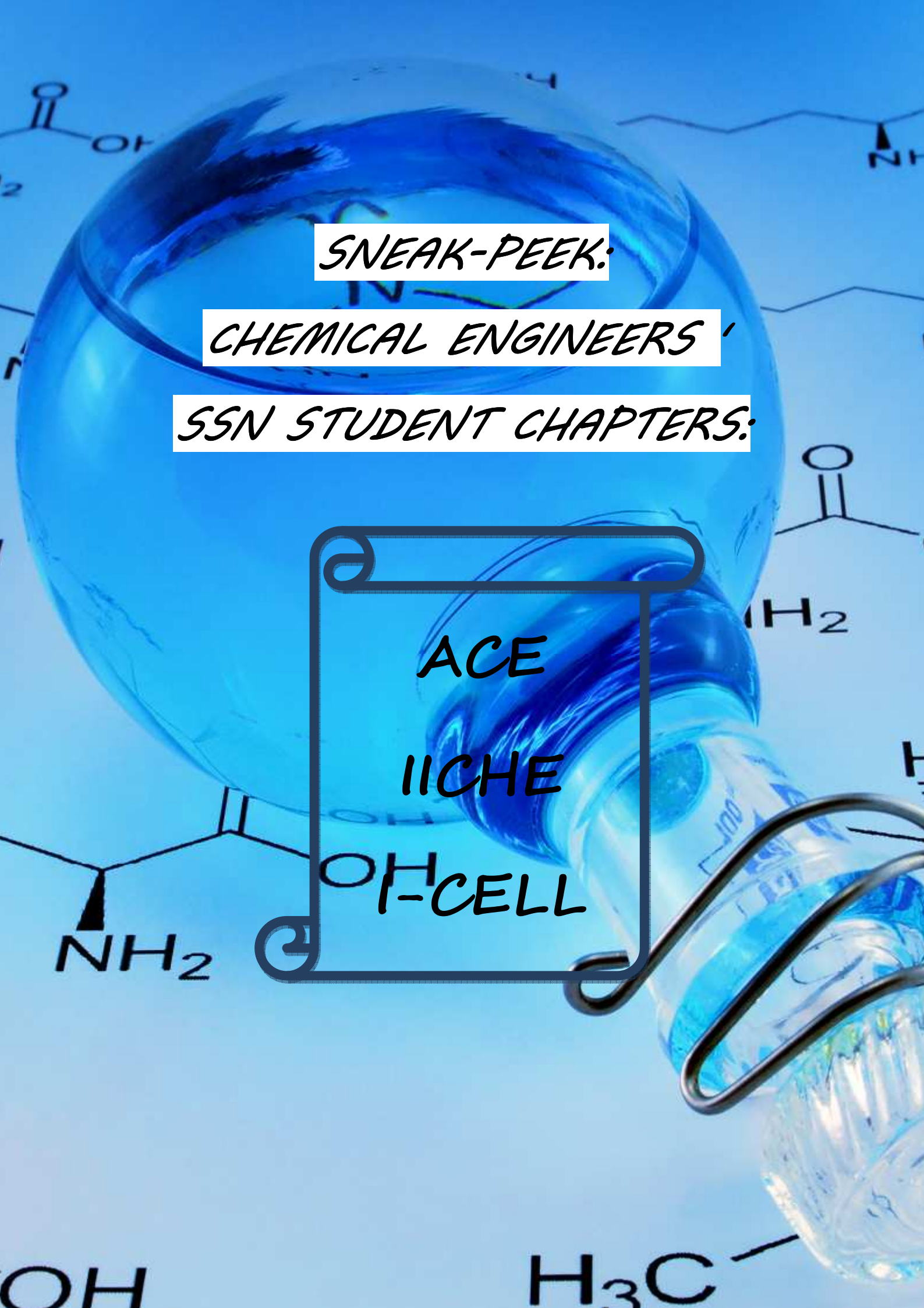
- **Dr. D. Balaji (Asso. Prof.)** delivered a lecture on "**PERSPECTIVE OF GREEN CHEMICAL PRODUCT DESIGN AND ENGINEERING**" for Faculty Development Programme on "**Separation Process in Environmental Applications** (SPEA)" at Department of Chemical Engineering, SSNCE on 25.06.2015.

DR. D. BALAJI

- **Dr. D. Balaji (Asso. Prof.)** delivered a technical talk on "**POTENTIAL OF CALORIMETRY AS A PROCESS ANALYTICAL TECHNOLOGY (PAT) TOOL FOR MONITORING AND CONTROL OF BIOREACTOR**" for UGC sponsored FDP on "**SYNTHESIS, CHARACTERIZATION & APPLICATIONS OF BIOMATERIALS**" at Coimbatore Institute of Technology, Coimbatore on 20.07.2015.

- **Mrs. B. Chitra (Asst. Prof.)** and Mrs. R. Pushpalatha (Asso. Prof.) published a paper titled **"Heat transfer Effects for two different impellers using Newtonian and Non-Newtonian fluids in an Agitated Vessel"** in ***International Journal of ChemTech Research***, Vol.7, No.6, pp 2802-2808, 2014-2015 (ISSN: 0974-4290) on 08.04.2015 .

MRS. B. CHITRA


SNEAK-PEEK:
CHEMICAL ENGINEERS '
SSN STUDENT CHAPTERS:
ACE
IICHE
I-CELL

THE DAWN OF A NEW BEGINNING...

ACE AND IICHE INAUGURAL

The ACE and IICHE student chapter was inaugurated on 17th of July 2015. The guest speaker was Mr.K.Sadanand , Secretary of IICHE – south zone. The function was started auspiciously with the invocation song and the introductory speech by Dr.Ramakrishnan (HOD).The secretary of the department Ms.Tanu Agarwal gave the annual report ACE activities and the secretary of IICHE Ms. Malavikha Rajiv Moorthy gave a brief view of the activities which was conducted during the past academic year (2014 – 2015).Then Mr.S.Siddarth,the joint secretary of IICHE gave the welcome address. This was followed by the customary "Lighting the Lamp". The chief guest then gave his motivational speech on the topic "Latest trends in water treatment processes." He also discussed about the various job opportunities in engineering field .He also encouraged the students to opt for management studies after finishing their undergraduate course. This was followed by the vote of thanks by Mr.J.Shiva Subramani and the memento was given to the chief guest by our HOD and thus the fruitful inaugural ended with the national anthem.


EGE OF ENGINEERING
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SN STUDENT CHAP
7/2015

I ICHE-GUEST LECTURE

MOTIVATIONAL TALK ON ENTREPRENEURSHIP

by

Mr. B. G. VENKATESH

Team Member, Youventus Consulting P. Ltd, Chennai

Following the success of the annual conference STEER , we planned a series of guest lectures to be conducted every month. One such event was organized on 29th of july 2015 . It was presided over by **Mr. B. G. Venkatesh** , a young dynamic industrious entrepreneur and a team member of youventus consulting P.Ltd. He is an MBA graduate and also an eloquent orator giving motivational lectures to aspirant entrepreneurs in all institutions. He provides consultancy services to more than 1000 startups and is the founder of Campus tiger.

About 80 students were attended the guest lecture. He first gave some fruitful insights to the students; the basic attributes to become a entrepreneur , the various economic and social problems to be faced and how to overcome it by sheer planning. He spoke about the personal hardships he faced and the measures he took to overcome the same. The students were quite stupefied listening to his mind boggling talk and it turned out to be a motivational and inspiring speech.

Followed by, there was a short talk given by **Mr. Rahul Joshi ,** a budding entrepreneur of final year chemical engineering **SSNCE** who started the online engineering book store **"Magic market"**. He explained to the students that the high profit makers of moor market instigated him to work on his startup. The magic market sells both used and new books at a challenging market price. His speech was further motivating to students.

I-CELL STUDENT CHAPTER

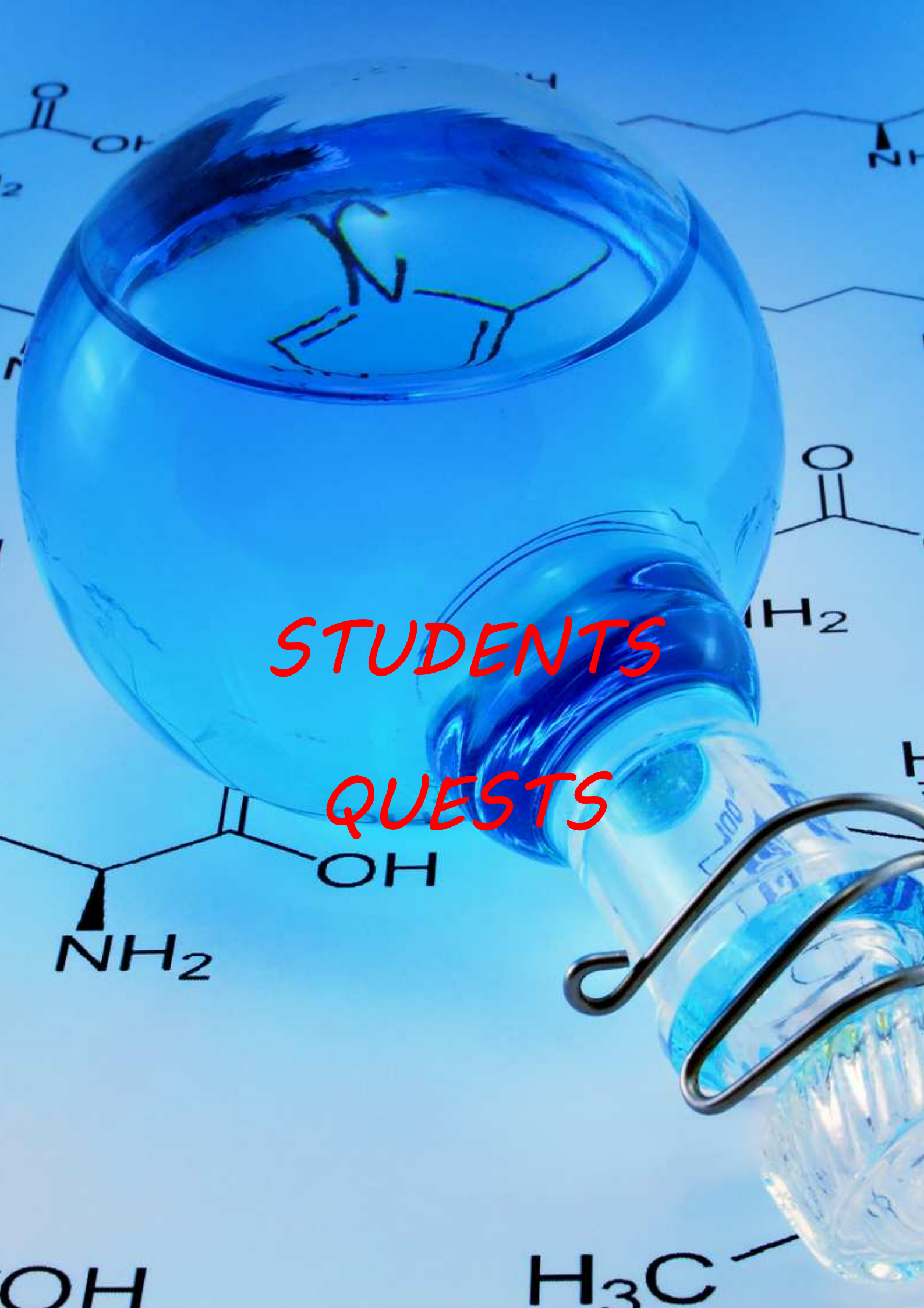
6th National Conference on Recent Trends in Chemical , Energy and Environmental Engineering

The ICELL's 6th national conference on recent trends in chemical , energy and environmental engineering was held on 31st July 2015. Dr. V. Vinoth Kumar, Professor, SRM University was invited as the chief guest to inaugurate the conference. He is a Biotechnologist and specialised in lignocellulosic bio-refineries.

A paper presentation contest was arranged in the morning session, total 34 teams from various colleges were actively participated. The teams were divided into three batches based on the topic of the paper. The "best paper" award was given to one team from each batch.

The afternoon session started off with a quiz competition on "General Science". It was conducted in two rounds, the first one was a preliminary round which was a paper and pen based round and the next round was the finals which was a presentation

round. Five teams qualified for the finals. Followed by valedictory function, certificates were distributed to all the participants.


STUDENTS
QUESTS

STUDENT ACHIEVEMENTS

R Jyotsna of fourth year pursued the Summer Research Fellowship Programme at IISc, Bangalore.She worked under Dr. Abha Misra on the project titled “Use of Graphene to synthesize Flame retardant Polymers” from May 20 till July 15.

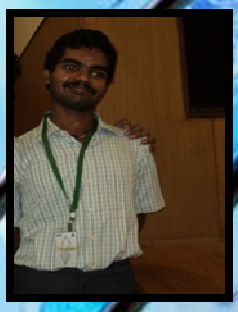
Sruthi.V and Mugilan of third year did an internship at the CLRI- Chennai, under Dr. A. Sivasamy. They worked on the synthesis of ZnO and its application as a photocatalyst for dye degradation from May 24 to June 30.

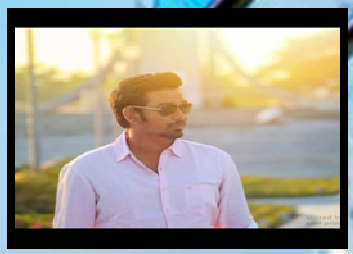
Sri Sai Janani, Sharmada, and Varsha Nathan of third year underwent an Inplant training at Bharat Petroleum Corporation Limited, for a week during June.

N.Abhinav of third year attended an Inplant training at the Orchid Pharmaceuticals Pvt Ltd, during the month of June and attended an NSS village camp for a week.

R Pavithra of third year pursued the Summer Research Fellowship Programme at ICT Mumbai. She worked under Dr. Parag R Gogateon the project titled “Novel approach on the treatment of wastewater containing triazophos” from May 19 till July 14.

Sairam, Ramanan Lokesh Prapanchana and Kameshwar , third year students, undertook an Inplant training at Cetex Petrochemicals during the month of June.





Saravana Kumar P of third year attended an Inplant training at Chennai Metrowater – CMWSS Board. Also, Pavan Kumar R of third year went to an Inplant training at CPCL, for a week.

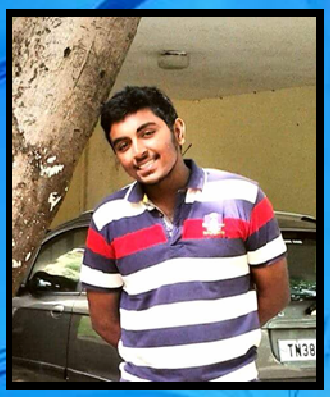
S.Keerthana and Keertthana of third year underwent an inplant training at Medopharm Private Limited. Ken Saroven of third year also did an Inplant training at Darangadara Chemical works, Tuticorin.

Athreya of third year undertook an internship, at the Ford India Pvt Ltd on wastewater treatment, and went through an inplant training at Kaleeswari Oil Refinery.

B Priya of third year did an internship at the Pescobeam.

A Venkatesh of third year underwent an inplant training at Larsen and Turbo Valves, Manapaakam, Chennai.

Koushik B of fourth year attended a Summer internship Programme.He worked Under Dr.Pijush Gosh,IITM, on Project titled Molecular dynamics of Water responsive Polymers- Chitosan, at IIT Madras from 21 May to 16 July 2015.

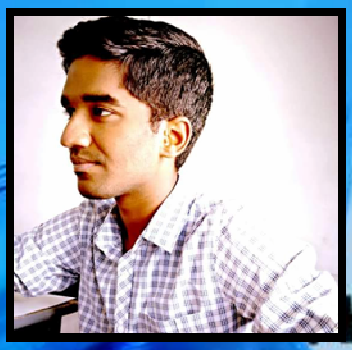


Abhinaya V, a fourth year student, did a Summer Internship Programme at Saint Gobain, under Dr.Muniswami Naidu, on project titled "Failure analysis of Residual Gas Analyzer" from 4th June to 17th July 2015. Her project was approvd by the Saint Gobain France.

R Sundaram Bharadwaj of fourth year did an Internship at AC Tech, Chennai, from 22 May to 7 July. He worked Mr.Selveraj, on the project titled "Preparation of Graphene based composite for supercapacitor applications"

Malavikha Rajiv Moorthy, fourth year student worked as a summer intern under Prof. Dr. Ramachandra Rao, IIT Madras, from 20 May to 15th July. She was involved in a study on microcrystalline and nanocrystalline diamond coatings.

Yashwanth of third year worked as an intern at Coromandel International Ankleshwar plant during the month of December'14



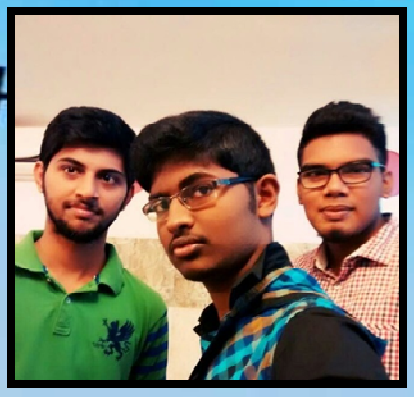
Madhumeetha of third year is actively involved in tribal hearts,an NGO to develop tribes across TamilNadu by conducting classes for kids belonging to the tribal group in Chennai and is a dedicated volunteer at the Environmentalist Foundation of India.

Sahana and Siddarth of third year are active volunteers of the YRC and attended a school camp recently for three days. Sahana was also one of the main volunteers in the YRC Blood camp,

Nanditha D of fourth year did a summer project internship at Saint Gobain Glasses from 4th June to 17th July. She worked on the topic, “t3 silver cabin ventilation improvement in mirror manufacturing.”

She is also a student correspondent trainee at the Vikatan Group of Magazines.

A Neeha Dev of fourth year pursued her Summer Research Fellowship at IIT Madras from 25th June to 15th July 2015, under Dr.Abhijit.P.Deshpande,IITM .She worked on a project titled " Cellulose nanowhisker synthesis and composite preparation"



C G Vignesh, R Kishore Kumar and Keshav V Kumar, students of second year, went on an inplant training and learnt regarding the production and quality checking of PET Bottles at Manjushree Technopack.

CHEMWARES

COSMO-RS

ABOUT COSMO-RS :

The COSMO-RS (**CO**nductor like Screening **MO**del for **R**eal Solvents) technique is a novel method for predicting the thermodynamic properties of pure and mixed fluids which are important in many areas, ranging from chemical engineering to drug design. This model was developed by Andreas Klamt, it provides an effective alternative to predict thermodynamic models such as UNIFAC and NRTL in prediction of thermodynamic properties of fluids, especially when unusual functional groups occur and no parameterization is available. The method is also useful when the molecules involved in the reaction are in transition state.

Why COSMO-RS ?

- Recently proven to be the most reliable and efficient tool for the prediction of vapour-liquid equilibria.
- Used when experimental data is not available for certain compounds and binary mixtures.
- Effective tool for choosing ionic solvents for a process.
- Determination of Partition coefficients
- Calculation of Binary phase diagrams

Fields of Application:

- Chemical product design
- Environment property prediction
- Chemical engineering simulation
- Computational chemistry

ABOUT THE WORKSHOP:

The need for software competent Chemical Engineers are felt worldwide. This workshop will help in updating know how on one of the most trending software in the Chemical Engineering world.

Department of Chemical Engineering planning to organize a workshop titled on “Introduction to COSMO-RS”. It will be a two day workshop focusing on the basic aspects of COSMO-RS software.

This workshop will be conducted shortly.....

AN ODE TO
OUR DEAR DR. A. P. J. KALAM
THE MISSLE MAN OF INDIA

Neela, 2nd Year B.Tech Chemical Engg.

We came across so many people everyday. Few of them are remembered and fewer still create an impact. However, occasionally, there are few great men and women who leave a lasting impact on you not because they were successful or greatly bestowed but they make you believe that you could be successful too. They inspire you and ignite your dreams. The prove to you that nobody is exempt from the liability to error but what matters is that you never give up. All of these great men impress upon the fact that your future lies in your hands. You are the maker of your own destiny.

One example of such a great man is **Dr. Abdul Kalam,** A scientist, president, teacher, educationist, this missile man of India has a long list of credentials to his name. He was awarded the Padma Bhushan, the Padma Vibhushan, the Bharat Ratna and has **Honorary Doctorates from over 40 universities.**

His main goal in life as stated by him was to ignite the imagination of young minds, to prepare them to work for a developed India, the roadmap to which is available. One famous quote by him is " You have to dream before your dreams can come true".

All of us are waiting against unsurmountable odds for something extraordinary to happen to us. However when you don't define your version of extraordinary, how can you work towards it and how do you recognize it? He wanted us to dream big but set boundaries on achieving it, to have a roadmap, to lay out our own pathway and follow it through all the way to the end.

He had a way with words. Everyday, we hear people advising us to work, to work hard and to never give up but in reality, not much of this advice sinks in. Rarely, do these words actually inspire us to get up and take control of our lives. His mere presence was an inspiration, such was his charisma. He had the ability to encourage any individual, prompt, possibly even goad them to contribute to society in their own special way.

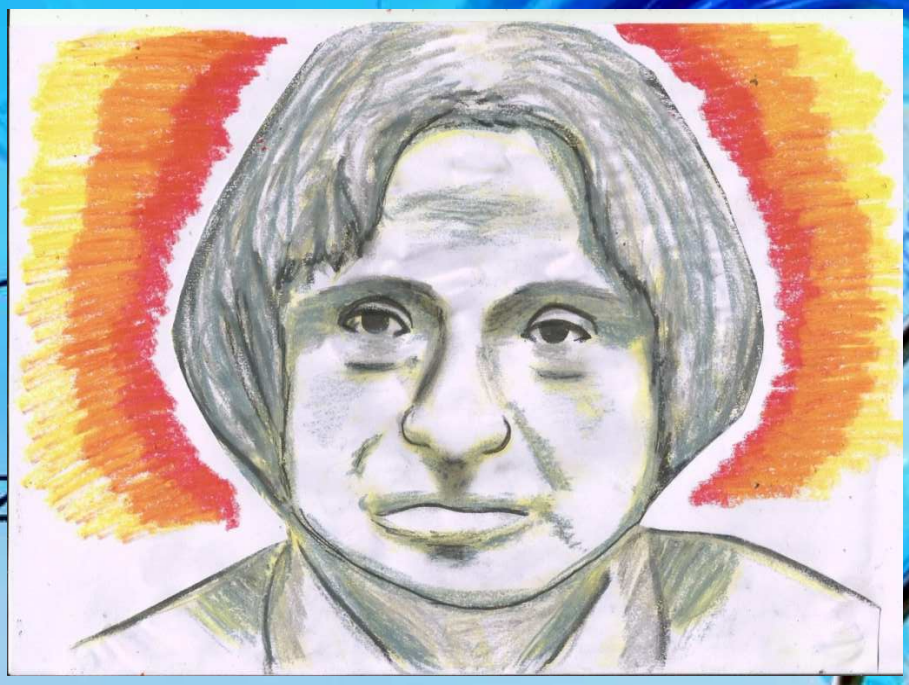
All he wanted people to do was think. He said that thinking is progress while non thinking was stagnation of the individual, society and country. He said that thinking led to action which eventually led to progress and development. Such ideas

partake in largely of the impressionist character, but attain much beauty at the hand of Dr Kalam with his extensive repertoire of suggestions.

Although he is remembered as a highly successful individual, he had his fair share of failure. His initial dream was to become a pilot. He failed to become one but ended up changing the face of aeronautics in India. His guiding force as he stated was" As a child of God, I'm stronger than anything that can happen to me.

As a motivational speaker, he preached self confidence and humility. He wanted each and every one of us to put our heart and soul, strength and sinew into achieving our goals, to have the courage to risk failure for what you believe is right and to have the power to stand up and rise from nothing in case it fails.

He was a spiritual man, simple by nature. He strongly believed in unity of religions and believed religion to be a tool for friendship. Kalam's life was exemplary and he was what he preached till his very last breath for he died doing what he loved best- igniting young minds. So, instead of expressing our condolences, let us pay our respects to this great man by making his dreams of a developed India into reality. In the words of Markus Zusak, Death took a selfish pleasure in knowing that he had lived his eighty four years so wisely for few know what it is like to truly live for what you believe in.



The portrait has been sketched BY

V. Abinaya

Final Year CHEMICAL

A Short Story

THE GIFT

Madhumeetha, 3rd Year Chemical

She opened the presents with the same excitement one by one. Her father suddenly came inside the room and handed over a letter to her and left. She had reserved it for the last. So, she opened it and started reading the letter. Moments later tears rolling down her cheek. She had never felt that happy on any of her birthdays. She was somehow feeling complete. The letter was her greatest asset, she decided. She read the letter everyday. It was her motivation. It helped her make decisions. It gave her reasons to smile when she was down. When she was happy, the letter gave her even more reasons to be happy. She was never that proud in her life. It helped her grow as a person.

It read as follows:

"Hi. This is the last time I will probably be talking to you. I wanted to say, you have been my best friend through my good and bad. You have inspired me without any efforts. **Just remember if you have any problems in life, just pause everything for a moment and introspect what went wrong. You will eventually figure out who you are. Never let that beautiful curve on your face fade away.**

Love you didi, Joe"

It has been 6 months since her brother left them. He is never coming back but she talks to him everyday through this letter. Understanding every moment of the life he lived through this letter.

She always remains a proud sister.

A CANDID CHAT WITH THE TYROS

OF THE DEPARTMENT (2ND YEARS)

We take immense pleasure in welcoming the 2nd Years to our Department and present the vies of these budding Engineers.

NAME: R. ABHAIGURU

Why did you take up Chemical Engineering?

Chemical engineering is different from, other engineering subjects

One of the reasons , why I chose chemical engineering is because I never wanted to work in IT field . Moreover I would just love to work in the field of nano , oil and gas !!

A few words about Chemical Department of SSN:

Chemical Engineering Department is nothing but a **mini heaven in SSN institutions**

The Faculties are out-standing and consider the students like their friends. The labs are well equipped and help students to develop on their projects.

Your future goals and aspirations :

To pursue higher studies in abroad in the field of process automation. To work in a well established company for few years and then probably a start-up may be!!

How do you think we can create more job opportunities in core chemical engineering?

Only we can help our self in creating more job opportunities. The key is to perform well in academics , get more exposure , only if we prove we are good enough to compete with others , the outsiders will believe in us .

Name: Sakthi prasanth

Why did u take up Chemical Engineering?

I took chemical engineering because I **love maths and chemistry to the core**. This is the one of the reason which forced me to take this course . While asking suggestions from many people like who completed did research in IIT , they said it has lot of scope and one of the developing fields in India.

A few words about our Department

I think this is one of **The Best Departments in college** . The department allows **Healthy interaction with the faculty. Seniors are another reason in that they help the juniors in many ways.** The department encourages student in many ways by encouraging research and internal funding for project.

How do you think we can create more job opportunities in core Chemical Engineering?

We can create more job by just exposing the students practically and theoretically to various fields of Chemical Engineering. It is an **interdisciplinary course** and has lot of sub divisions. So every student must be aware of the fact and they must apply the knowledge practically . Practical application of the knowledge gained in useful way is an important aspect.

PLEASE PAVE WAY FOR...THE MOST AWAITED

SSN

SSN COLLEGE OF ENGINEERING, CHENNAI
DEPARTMENT OF CHEMICAL ENGINEERING
Presents
A NATIONAL LEVEL TECHNICAL SYMPOSIUM

ACE
ASSOCIATION OF CHEMICAL ENGINEERS

Technical Events

1. PAPER PRESENTATION
2. POSTER PRESENTATION
3. CHEMICAL ENTREPRENEURSHIP
4. WORKING MODEL
5. MYSTERY PROJECT
6. TECHNICAL QUIZ
7. ONLINE QUIZ

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Non -Technical Events

1. TREASURE HUNT
2. CRAZY QUEST
3. GAMING
4. ONLINE PHOTOGRAPHY

WORKSHOPS

1. MAT - LAB
2. COSMO - RS

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SEPTEMBER 5th
2015

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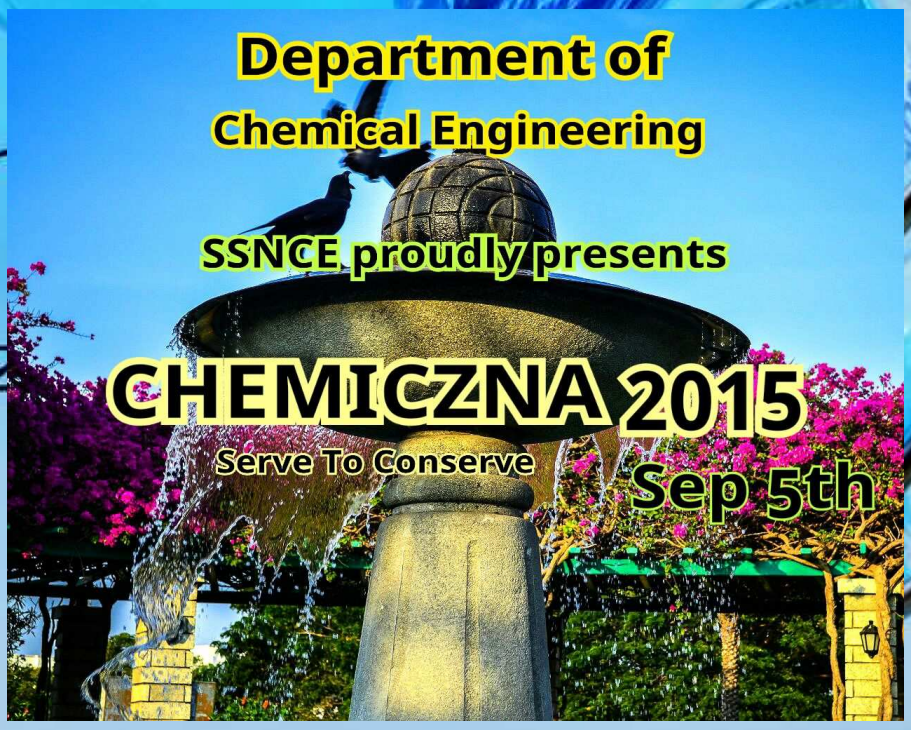

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