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Treasurer: Mr. Kishore S. Surti

Editorial Message

Right from its inception Shroff SR Rotary institute of Chemical Technology SRICT has been an oyster that has moulded innumerable technocrats from the ordinary students who walked into it .Established in 2011 with 4 branches of Engineering namely CE,CT,EST and ME, SR ICT has never failed to enthuse the Engineering society. With 11 years of steady achievements ,it is a matter of great pride to see SRICT family growing from new students walking in with hopes and aspirations to the alumni who marches away with accolades and accomplishments. It was an added impetus to our progress in the field when Electrical branch was added to our programmes in 2012.

SRICT now has 3 post-graduate courses in CE,ME &EST added to its cap in Growing number of MoUs with esteemed organisations in India and abroad testifies SRICT's progress towards greater glories in academic-industry symbiosis. SRICT is also offering Post Graduate courses in Chemistry under VNSGU from 2018 onwards, and have also extended our field by undertaking courses of Management under AIMA.We have also started Centre of Excellence in safety, CoE in collaboration with GEXCON.

We are happy to announce that recently the government of Gujarat has granted us the status of a private university –UPL University of Sustainable Technology - under which different institutes conducting various courses of Degree Engineering, Diploma Engineering, and Science will be functioning. From the current academic year BE in computer Engineering and 6 other diploma Engineering courses will be started. Now 2 of our BE programs CE and EST are NBA accredited and it is our target to achieve the same for all the branches. Our R&D and Industrial consultancy projects focus on bringing accuracy and refinement through break through technical interventions.

At SRICT we teach our students to be open hearted and bold individuals who can catalyse the process of development and strike a perfect balance between steady composure and a zest of enthusiasm. We value human efforts and dignity and believe that “One machine can do the work of 50 ordinary men but no machine can do the work of one extra ordinary man” As an e- magazine of SRICT, KATHAN is a platform to showcase our students and their endeavours in academics and innovation



Shroff S.R. Rotary Institute of Chemical Technology

Diploma Engineering

- Chemical Engineering
- Computer Engineering
- Mechanical Engineering
- Electrical Engineering
- Environmental Engineering
- Fire Technology & Safety

Bachelor of Engineering

- Chemical Engineering
- Computer Engineering
- Electrical Engineering
- Mechanical Engineering
- Environmental Science & Technology
- Chemical Technology

Master of Engineering

- Mechanical Engineering (Thermal)
- Chemical Engineering
- Environmental Management

SRICT Institute of Science & Research

Bachelor of Science

- Chemistry

Master of Science

- Chemistry



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ENVIRONMENTAL SCIENCE & TECHNOLOGY PROGRAMME

IS NBA ACCREDITED



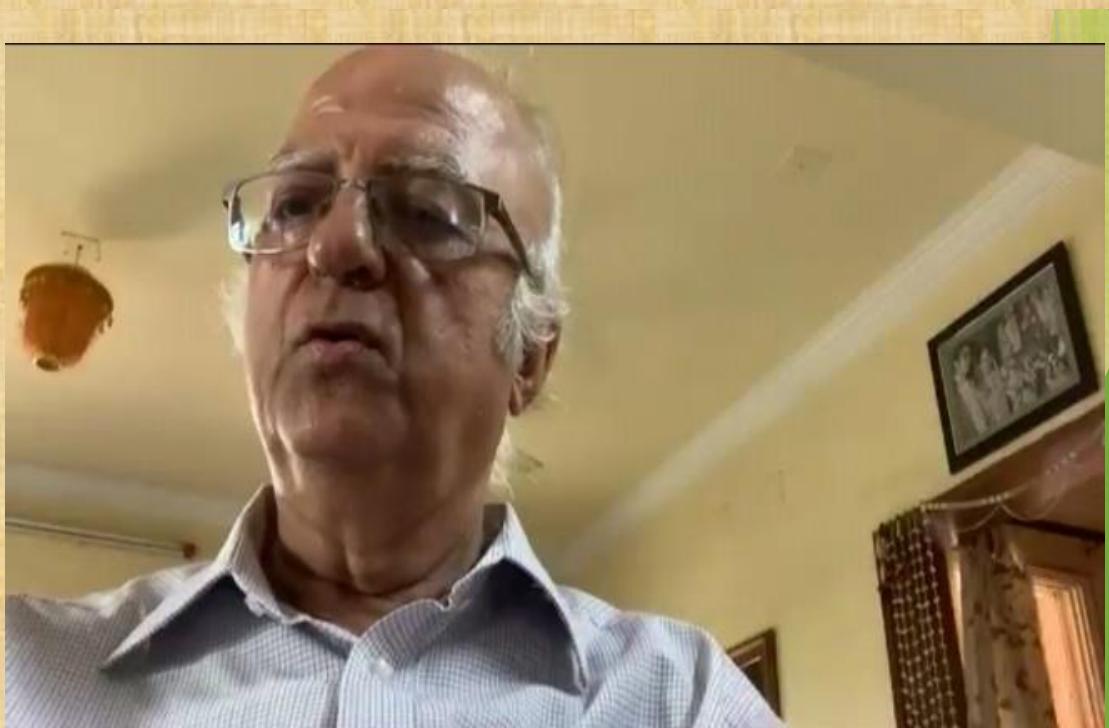
“NBA” stands for the National Board of Accreditation which is an accreditation agency representing India in the Washington Accord (WA). The Washington Accord is an agreement between bodies that accredit or recognize higher-level engineering qualifications. NBA is one such autonomous accrediting body in India, which deals with the accreditation of engineering and various technical institutions based on the quality of education being offered. The guidelines outlined by the NBA act as parameters to certify institutions.

It is a proud moment for Department of Environmental Science and Technology to be NBA accredited for three years (2021-2024) which has created a great impact in terms of quality of education and teaching practices. The efforts done by the team and the authenticity of the documents produced for the best quality education earned 743 marks out of 1000 which is remarkable. The Department is first in Gujarat to be accredited in the Environment program.



Know Industries Around you-UPL

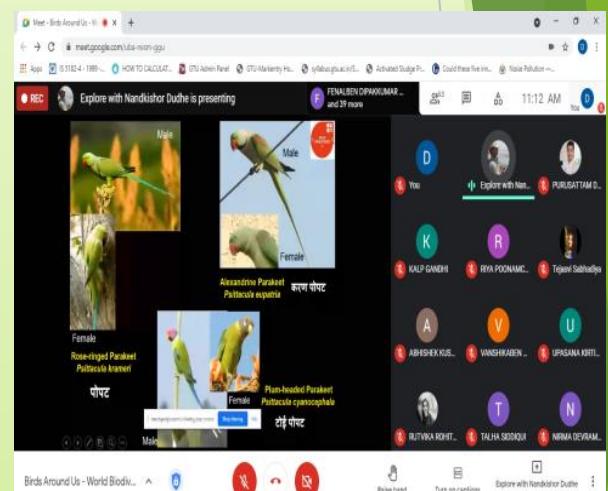
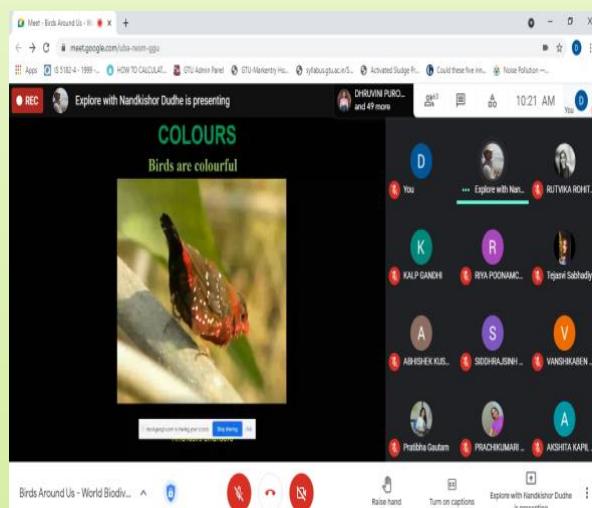
In this 3rd session of webinar series Mr. Sunil Motiramani- Head Technical Cell, UPL showcased the company and its journey to one of the biggest agrochemicals producers of the world .Mr. Ashok Panjwani , Executive director-UPL gave the opening remarks for the session. Students found the long glorified journey of UNITED PHOSPHORUS LIMITED immensely motivating.



Nature Club Activities



Department of Environmental Science & Technology, Nature Club of SRICT and IEI students' chapter (393135/SRICT/EN) jointly organized a webinar on "Birds Around Us" on 22nd May, 2021, at 10:00 am on World Biodiversity Day 2021. The webinar was delivered by Mr. Nandkishor Dudhe, Program Officer - BNHS ENVIS. Mr.Dudhe shared valuable information on bird identification, morphology, habitat, nomenclature etc.



Faculty Achievements



Assistant Professor MSH, Dr. Piyush Mistry attended online International Conference on “Mathematical Modelling and Simulation in Physical Sciences” (MMSPS-2021) organised by AMHD, SVNIT, Surat on 17-04-21 to 18-04-21 and presented Research paper on “Mathematical Modelling of fingering phenomenon to examine the velocity of injection of water in Double Phase Flow through Homogeneous Porous Media ”.

LMAD

Let's make a difference

LMAD believes that every individual can make a difference and honest introspection is the starting point of that change. LMAD started its journey of transforming individuals 26 years ago and aims at encouraging every individual to find his/her unique ability by following the absolute moral standards of **Honesty, Purity, Unselfishness and Love**. LMAD believes in sensitizing every individual to evaluate themselves against the four standards. When today's youth feels it as outdated to talk about honesty, purity and so on, LMAD reflects on them in one's time of silence and they realize the timelessness of these values. 2 students from each department of SRICT have registered for the program and will attend the program from 1-7 June from 6:30 am to 8:30 am with Assistant professor MSH, Dr. Piyush Mistry



Technomics is a presentation-making event based on Chemical Daily and Indian Chemical News sent to students of EST, CT and CE students. It was an online event organised on 24/05/2021 where 16 students from EST, CT and CE presented their views on the pieces of news they received. Mr Hemant Purohit and Dr. Omprakash Mahadwad was the judge for this event. Mr. Ashok Panjwani also graced the event by his inspiring speech during the event. The presentation delivered by the participants were encouraging. There was a tie for the first and second position between Ms Monica Jadiya, Mr. Kashyap Joshi and Mr. Viraj, Mr. Moinuddin. The third position was secured by Mr. Kaushik Vaijapurkar.



Expert Lectures



Several online lectures were organised for students by different departments to bring practical experience closer to theoretical knowledge of our students.

Sr:No	Topic	Speaker	Designation & Industry
1.	Glass and its processing	Mr. Vasu Dixit	Technical service associate, Gujarat Guardian Ltd.
2.	Project Life Cycle Offshore Platform	Mr. Shailesh Vadher	Assistant General manager, L&T hydrocarbon Ltd., Hazira, Surat
3.	Pumps and Valves	Mr. Rilesh Mehta	Process Engineer ,Solvay Specialty Chemicals
4.	Safety in Industry	Ms.Lekshmi Ratheesh	,Environment, Health and Safety Officer, Tagros Chemicals, India pvt Ltd, Dahej

Designing the Equipment for Semi-solid Waste Material Handling



The Principal investigator of the project is Dr. Divyangkumar D. Patel, Associate Professor, Mechanical Engineering Department. with Mr. Ankit Solanki, Assistant Professor, Mechanical Engineering Department. as the co-investigator. The Project consists of designing & developing a solution for effective handling of semi solid waste sponsored by BEIL Infrastructure Ltd. The design will be executed in three stages as given below.

Stage 1: A device/arrangement that provides a proper resting place for the drums to be cut, a cutting arrangement to increase the speed of cutting drums and reduction of manual effort to handle more material with less workforce and less time.

Stage 2: A device/arrangement where the material (semi-solid) will be poured, and admixture can be added and mixed.

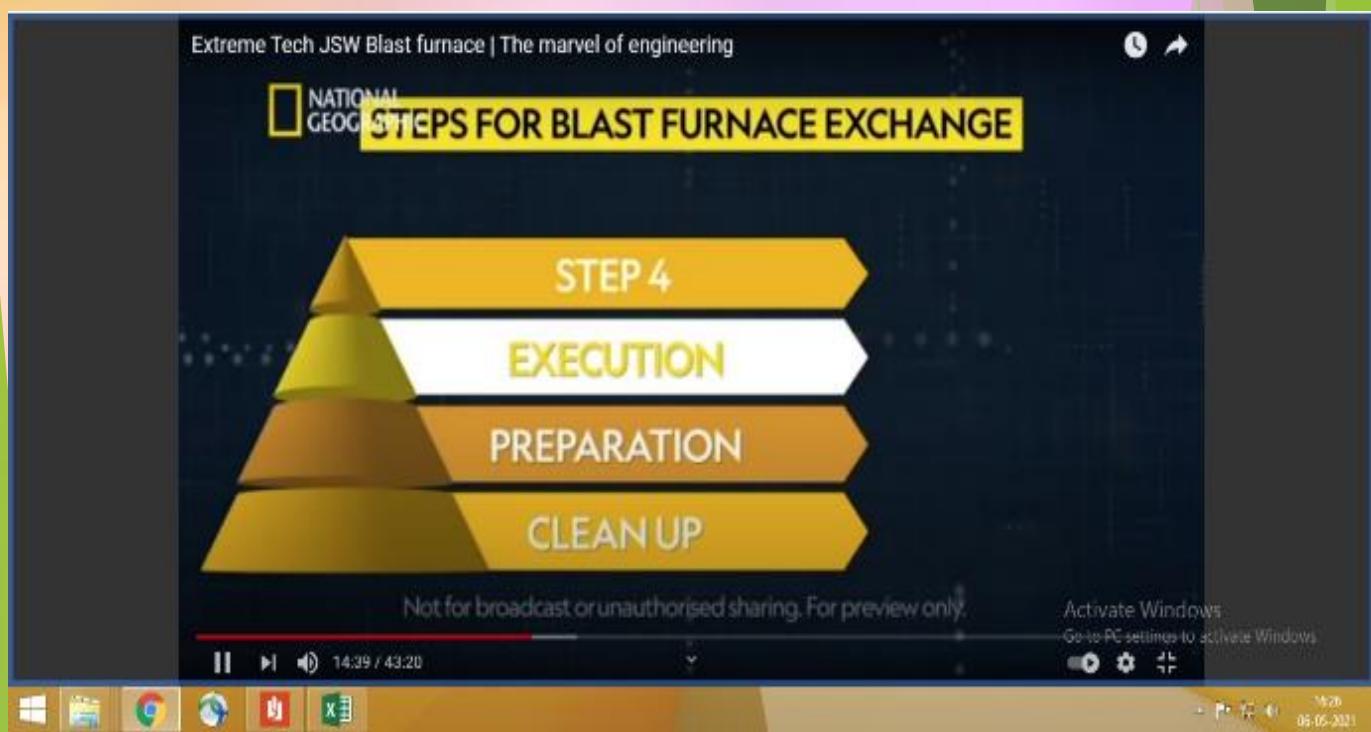
Stage 3: A device/arrangement that will take the material from the stage 2 and provide ease of filling the bags.

Industry Visits



Virtual visits to several industries were organised by departments for students. Some of them were as following:

Sr.No.	Industry visited	Students
1.	Jindal Steel Plant Dolvi)	6th Semester Mechanical Engineering
2.	Mumbai Dabbawala(Case study)	4th Semester Mechanical Engineering
3.	GRP group of Industries	2 nd semester CE,CT,EST,ME,EE

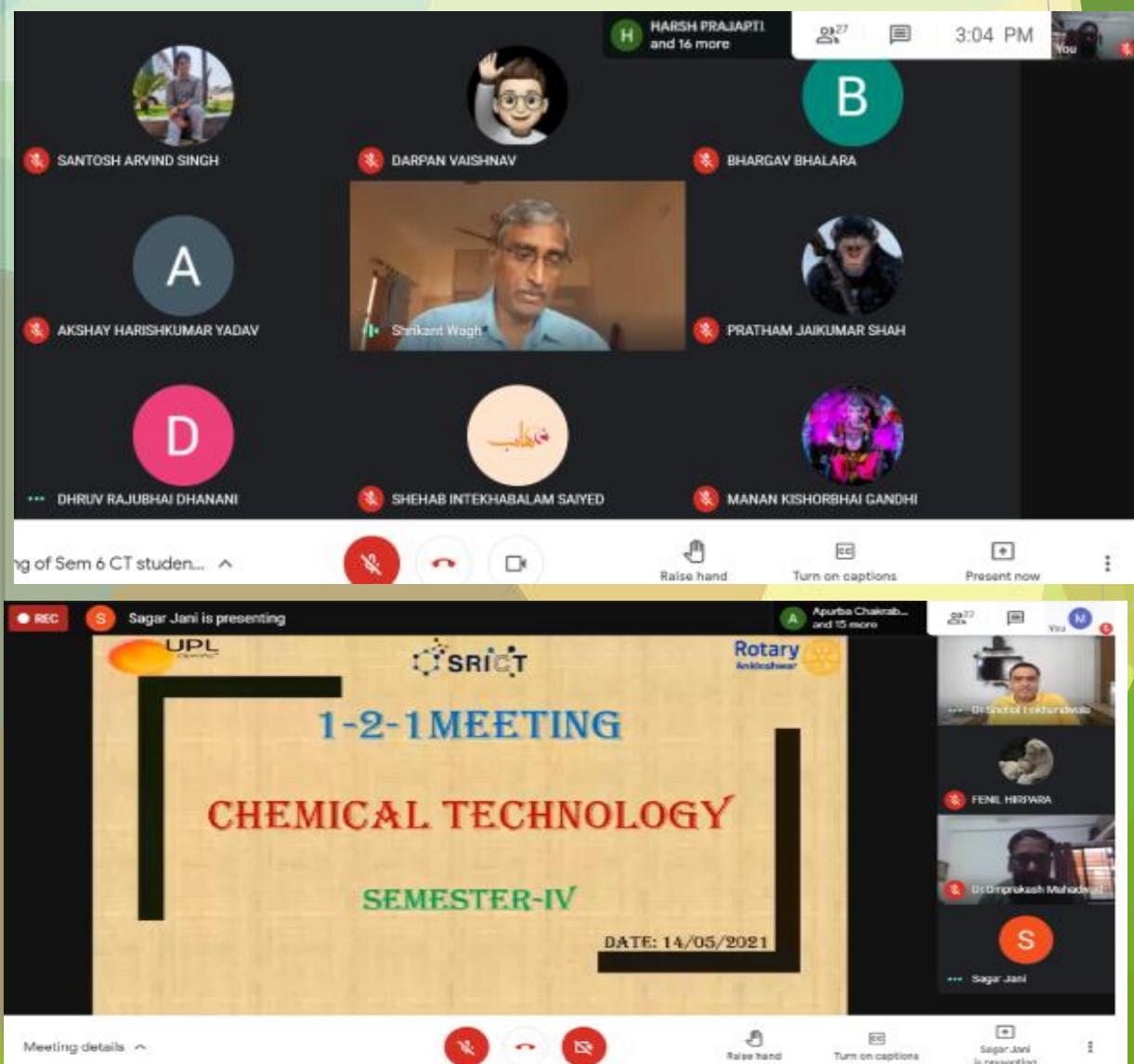


One to One Meetings with Students

Department of Chemical Technology arranged an online 1-2-1 meeting on 8th May, 2021 for the 6th semester students with Principal Dr. Shrikant Wagh, HoD Dr. Omprakash Mahadwad and departmental faculty members.

The interaction was mainly focused on the present pandemic situation, students' academic performance, their commitment towards study hours, their hobbies and interests. He broadly illustrated the challenges of the sustainability and living crisis the pandemic has posed on every one of us and insisted students on registration for vaccination at the earliest. He also encouraged students to participate in upcoming online Reva Fest-2021.

Electrical Engineering Department also organized one to one meeting for the 6th semester students with Principal, Dr. Shrikant Wagh, Head of the Department Dr. Jalpa Thakkar and faculty members of the department on 10/05/2021. Another meeting was organized for the slow learners of 4th semester Electrical Engineering with Vice Principal Dr. Snehal Lokhandwala , Head of the Department Dr. Jalpa Thakkar and faculty members of the department on 12/05/2021.



From the T&P Cell

Congratulations on your New Job!!

The Training & Placement Cell of SRICT has organised campus recruitment from several renowned industries for students. They have worked very hard and deserve everything that is coming to them. Some of the recent appointments are the following:



Daksh Makwana



Jayendra
Bodana



Ajaysinh Gohil



Nisarg
Modi



Vedant
Kayasth



Mann Makwana

Sr: No	Name	Industry	Branch
1.	Modi Nisarg MaheshKumar Darshan Mansukh Rabadiya	Kanoria Chemicals & Industries Limited	CE
2.	Vedant Dipakbhai Kayasth Shivam Snehal Keshruwala Makwana Dakshkumar Anandbhai Mann Rajeshbhai Makwana Ajaysinh Mahendrasinh Gohil	Nitrex Chemicals India Limited	CE
3.	Jayveersinh vansiya Jayendrasinh Yogendrasinh Bodana	Meghmani Organics Ltd, Panoli	CE
4.	Rahul Padhiyar	BEIL	CE
5.	Patel Mihirkumar Gomanbhai Rathod Pradhyumansinh	Parikh Enterprises Pvt Ltd	CT
6.	Rittal Rathod	Astik Dyestuff Pvt Ltd	CT

TECHNICAL ARTICLE

“s-Triazine: a unique and most researched heterocyclic rings scaffold”

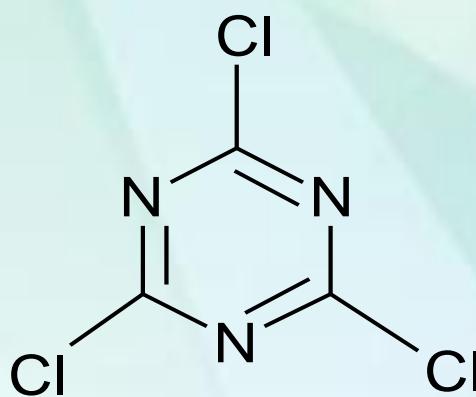


Dr. Jyotindra Mahyavanshi

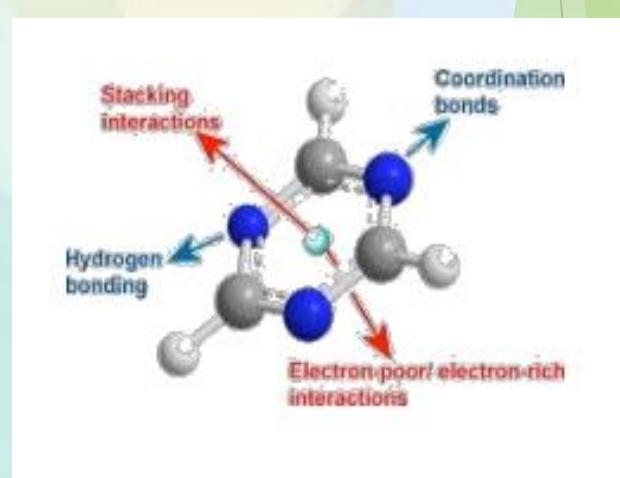
Asst. Professor

Department of chemistry
SRICT-ISR

s-triazine is a very interesting and unique compound with wonderful pharmacological properties including anticancer, antimicrobial, anti-mycobacterial, anti-HIV etc. Besides this it is also used in renowned agricultural chemicals such as simazine, atrazine, propazine etc. Trazine can be symmetrical and asymmetrical depending upon the position of nitrogen atom in the ring. If nitrogen is on the 1, 3 and 5 position then it is known as s-triazine. Different methods have been reported on the preparation of triazine from different starting materials among them the preparation of triazine derivative using 2, 4, 6 trichloro 1, 3, 5 triazine which is also known as cyanuric chloride as starting material seemed to be best options to achieve our desired products.



Structure of s-triazine

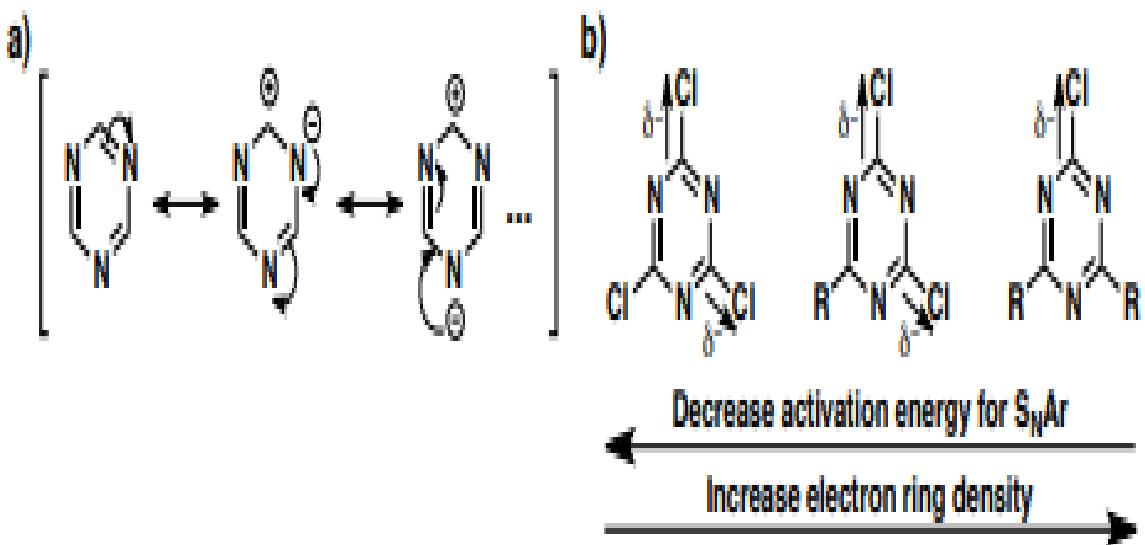


Electronic effect in the structure

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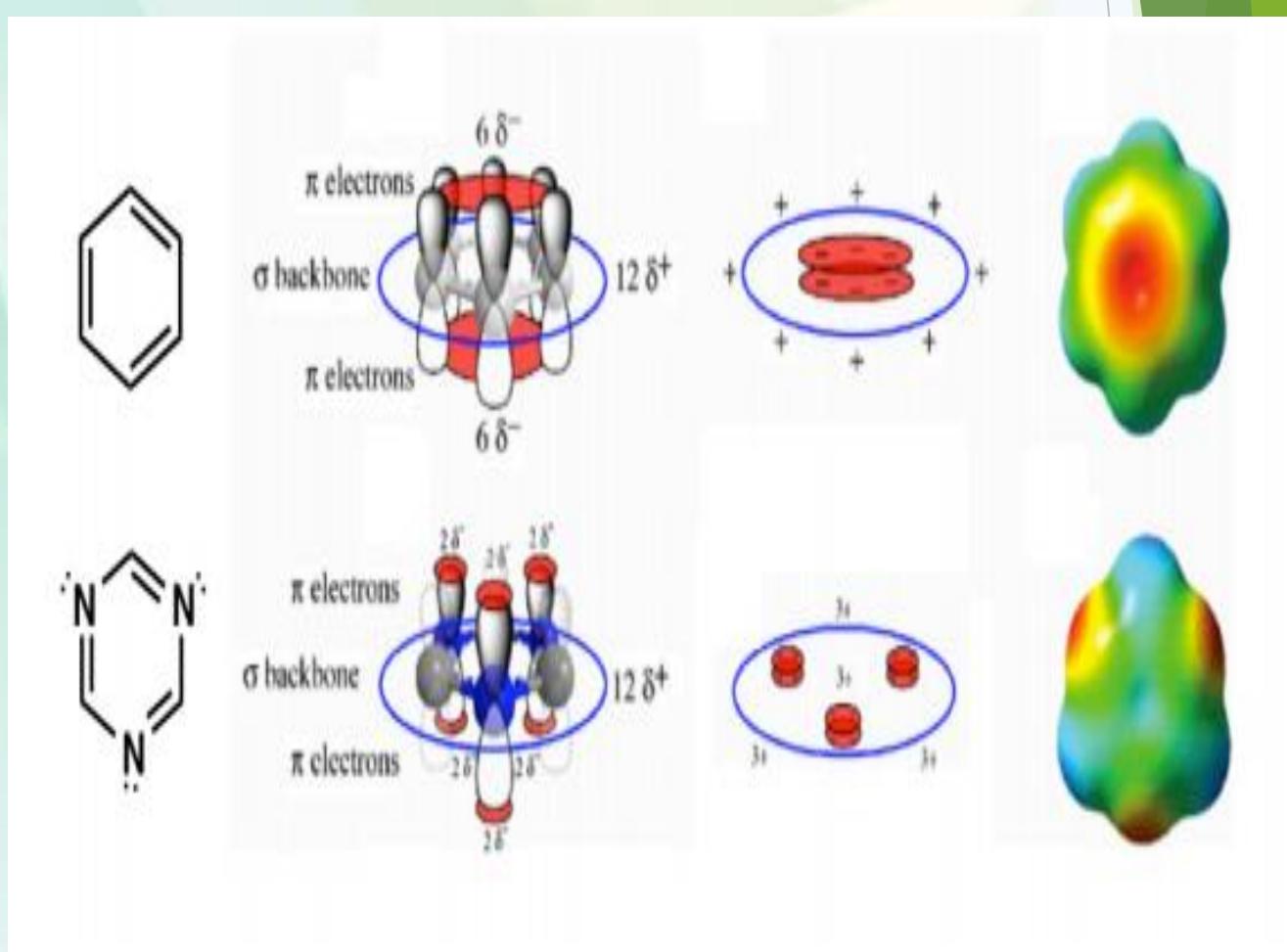
Cyanuric chloride is a commercially available cheap reagent which is a dusty white solid with a very strong smell soluble in most organic solvents. Triazine has the very unique property that it replaces its three chlorine atoms at different temperatures. The first chlorine atom can be replaced at 0 to 5°C temperature, second can be replaced at room temperature and third can be replaced at higher temperature above 100°C.

This property of cyanuric chlorides makes it more selective to synthesise different varieties of heterocyclic scaffold containing s-triazine. According to Pauling the s-triazine ring is stabilized by resonance energy of 82.5 kcal/mole compared to 39kcal/mole. For benzene the high resonance energy is probably due to the six nonbonding electrons on the three ring nitrogenous which contribute to the resonating system because of the higher stability of the ring .Much of the chemistry of s-triazine is simply the chemistry of the substituent groups.



Continue...

Common nucleophilic substitution on aromatic systems does not occur due to the high electronic density of the aromatic ring. However in the case of cyanuric chloride the nitrogen atom on the ring strongly attracts the electronic clouds and chlorine atoms in the position 1, 3 and 5 exert a negative inductive effect draining electronic charge from the ring. Because of the above positions 2, 4 and 6 of cyanuric chloride become suitable for nucleophilic substitution. As chlorine is exchanged for other side chains the aromatic ring (depending on the substituent introduced) increases its electronic density due to the loss of the negative inductive contribution of chlorine making it more difficult to exchange the next chlorine atom. For that reason the activation energy of the first substitution is lower than the second and this is lower than the third.



Charge distribution in the structure

(Image courtesy: Advanced organic chemistry, By Carey and Sundberg, Springer publication)

GENERAL ARTICLE

Extending a helping hand in the pandemic crisis by NCC Cadet

Pranavkumar Parekh, EST Semester 6



During these difficult times of the global pandemic, when the common man is struggling to make two ends meet, I thought it would be worth sharing my experience of an opportunity which I got to serve the ordinary people of my city –Bharuch.

The COVID-19 pandemic had taken the world by a storm. In the fight against this pandemic, temporary lockdowns were announced several times from March 24, 2020 onwards. In order to ensure and enforce social distancing, the local police forces and the Central Armed Police Forces (CAPFs) have been the warriors at the forefront. As I am an NCC cadet, me with my group of other boys from NCC, were deployed in Bharuch along with local police for traffic control to maintain the rules and guidelines of lockdown. I was on duty at Tulsidham area, Bharuch for 20 days with the work to ensure that people follow rules completely. Along with that, I have joined one local group of Bharuch city, which is active in social activities in area. And we distributed fresh vegetables to the poor and needy.

Continue...



It was so heart rending to watch the desperate cries on social media platforms. During this crucial time me and my friends created a group on social media with officials from the medical line such as Doctors and various hospitals. We could also help to connect people in dire requirement of rare blood groups , plasma, oxygen cylinders and ventilators in different areas of Bharuch, Ankleshwar and Surat with the help of social media. We ensured that people got their requirements met from their nearer places without much travel. This could cut short commuters on road and in turn relieved the traffic section.



HABITS TO MAKE YOU A BETTER READER

No matter why you read, there is always a nagging voice at the back of your mind that tells you to become a better reader. And simply reading every day is not enough.



LET GO

First things first, drop the book if you don't enjoy it. Normalise abandoning a book and not feeling guilty about it – it is no sin. Instead of torturing yourself with a bad book, use the time to find a better read. Bad books kill time and keep you from discovering the richness of the literary world.

But when should you quit a book? Basically, whenever reading becomes a chore and you'd pretty much rather do anything but face that book. That being said, it doesn't mean once you drop it, you can never go back. Maybe you feel bad about not liking the classic everyone raves about. You may not understand a book the first time; give the author the benefit of the doubt. And if things still don't work out, there's something called the "rule of 50" where you read the first 50 pages before you decide to give up or commit.

**Mr. Yogesh S
Shinde
[Librarian]**



BE FUSSY WITH SELF-HELP BOOKS

Your time is valuable; read selectively. Many self-help books are regurgitating the same facts and notions. Why not skip to Chapter 10 (which is why you bought the book) instead of dragging yourself through the entire title? Better yet, find the book summary on the web; cover three hundred pages under 15 minutes (obviously *only* for self-help books).

ONE IS TOO FEW

Read more than one book at a time, preferably two or three. It gives you a break from the scene and by the time you return to a book, you'll feel more absorbed. Perhaps this could get you through a book you thought you'd never finish. Make sure to form a balance between the heavy reads with light ones and select the genres comfortably. This way you can read more books, too!

THE RIGHT BOOK WILL CLICK

A series of bad books can potentially drive you away from a worthwhile hobby, especially for a beginner. Don't just grab the closest book you find. Look for recommendations online. Follow your favourite celebrity's reading list. Talk about books. Ask your friends for suggestions. If you're at the shop, make a go at the first 5 pages or so before you thump it on the cash counter.

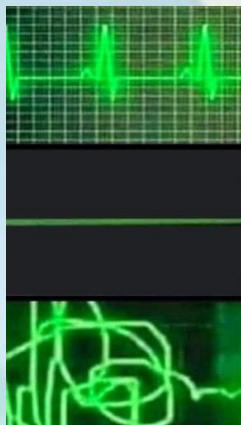
YOU'RE NEVER TOO BUSY TO READ

Make use of the "hidden hours" in a day. On an average day, there are many instances where you can squeeze in some reading. Think of your daily commute and waiting queues. You'd be surprised at how much reading you can get done during breakfast every day. Besides, the hours unnecessarily spent on social media and such can find a new use.

Student Corner

Funs upon a time...

Compiled by Dewansh Mishra 2nd CE



Normal Heartbeat

Deceased Heartbeat

When the online class teacher starts to randomly select students to answer questions

Teacher: Can everyone turn on their cameras please?
Me at the exact moment:



Continuously watching 8 episode of TV series

20 minutes into online classes



Skipping class in 2019



Skipping class in 2020



Prof: Why are you late?

Me: Traffic

Prof: But it's an online class!

Me: Yes, network traffic

Prof:



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