ISSUE
30
MARCH-APRIL 2021

KATHAN

MONTHLY
NEWSLETTER
OF SRICT

SRICT News in March-April - 2021

THIS ISSUE

Editorial

SRICT believes that every student is a genius and that her/his life and career evolves based on the experiences and learning that one assimilates. Through visionary thinking and planning, we have rendered an ambiance that will create an academic experience of a life-time for all the priceless gems that we draw from the society. We strive to (re)build the creativity in every student and encourage them to question and giving them back to the society as accountable professionals. Our committed management and well trained faculty members will provide guidance through the nuances of academic rigor and transform every student into a well-groomed and enthusiastic technocratready to take on challenges of the real world.

As an e-news bulletin of SRICT, KATHAN has always been a wide canvass toportray the institute from different angles.We are poud to inform that considering the demand of students and other readers,from June 2021,Kathan will be published monthly.

It gives an authentic record of theachievements and activities of our students which have always transformed themfor good. It has been a platform for students to explore their talents and express their views.The volumes ofKATHAN also speak about the glorious journey of 10 years that the institute has successfully made through leaps and bounds. As we scan through the pages of KATHAN, it vividly brings before us the milestones that make us brim with pride. It also highlights the quality of education and extra curricular activities organized with a view of the overall development of the students' personality.As rightly quoted by Swami Vivekananda "Education is themanifestation of perfection already in man".

World of Chemical Engineering

IIT-BOMBAY CONVERTS EXISTING NITROGEN PLANT INTO OXYGEN GENERATOR

Here air goes into the PSA chamber which is fitted with carbon molecular sieves or filters that can separate nitrogen and oxygen. They are proposing that the sieves be replaced with ones that can separate oxygen instead of nitrogen. The oxygen generated by this plant at IIT-B lab was tested and found to be 93-96% pure and at 3.5 atmospheric pressure.

KEY STEP TOWARD CLEANER, MORE EFFICIENT MASS-PRODUCTION OF HYDROGEN FROM WATER

The lead groups from Cornell University, Oregon State University and Argonne National Laboratory employ a set of advanced characterization tools to study the atomic structure evolution of a state-of-the art OER electrocatalyst, strontium iridate (SrIrO3), in acid electrolyte, to understand the origin of its record-high activity (1000 times higher than the commercial catalyst, iridium oxide) for the OER.

NEW CATALYST MAKES STYRENE MANUFACTURING CHEAPER AND GREENER

Chemical engineering researchers have developed a new catalyst that significantly increases yield in styrene manufacturing, while simultaneously reducing energy use and greenhouse gas emissions.

Activities in Department of Chemical Engineering

Sponsored Research Projects

Proposal on "Design, development and experimental analysis of combined focus solar collector for 1kW power generation" has been approved and sanctioned for an amount of 11,66,000/- for two years under GUJCOST STI Policy.

(PI: Dr. Hemant Gupta, Co-PI: Mr. Gunjan Kumar)

Research Paper Publication

Kumar G, Gupta H. (2021) A Study of Linear Fresnel Solar Collector Reflector Field for Performance Improvement. In: Recent Advances in Mechanical Infrastructure. Lecture Notes in Intelligent Transportation and Infrastructure. Springer, Singapore. https://doi.org/10.1007/978-981-33-4176-0_31

Virtual Project Fair

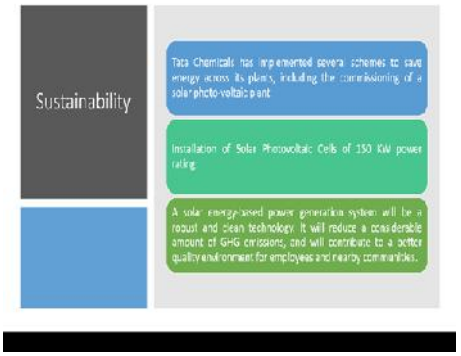
A virtual Project Fair -2021 was organised on 09/04/2021. Students of 18 groups from final year presented their projects in this event. Projects based on various problems related to Chemical Industry, Environment, Process, Equipment Design, Heat Integration were presented.

Committee to judge project work constituted of Mr. Amol Lakare, Manager Process Safety, from UPL and Dr. Swapnarekha Panda, Associate Professor, Chemical

Industrial visit

A virtual industrial visit of Tata Chemicals Ltd, was organised for 8th semester students on 15th April,2021, via google meet.

Another virtual industrial visit of India Glycols,was organised for 4th semester students on 28th April,2021 on google meet.The students were first shown a representational video of the company followed by a brief overview of their products and various locations. Also, special emphasis was given on innovation and research and development of the company. The students actively participated in the session which concluded with a brief question-answer session.



World of Chemical Engineering

TURNING FOOD WASTE INTO AVIATION FUEL

A BIOREFINING process that converts wet waste – including food waste and wastewater sludge – into sustainable aviation fuel (SAF) has been developed by researchers in the US. The SAF could be used in commercial flights within a couple of years if approved.

SAFER AND MORE EFFICIENT ALKYLATION PROCESS NOW AT COMMERCIAL SCALE

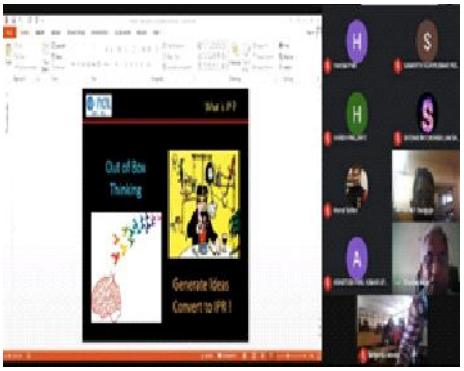
CHEVRON and Honeywell have started commercial operation of a new alkylation process using an ionic liquid catalyst that is safer and more efficient than traditional methods. Alkylation combines light olefins such as butylene with isobutane to create a high-octane blending component that can be used to produce high-octane gasoline.

TRANSFORMING ATMOSPHERIC CARBON INTO INDUSTRIALLY USEFUL MATERIALS

Plants are unparalleled in their ability to capture carbon from the air, but this benefit is temporary. Researchers have proposed a more permanent, and even useful, fate for this captured carbon by turning plants into a valuable industrial material called silicon carbide (SiC) -- offering a strategy to turn an atmospheric greenhouse gas into an economically and industrially valuable material.

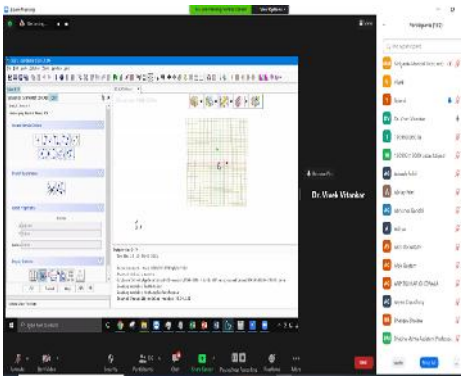
Expert lectures

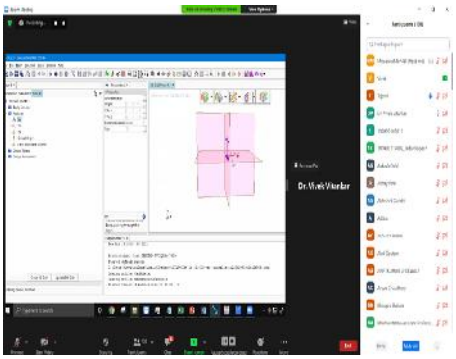
An expert lecture was organized for 8th sem students of Chemical Technology and Chemical Engg. on “Intellectual Property Rights” on an online platform on 03rd March,2021 . The lecture was delivered by Dr. Bhaskar Idge, Retired Senior Scientist, NCL, Pune. The lecture was very informative as the speaker explained various terms related to the Intellectual Property Rights (IPR), IPR evaluation, activities, portfolio, intangible property, types, trademarks, definition of patent, its filing, publishing and amp; granted procedure, patent rights, requirement of patentability and patent specifications .



Another expert lecture was organized for 7 th SEM students on 06/03/2021. Mr. Shakil Saikh, Sub- Regional Officer (Group A), Maharastra Pollution Control Board, delivered a lecture on “Bulk Drugs/ API Manufacturing & Its Environmental Aspects” where he discussed the scope of chemical engineering students in the pharmaceutical industries and gave an economic overview of Indian and worldwide market of Mr.Shaik also explained the procedure of a new drug coming into the market for public use and how the novel corona virus vaccine (Covishield) came out in such a short period of time.

Another expert lecture was organized for 8th Sem students on 15th March,2021. Mr. Vivek Vitankar, Director, FluiDimensions, delivered a lecture on “Computational Fluid Dynamics” where he demonstrated designing of a venturi meter for different





Another expert lecture was organized for All SEM students on 20/03/2021. Mr. Rajiv Wadnerkar, Vice President, Manufacturing at Aquapharm Chemicals Pvt Ltd, had delivered a lecture on “Chemical Industry Outlook” where he discussed the potential of chemical engineering students in the chemical industries.

World of Chemical Engineering

NEW TECHNOLOGY CONVERTS WASTE PLASTICS TO JET FUEL IN AN HOUR

Researchers have developed an innovative way to convert plastics to ingredients for jet fuel and other valuable products, making it easier and more cost effective to reuse plastics. The researchers in their reaction were able to convert 90% of plastic to jet fuel and other valuable hydrocarbon products within an hour at moderate temperatures and to easily fine-tune the process to create the products that they want.

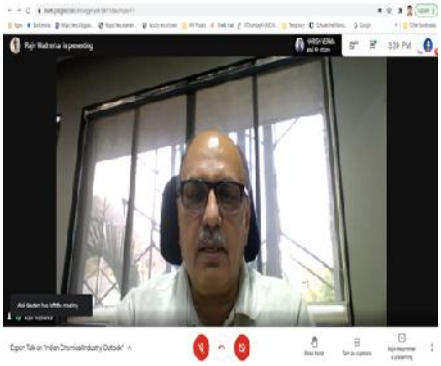
RELEASE OF DRUGS FROM A SUPRAMOLECULAR CAGE

How can a highly effective drug be transported to the precise location in the body where it is needed? Chemists now present a solution using a molecular cage that opens through ultrasonification.

CHEMICAL ENGINEERS DEVELOP 'SMART BANDAGES'

Researchers at the University of Rhode Island (URI), US have embedded nanosensors into microfibres to create "smart bandages", which offer the chance to detect and monitor wound infections in a continuous, non-invasive manner.

He has also discussed the future of the chemical industries considering the present scenario of Covid-19.



Another expert lecture was organized for 8 th and 6 th SEM students on 24/03/2021. Mr. Anjani Kumar Sharma, Founder, ChE GATE Academy, delivered a lecture on "Technical Opportunities in Chemical Engineering" where he discussed the potential opportunities that students can get after GATE. He has also discussed question pattern of the GATE exam and how students can prepare for a career in reputed companies. The students were highly motivated for the lecture and

Another expert lecture was organized for 4 th SEM students on 24/03/2021. Mr. Amol Lakare,Manager Safety, UPL Jhagadia, delivered a lecture on "Hazop Methodology" where he discussed the importance of chemical process which are required for analyzing any potential risk in the chemical industry.

World of Electrical Engineering

RURAL PEOPLE ARE NOW GETTING POWER FOR LONGER DURATION

The average rural power supply duration has been increased from 12.5 hours in 2014-15 to 18.5 hours in 2019-20. While addressing the members of the Consultative Committee of the Ministry of Power, the power minister R. K. Singh said that some of the major reform initiatives which the Ministry of Power has recently undertaken include: Universal Access to Electricity; Reliable, Quality and Sustainable Supply; Empowering Consumers and Green and Clean Nation.

SIEMENS COMMISSIONS INDIA'S FIRST HVDC LINK

Siemens Limited has commissioned India's first High-Voltage Direct Current (HVDC) link featuring Voltage-Sourced Converter (VSC) technology. The 2,000 megawatts (MW) electricity transmission system, consisting of two links between Pugalur in the state of Tamil Nadu and Thrissur in Kerala, supports Power Grid Corporation of India Ltd. (PGCIL) to counter power deficit in India's southern region and improve the grid stability. The ±320 kilovolt (kV) HVDC system was realized by Siemens Limited in association with a consortium of Siemens Energy (Germany) and Sumitomo Electric Industries Ltd., Japan – and features for the first-time the integration of HVDC XLPE Cable with overhead lines in India.

On February 19, 2021, the Prime Minister of India, Narendra Modi officially inaugurated the link that is now enabling the exchange of electricity in both directions.

Activities in Department of Electrical Engineering

One Day ONLINE workshop on "Energy Conservation"

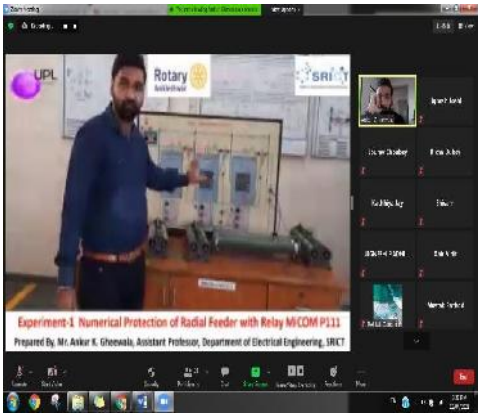
In collaboration with Gujarat Energy Development Agency (GEDA) a one day online Workshop on "Energy Conservation" was organised on 6/3/2021. The program was inaugurated by Chief Guest Mr. Sanjay Sapate, Head-Operations, Sajjan India Limited, Ankleshwar, Vice Chairman ARES Mr. Ashok Panjwani, Mr. M P Agarwal, Chairman, Sajjan India Limited, Ankleshwar, Dr. Shrikant . J. Wagh, Principal and Dr.Snehal Lokhandwala, Vice Principal.Participants included students,faculty and Staff members of Electrical & Mechanical Engg Dept.The session was based on energy conservation awareness, recent energy crisis scenario, energy audit methodology and instruments, best practices in energy efficiency, new technologies, electrical and thermal utilities and latest developments in renewable energy system.

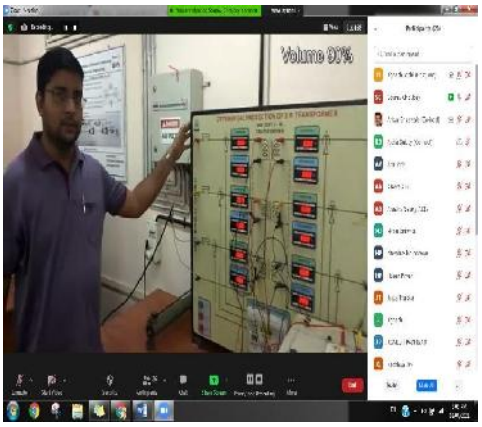
The Workshop was coordinated by Mr. Praful P. Chudasama and moderated by Mr. Krunal Shah. Dept of Electrical Engineering, SRICT.

Virtual Workshop for Diploma Students

A Virtual Workshop on "Modern Power System Protection and Relaying" for the Diploma Electrical Engineering students was organised on 03/04/2021.

Dr. Shrikant J. Wagh (Principal, SRICT) addressed the participants during the inauguration.The workshop was delivered by expert faculty members from the Department of Electrical Engineering.A demonstration of different protection schemes for Transformer, Transmission Lines, Induction Motor etc were delivered to student participants from various Polytechnics.





World of Electrical Engineering

SCHNEIDER ELECTRIC ENABLES SUSTAINABLE RAIL INFRASTRUCTURE IN INDIA

Schneider Electric, the leader in the digital transformation of energy management and automation, launches EcoStruxureTM Rail in India. Through this end-to-end digital solution, the company aims to build a collaborative digital environment for safe, efficient, reliable and sustainable metro rail operations in the country.

Schneider Electric's advanced IoT-enabled EcoStruxure Rail platform is positioned to solve the critical challenges faced by the Indian metro-rail segment. It helps optimise energy consumption by using smart energy management solutions, integrating renewables, and braking energy recovery.

RFC4072S-HIGH-PERFORMANCE REMOTE FIELD CONTROLLER BASED ON PLCNEXT TECHNOLOGY

The RFC4072S is the first high-performance Remote Field Controller based on PLCnext Technology.It is also possible to use applications with the highest safety relevant requirements levels in accordance with SIL 3 or PLe respectively.Standardand safety programming in only one engineering tool, thanks to PLCnext Engineer. Safety characteristics data controlled by 2x ARM Cortex processors.

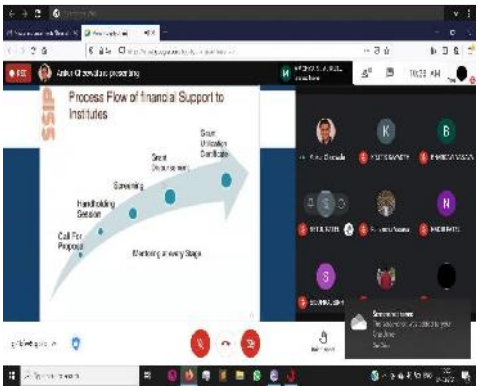
-Intel Core i5-6300U 2×2.4GHz processor

-GBDDR4 dual-channel RAM

-Support for PROFIsafe Profile V2.6.1.

SSIP Awareness Program

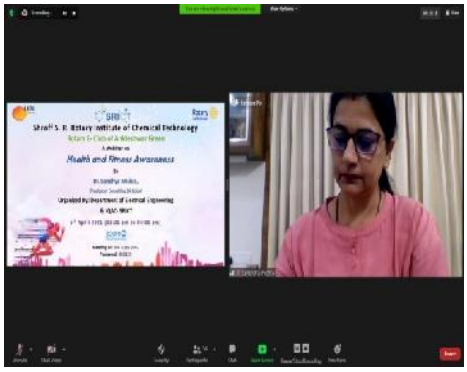
An SSIP awareness program for Sem-8 and 6 students was organized on 2nd March, 2021 by SSIP Coordinator of DEE, Mr. Ankur Gheewala. Students were given a brief introduction to the process and SRICT policy of SSIP cell and were encouraged to submit proposals of their innovative designs.



Health and Fitness Awareness Program

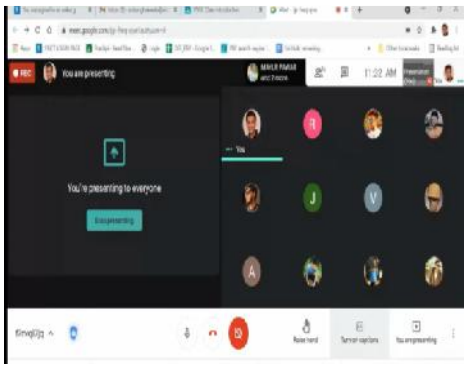
In association with IQAC- SRICT a webinar on Health and Fitness awareness was organized on 05/04/2021 with the kind cooperation of Dietician

Ms.Sandhya Mishra. Students, faculty and staff members were made aware of the importance of physical activity for improving the Body Mass Index and nutritional adequacy for a healthy life. A total of 120 participants attended the webinar.



One to One Meeting with Students

"Commitment is what transforms a promise into reality." An "ONLINE ONE TO ONE MEETING" was organized for 8th semester students with the Head of the Department of Electrical Engineering Dr. Jalpa Thakkar on 23/03/2021.



World of Electrical Engineering

FIRST NPP TO DELIVER 400 BILLION KILOWATT HOURS OF ELECTRICITY

The Grohnde nuclear power plant (KWG), with a gross installed capacity of 1,430 MW, has recently passed the mark of 400 billion kilowatt hours of electricity generated. This new record continues the success story of the pressurized water reactor on the river Weser. It is the only Nuclear Power Plant (NPP) unit in the world to generate so much of electricity.

Commenting on the achievement, Dr. Erwin Fischer, Technology and Operations Director at PreussenElektra, said, “Our power plants are still among the best in the world. They proved that again last year under the difficult pandemic conditions.

In addition, over the past 36 years, operation of the Grohnde NPP has saved 400 million tonnes of carbon emissions that would have otherwise been produced by coal and gas-fired power plants.

JUPITER POWER TO BUILD 652 MEGAWATTHOURS OF BATTERY STORAGE PROJECTS

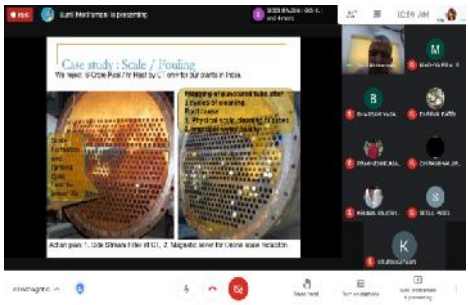
Jupiter Power LLC (Jupiter) will build six stand-alone, utility-scale battery storage projects this year, totaling 652 megawatt hours of energy storage capacity.The projects consist of three 200-megawatt-hour projects and three smaller projects, each strategically sited and configured at optimized locations.The projects are all expected to be online by the third quarter of 2021.

Virtual Project Fair

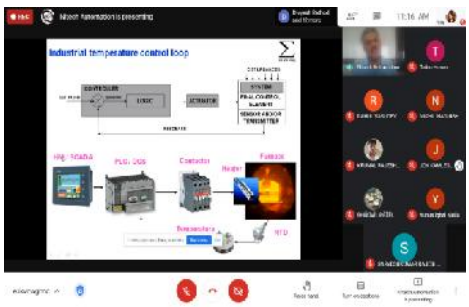
In association with Institute of Engineers (India) a Virtual Project Fair for the 8th semester students of Department of Electrical Engineering was organised on 12th April, 2021. Dr. Siddharth Joshi from Pandit Deendayal Energy University, Gandhinagar & Mr. Chirag Chandarana from industry judged the event and gave their valuable suggestions for the improvement in the projects students. The Experts were quite happy to see the efforts made the students of Electrical Engineering & praised their work."

EXPERT LECTURES

In association with IE(I) Student Chapter Electrical Engineering, an Expert Lecture by Mr. Sunil Motiramani, Head Technical Cell, Senior General Manager, UPL on “Energy Conservation Practices in Industries” was organised on 01/03/2021 for Sem 8, Sem 6 and Sem 4 Electrical Engineering students. Mr. Motiramani interacted with students on "Energy Conservation Practices in Industries'' with a presentation on the best Energy Conservation Practices adopted by UPL. Expert Lecture was well appreciated by the students.

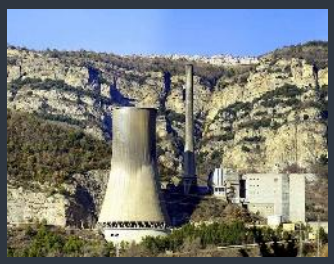


Another expert lecture by Mr. Mihir Raval, Nitech Automation, Surat on “Introduction to Industrial Automation” was organised on 30/04/2021 for Sem 4, Sem 6 & Sem 8 Electrical Engineering students. Mr. Raval interacted with students regarding different Softwares, Industry Requirements, safety rules, etc. Types of automation, industrial temperature control loop which Mr.Raval explained ,proved to be very relevant to their course of study.



World of Electrical Engineering

BHEL COMMISSIONS AN 800 MWSUPERCRITICAL THERMAL POWER PLANT



Indian public sector engineering and manufacturing company Bharat Heavy Electricals Limited (BHEL) has successfully commissioned the second unit (800 MW) of the 2×800 MW Gadarwara Super Thermal Power Project Stage-I.The greenfield project, located at Gadarwara in Narsinghpur district of Madhya Pradesh, is being developed by NTPC Ltd.

The first unit of this project was commissioned by BHEL in 2019 and is presently under commercial operation.So far, BHEL has commissioned 24 sets of supercritical boilers and 20 sets of supercritical turbine generators of 660/700/800 MW rating, out of which 08 sets of supercritical boilers and 06 sets of supercritical turbine generators have been commissioned for NTPC Ltd.

INDIA'S NUCLEAR CAPACITY TOREACH 22,480 MW BY 2031

There are presently 22 reactors with a total capacity of 6,780 MW in operation and onereactor, KAPP-3 (700 MW) has been connected to the grid on January 10, 2021.In addition, there are 8 reactors (including 500 MW PFBR being implemented by BHAVINI)totalling to 6,000 MW under construction at various stages.

On progressive completion of the projects under constructionand accorded sanction, the nuclear capacityis expected to reach22,480 MW by 2031.

Industry Visits

In association with IE(I) student chapter,Electrical Engineering, a virtual Industry visit at 3960 MW Sasan Ultra Mega Power Plant ,Reliance Power, Madhya Pradesh was organised on 17/04/2021 for 4th semester Electrical Engineering students.The plant is fueled by captive coal mines. During the visit students were shown commissioning and installation of the plant, coal mine, generators and turbines.Students enthusiastically attended the session and raised their queries.

Another virtual Industry visit at Brahmanvel windfarm, Dhule, Maharashtra was organised for 6th Semester Electrical Engineering students on 07th March ,2021.Brahmanvel wind farm has an installed capacity of 528 MW and managed by Parakh Agro Industries. During the visit students were shown wind turbines, their motors and control panels.

Another virtual industry visit at Suzlon Energy wind farms in Kutch District, Gujarat was organised for 8th Semester Electrical Engineering students on 08/03/2021. Suzlon Energy wind farm has an installed capacity of 1100 MW.

World of Mechanical Engineering

WINDOWS DOUBLE AS SOLAR PANELS: FULLY TRANSPARENT SOLAR-POWER-GENERATING WINDOWS

These windows have solar cells installed in the edges at a specific angle, which allows the incoming solar light to be efficiently transformed into electricity. The windows could generate 8 to 10 watts of power, according to Grapperhaus."Right now, we are looking for iconic projects all over the world to show that a large glass building can be made energy neutral in an aesthetic way."

A METAL FOREST BY SILICON KINGDOM HOLDINGS

A forest of 1,200 mechanical "trees," designed by Silicon Kingdom Holdings and Arizona State University scientists, is poised to pull more carbon dioxide out of the air than any human-made endeavor before it. Instead of wood, these metal columns (the specific material remains under wraps) use discs made of sorbent, which can absorb three times its weight in carbon dioxide as the wind blows through it. A cluster of 12 can suck a metric ton of the gas out of the atmosphere every day; a full lot, like the pilot one SKH is planning to install in California, can remove up to 36,500 metric tons annually. That's nearly 1,844 American households' worth of emissions.

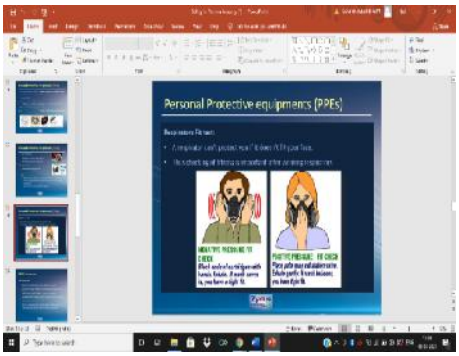
Activities in Department of Mechanical Engineering

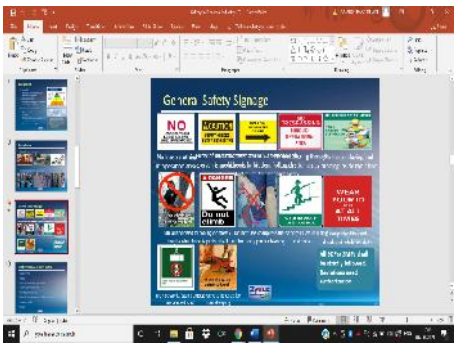
Virtual Project Fair

A Virtual Project Fair of 8th semester was organized on 17th April, 2021.Students of 11 project groups showcased their work in online poster presentation via Google Meet. It was externally judged and evaluated by Mr. Vikas Thakur, Senior Business Analyst, UPL and Mr. Parth Gupta, Executive-Quality Assurance, Gujarat Guardian Ltd., with Dr. Hemant Kumar Gupta, Head of Mechanical Department as Internal Examiner. Evaluation was carried out based on criterias like topic selection,concept clarity,work quality, poster making ,and presentations.

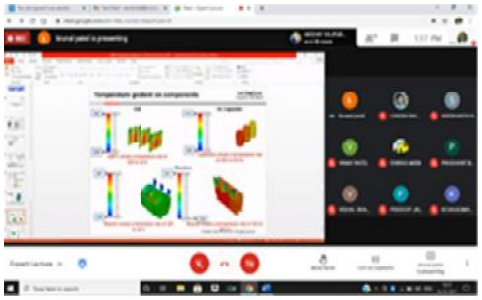
EXPERT LECTURES

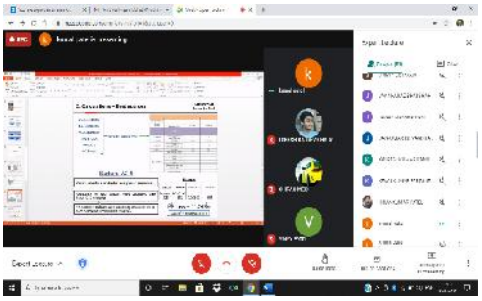
An expert lecture was delivered by Mr. Rajeev Tyagi [General Manager, (Engineering)] working in Zydus Cadila, Ankleshwar 06/03/2021 for 4th sem students. He delivered the session on Utilities & Safety in the industry. Mr. Tyagi explained the kind of utilities in industries and the control to run plants smoothly. Safety measures & precautions were precisely monitored such as temperature & pressure parameters as they frequently change in the industries .





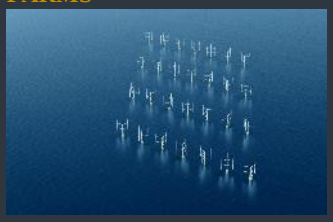
Another session of expert lecture was delivered by Mr. Krunal Patel ,Assistant Manager,Hitachi on 16/3/2021. He delivered the session on "Simulation used in Power Electronics". The speaker also elaborated the scope of CFD analysis for project works and as a career option.





World of Mechanical Engineering

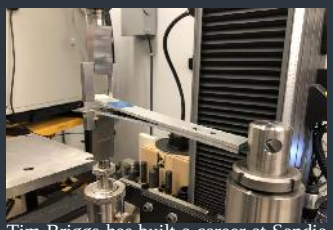
MORE COMPACT AND EFFICIENT VERTICAL TURBINES COULD BE THE FUTURE FOR WIND FARMS



New research from Oxford Brookes University has found that the vertical turbine design is far more efficient than traditional turbines in large-scale wind farms, and when set in pairs the vertical turbines increase each other's performance by up to 15%.

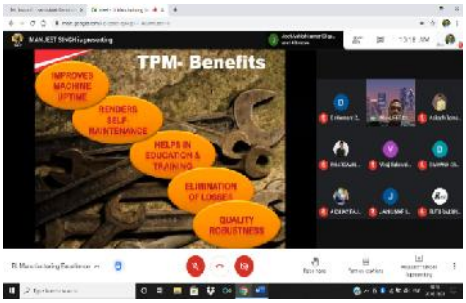
A research team from the School of Engineering, Computing and Mathematics (ECM) at Oxford Brookes led by Professor Iakovos Tzanakis conducted an in-depth study using more than 11,500 hours of computer simulation to show that wind farms can perform more efficiently by substituting the traditional propeller-type Horizontal Axis Wind Turbines (HAWTs), for compact Vertical Axis Wind Turbines (VAWTs).

NEW EQUIPMENT FINDS THE FLAWS IN EVERYTHING – FROM AIRPLANES TO CELLPHONES

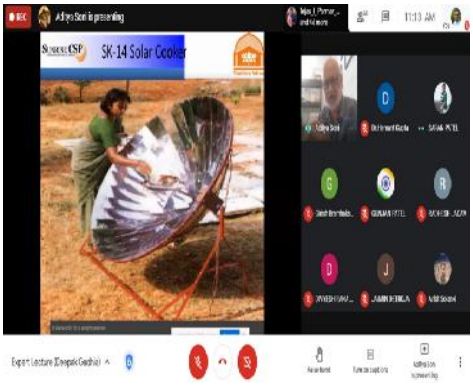


Tim Briggs has built a career at Sandia National Laboratories tearing and breaking things apart with his team of collaborators. Now, he's developed a fracture-testing tool that could help make everything from aircraft structural frames to cellphones stronger. Briggs has filed a patent for a device associated with bonded structural composite materials with the deceptively mundane title "Mode I Fracture Testing Fixture." The device, a small set of two hangers no larger than a hand, fits into a precisely drilled hole through the middle of two structural materials bonded together. The hangers then attach to a traditional testing machine designed to pull the bonded sample apart to measure how tough it is.

The expert lecture was conducted by Mr. Manjeet Singh,Manager (Quality), Metrod, Malaysia, for the students of Mechanical Engineering on 20/03/2021.In the session "Manufacturing Excellence",mr Singh described Kaizen, TPM, TQM, 5S etc. Such management strategies are followed in many industries and they ensure production with zero defect and good quality as per the customers requirement. Many practices that are implemented in the various industries were explained in detail with its practical aspects. Students learnt about manufacturing and management skills for the same. Students appreciated the informative session very much.



An expert talk was arranged on "Solar Energy: Journey of a Social Entrepreneur" delivered by prominent speaker Mr. Deepak Gadhia on------ . This lecture was significant due to its immediate environmental impact.Renewable energy sources are the need of the hour as by near future the conventional sources of energy including fossil fuels are found to be depleing at an alarming rate. So,as an alternative energy source solar energy is more compatible to provide clean and green energy. Mr.Gadhia presented the installation of Solar thermal plant in different areas of India. Students found the session very informative as it shared details of different kinds of collectors and their applications. Students and faculty members

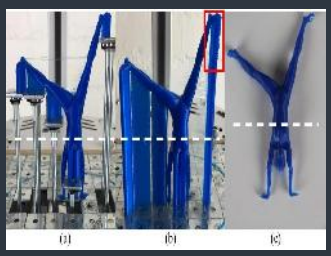


Industry Visits

A virtual Industrial visit of Nuclear Power Plant Tarapur was organized for all Mechanical Engineering students on 24/03/2021. Different departments of nuclear power plants, types of nuclear reactors, pre and post treatment of nuclear fuel and safety measures to be considered during operation of nuclear plants were explained in detail. The tour clarified concepts of power plant engineering ,fluid power and thermal engineering concerns.

World of Mechanical Engineering

NEW LOW-COST DYNAMICALLY-CONTROLLED SURFACE FOR 3D PRINTERS REDUCES WASTE AND SAVES TIME



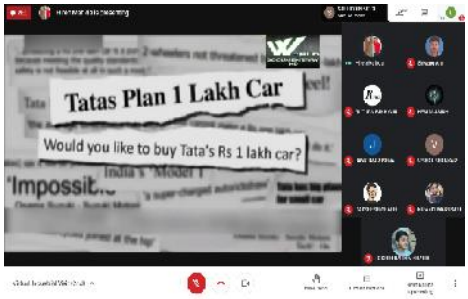
3-D printing has the potential to revolutionize product design and manufacturing in a vast range of fields—from custom components for consumer products, to 3-D printed dental products and bone and medical implants that could save lives. However, the process also creates a large amount of expensive and unsustainable waste and takes a long time, making it difficult for 3-D printing to be implemented on a wide scale.

Each time a 3-D printer produces custom objects, especially unusually-shaped products, it also needs to print supports–printed stands that balance the object as the printer creates layer by layer, helping maintain its shape integrity. However, these supports must be manually removed after printing, which requires finishing by hand and can result in shape inaccuracies or surface roughness.The materials the supports are made from often cannot be re-used, and so they're discarded, contributing to the growing problem of 3-D printed waste material.

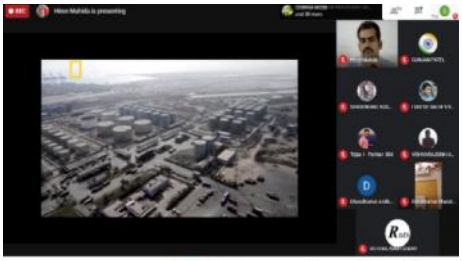
The work, led by Yong Chen, professor of industrial and systems engineering and PhD student Yang Xu, has been published in Additive Manufacturing.

Traditional 3-D printing using the Fused Deposition Modeling (FDM) technique, prints layer-by-layer, directly onto a static metal surface. The new prototype instead uses a programmable, dynamically-controlled surface made of moveable metal pins to replace the printed supports. The pins rise up as the printer progressively builds the product. Chen said that testing of the new prototype has shown it saves around 35% in materials used to print objects.

A virtual tour of Tata Nano Plant Sanand was arranged for all Mechanical Engineering students on 25/03/2021. Students were made aware of the different departments of the automobile industry, factors that need to be considered during plant set up, working of assembly line, testing of automobiles and many more. This virtual tour was helpful for students in understanding concepts related to Automobile Engineering and Internal Combustion Engine.



Another virtual tour of Adani Mudra Port was organised for all Mechanical Engineering students on 19/04/2021. Student came to know the uniqueness of Mudra port, important departments and the management of activities like loading and unloading of big ships, function of tug boats, floating pontoon and many more. This virtual tour was helpful for students in understanding concepts related to Industrial Engineering, Machine Design and related concepts.



World of Environmental Science & Technology

AMID POLLUTION THREAT, ASI TO SET UP WEATHER STATIONS WITH ISRO AT KEY SITES.

NEW DELHI: Increasing air pollution is not just a big risk for our lungs but it is also impacting India's centuries old . monuments, some of which house precious paintings and murals .. vulnerable and exposed to contaminated air and climate change.

To address this concern, the Archaeological Survey of India ,(ASI) plans to set up its own weather stations at some of the UNESCO and ASI-protected sites, like Humayun's Tomb, Sun ..

SHARP INCREASE IN DESTRUCTION OF VIRGIN FOREST IN 2020

PARIS: An area of pristine rainforest the size of the Netherlands was burned or hacked down last year, as the destruction of the planet's tropical forests accelerated despite a global economic slowdown, according to research Wednesday. The worst losses were in Brazil, three times higher than the next highest country, the Democratic Republic of Congo, according to a report from Global Forest Watch based on satellite data. Across the tropics, the study registered the destruction in 2020 of 4.2 million hectares (10.4 million acres) of primary forest -- 12 percent higher than the year before.

Activities in Department of Environmental Science & Technology

Nature Club Activity

WEBINAR

Rotary e-club of Ankleshwar Green, Nature Club of SRICT and IEI students' chapter (393135/SRIC/EN) jointly organized (under IQAC) a webinar on "Every Drop Matters" on 15th April, 2021 by the 'Water Man Of India', Mr. Rajendra Singh.Mr. Singh shared his experience and marvelous efforts in rejuvenating completely dried up rivers in semi-arid and arid regions of India. He also shared some important information related to rainwater harvesting, water cleaning, health of aquatic life and many more. The webinar was very interactive and more than 120 participants from industries, NGOs and academics of Gujarat, Maharashtra, UP and MP joined it and shared their experience and feedback with the guest speaker.

Expressing Ideas

Nature Club of SRICT and Institution of Engineers (India) (IEI) students' chapter (393135/SRIC/EN) jointly organized (EXPRESSING VIEWS) Competition on the theme "Effect of Covid-19 on Education" on 11/4/2021.Active participation was received from the students. The event was coordinated by Ms. Bhasha Mehta ,Assistant Professor,EST.

World of Environmental Science & Technology

ENDANGERED INDIAN RHINOCEROS BABY IS BORN IN ZOO IN POLAND

WARSAW:An endangered Indian rhinoceros was born last week in Poland's Wroclaw Zoo, a hopeful development in efforts to preserve the rare animals.

Born January 6, the female baby is the first Indian birth in the zoo's 155-year history, the zoo said Wednesday. ..

Its parents are seven-year-old Maru.

INNOCENT CITIZENS DRINK GANGA WATER OUT OF REVERENCE WITHOUT KNOWING HARMFUL CONTENTS: NGT

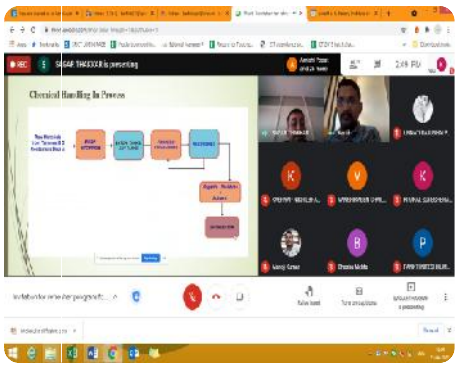
NEW DELHI: Innocent citizens drink Ganga water out of reverence without knowing the harmful contents and the least expected from the authorities is to notify the extent of harmful contents at appropriate locations including at Ganga Sagar in West Bengal, the National Green Tribunal said Wednesday.

The green panel said steps are required to be taken on "war footing" by authorities in preventing water pollution in Ganga.

Refresher Programme

Refresher program for final year students was arranged for Final year EST students about various concepts they have learnt in their four years

Sessions were organized on topics of Air pollution, Solid Hazardous waste Management and Waste Water treatment



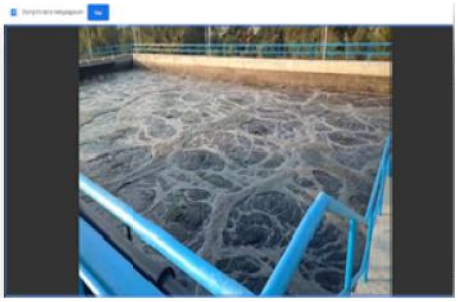
Virtual Project Fair

Project Fair was conductedon 9th April 2021 for 8th semester students. Fair was examined externally by Mr. Nitin Shah Manager Zydus Cadila and Mr.Rushi Shah, Dy.Gen Manager, Intas Pharma. Fair was examined internally by Mr. Darshan Salunke.

Industry Visits

A virtual industrial visit was made to Amrit STP, Haryana on 15/03/2021 for semester 6 students.

Another industrial visit was conducted to Sudeep Industries Pvt. Ltd., Ahmedabad on 23/03/2021 for semester 8 students.



FACULTY RESEARCH PAPER

Pratibha Gautam, Sunil Kumar, Characterization of Hazardous Waste Landfill Leachate and its Reliance on Landfill Age and Seasonal Variation: A Statistical Approach, Journal of Environmental Chemical Engineering 9 (2021) 105496

World of Chemical Technology

LUPIN ENTERS INTO VOLUNTARY LICENSING AGREEMENT WITH LILLY TO EXPAND ACCESS FOR COVID-19

Global pharma major, Lupin Limited (Lupin) today announced that it has signed a royalty-free, limited, non-exclusive voluntary licensing agreement with Eli Lilly and Company (Lilly) for manufacturing and selling of Lilly's drug Baricitinib in India.

Lilly has received permission from Central Drugs Standard Control Organization (CDSCO), Ministry of Health, for restricted emergency use of Baricitinib in combination with Remdesivir for the treatment of suspect or laboratory-confirmed COVID-19 in hospitalized adults requiring supplemental oxygen, invasive mechanical ventilation.

TREATMENT IN INDIA

JOHNSON & JOHNSON WILL SOON BEGIN CLINICAL TRIALS

Johnson & Johnson has told Indian regulators that it will soon begin clinical trials of its single-shot COVID-19 vaccine in the country, the Indian Express reported. The US drugs and healthcare giant has sent a letter to Central Drugs Standard Control Organisation (CDSCO) saying it would "very shortly apply for permission to conduct clinical bridging trials in India,"

Activities in Department of Chemical Technology

GTU Winter 2020 results for CT students

As per recently declared GTU Winter 2020 results, 100 % result was achieved by 7thsem students and 80.95% result by 5thsem students.

AdityaChoumal secured 1st position with 10 SPI in 7th sem.Out of total 35 students 12, scored SPI between 9.5 to 9.9. Also, 9 students got SPI between 9 to 9.49 and 8.5 to 8.99. 4 students got SPI more than 7.1 .

In 5th semester, total 21 students appeared in the examination.Out of them,VaibhavkumarSoni secured 1st position with 9.74 SPI.10 students got SPI in the range of 8.5 to 9.49.

SSIP Project

Atal Incubation Center at Gujarat Technological University (AIC-GISC Foundation) supported by Atal Innovation Mission, Government of India, aims to nurture the ideas into a viable Enterprise/Start Up, with a specific focus on Healthcare, Biotechnology, Medical Devices, and allied areas. Besides, providing active Mentoring and Financial support to the Incubates, Atal Incubation Center from its main Campus at Chandkheda, Ahmedabad is going to provide Basic and high end Instrumentation facilities, Incubation spaces, and networking facilitating a host of other resources that may be required for the startup to survive and scale up further.

Final Presentation for IDEATHON projects by GTU innovation council under the banner of Atal Incubation Centre was organized at GTU on 6th March 2020.Total 15 shortlisted teams were called for further presentation before jury for the approval and sanctioning of the proposed fund.

Students of Chemical Technology DevarshiVyas, AdityaChoumal, Kashyapkumar Joshi, Khyatil Patel, Ashutosh Singh and Dhruvil Shah under the guidance of Dr. JigishaModi from Shroff S R Rotary Institute of Chemical Technology presented their business project and got a grant of Rs 1,89,290/- .Rs.47323/- has been released to complete the first milestone.

The selected business project from SRICT was "Microbial Fuel Cell".

World of Chemical Technology

CHEMICAL FIRM ANUPAM RASAYAN INDIA TO SET UP 12.5 MW SOLAR PLANT

Specialty chemical company Anupam Rasayan India has announced that it will invest Rs 43 crore to set up a 12.5 megawatt (MW) solar power plant in an attempt to lower its carbon footprint and save on electricity costs in the long term. “In a conscious move towards reducing dependence on non-renewable energy and cost saving measure, Anupam Rasayan… has issued a letter of intent to install solar power by investing a sum of Rs 43 crore,” the company stated in a regulatory filing.

AXENS SELECTED FOR CPCL CAUVERY BASIN REFINERY PROJECT IN INDIA

Chennai Petroleum Corp. Ltd. (CPCL), a group company of Indian Oil Corp. Ltd. (IOCL) has selected Axens (Rueil-Malmaison, France) to supply several advanced technologies for its state-of-the-art 9 MTPA refinery to be set at Cauvery Basin at Nagapattinam in Tamil Nadu (southern part of India).

One to One Meeting with Students

A 1-2-1 meeting on 17th March, 2021 for the 8th semester students with Principal Dr. Shrikant Wagh, HoD Dr. OmprakashMahadwad anddepartmental facultymembers.

Principal convinced students of the importance of learnin. He also spoke on the challenges of sustainability and life that the pandemic has posed on every one of us. We as a generation are given scope to learn how to liveaminimalistic life andnavigatethrough this critical times.

He encouraged students to sincerely focusupon their daily studies in order to attain commendable outcome in the final year exam. He also encouraged the students for higher study as well as entrepreneurship based on their interest.

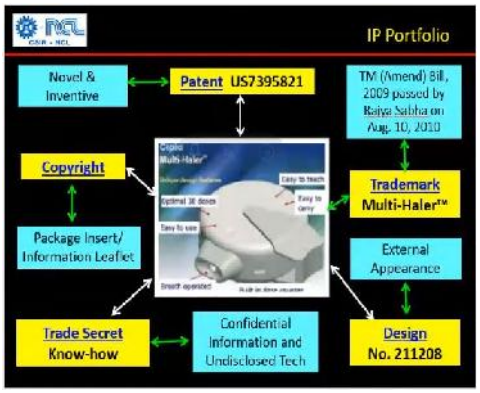
Virtual Project Fair

A virtual project fair for the final year B.E. students as a part of GTU yearlong Project Program was organized on 11th April 2021. 35 students were distributed in9 projects which are unique in terms of the industry and user definedapplications.

The panel of judges for the event included experts from industry academics.Video links of all projects are uploaded on SRICT YouTubechannel.Feedbacks from all corners are solicited for further improvement and excellence in terms of quality.

Expert Lectures

An expert lecture on“Intellectual Property Rights” was organized on 03/03/2021 for Chemical Technology and Chemical Engg students. The lecture was delivered by Dr. BhaskarIdge, Retired Senior Scientist, NCL, Pune. He explained various terms related to the Intellectual Property Rights (IPR), IPR evaluation, activities, portfolio, intangible property, types, trademarks, definition of patent, its filing, publishing and grants procedure, patent rights, requirement of patentability, patent specifications etc.



Another online expert lecture on “ Water based elastomeric coating” was organised on 04/03/2021 for 8th Sem Polymer & Rubber Tech. & 6th Sem Dyes & pigment Tech. students.The expert lecture was delivered by Mr. Yogesh Shirsath, R&D Manager- Comet group of company, Ahmedabad.Mr. Shirsathexplained various terms related to the elastomeric coating for roof application.

GENNOVA BIO-PHARMACEUTICALS LTD.'S DEVELOPED 'FIRST OF ITS KIND' MRNA-BASED COVID-19 VACCINE

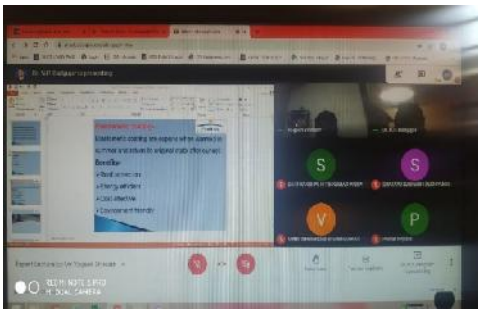
Gennova Biopharmaceuticals Ltd.'s developed 'first of its kind' mRNA-based COVID-19 vaccine, HGCO19, in collaboration with HDT Biotech Corporation, USA has been approved for additional funding towards clinical studies by the Indian Department of Biotechnology (DBT). This funding has been awarded under the 'Indian COVID-19 Vaccine Development Mission' by DBT's dedicated Mission Implementation Unit at Biotechnology Industry Research Assistance Council (BIRAC) after multiple rounds of evaluation of all the applications

NITTA GELATIN INDIA LTD (NGIL)'RECEIVED A 'TPM CERTIFICATION ASSESSMENT OF STRONG COMMITMENT'

Nitta Gelatin

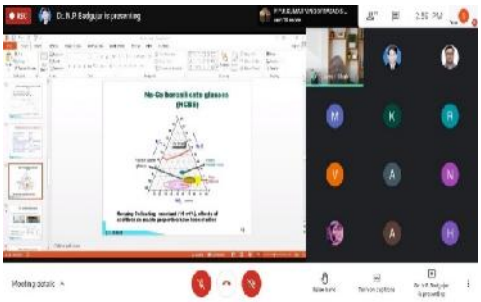
Nitta Gelatin India Ltd (NGIL)'s factories at Kakkanad and Koratty received a 'TPM Certification Assessment of Strong Commitment' from Confederation of Indian Industry (CII). NGIL is a leading manufacturer of Gelatin for Pharmaceutical & Food applications, Di-Calcium Phosphate as poultry feed ingredient, Ossein and Chitosan for Agricultural and Industrial application.

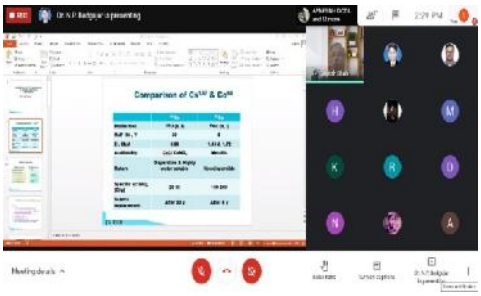
It included the importance of acrylic polymers and pigments with their required properties, stages of film formation,additives used in coating, and experimental case studies in terms of design of formulations. Vote of thanks was given by Ms. Monika Patel, Assistant Professor in Dept of Chemical Technology.



Anotheronline expert lecture on "Development of 137Cs-glass source for radiation technology applications" was organisedon 29/04/2021 for the all semester students of Chemical Technology. The expert lecture was delivered by Dr. Jayesh Shah, Former Head-BARC and Head R&D Ami Polymers, Ankleshwar. The coordinator for this expert lecture was Dr. NileshBadgujar, Associate Professor, Chemical Technology department.

He explained importance of cesium & cobalt as a radiation technology source, matrix selection, matrices used as radiation source, development of Cesium as a glass source etc.





Industry Visits

A virtual Industry visit to Oriental Rubber Industries Ltd, Pune was organisedon 22/04/2021 for Polymer and Rubber Technology students. Mr. Ujjawal Kumar, of Quality assurance department very well explained the journey of the company along with detailed description of the process for manufacturing of conveyor belts. During the visit, the students were explained various processing units and different products like sheets and conveyor belt profiles etc. The overall visit was very much appreciated by students. The visit was organised by Ms Monika Patel,AssistantProfessor,CT,department.

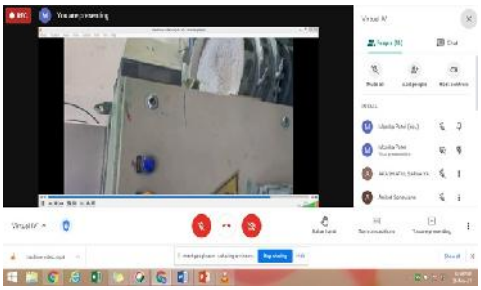
World of Chemical Technology

RELIANCE, AFFILIATES BUY 3/4 OF KG-D6 GAS VOLUMES

Billionaire Mukesh Ambani's Reliance Industries Ltd and its affiliates have picked up more than three-fourths of the new gas volumes from the firm's eastern offshore KG-D6 block which at current government dictated price will cost it less than half of the imported rate, sources said.

Reliance and its partner UK's BP Plc last week auctioned 5.5 million standard cubic meters per day of incremental gas from the newer discoveries in the KG-D6 block, benchmarking it to a gas marker. Reliance's oil-to-chemical (O2C) business unit picked up 3.2 mmscmd gas in the auction, three sources with direct knowledge of the development said.

Another virtual Industry visit to Shakti Polyblends, Damanwas organisedon 26/03/2021 for Polymer and Rubber Technology students. Mr. AtulSarvaiya, Owner of Shakti polyblends and Om Polyblends explained different master batches they were preparing.



A Virtual Industry Tour of Nilkanth Group of Industries was arranged on 04-04-2021 for Sem 4, 6, 8 Dyes & Pigment Technology (CT) students.

The company was established in 1992 at GIDC, Ankleshwar. It has a long history of trading, selling, procuring and servicing customers in the field of reactive dyes, CPC blue pigments and intermediates etc. The students were given the information about the products, working profile of company, processing of products, scope of career etc. The visit was coordinated by Mr. HarshalPatil,Assistant Professor, CT Department.

A Virtual Industry Visit of Cipla Limited was arranged on 01-04-2021 for Pharmaceutical Technology students. During the visit a brief description of the vision, and mission of Cipla andmilestones in its growth were explained. Photographs of API manufacturing area, intermediate manufacturing Quality Control were shown. The API and intermediate manufacturing processes were discussed. The visit was coordinated by Mr. JayadevVasudevan,AssistantProfe ssor, CT Department.

Another online industry visit to Borosil renewable Ltd. has been conducted on 4th March 2021. Mr. VishveshPrajapati, Furnace Engineer, BRL Jhagadia,explained'Raw materials for the glass batch'.Heexplained various raw materials,their usage and various glass compositions.The visit was coordinated by Mr. ApurbaChakrabarty,AssistantProf

World of Computer Engineering

COVID-19: GOOGLE TESTING NEW FEATURE TO ENABLE SHARING INFO OF BEDS, OXYGEN

Google said it is testing a new feature in Maps that enables people to ask about and share local information on availability of beds and medical oxygen in select locations. This is part of the tech giant's efforts to support the relief efforts amid the deadly second wave of the COVID-19 pandemic. In addition to showing 2,500 testing centers on Search and Maps, Google is now sharing the locations of over 23,000 vaccination centers nationwide, in English and eight Indian languages, it said.

WORLD OF LANGUAGES

This means that all pilots have to identify themselves and speak in English while flying, regardless of their origin

Activities in Department of Mathematics, Science &Humanities

Career Counselling Seminar

A career counselling online program was organized by Shroff S R Rotary Institute of Chemical Technology for the 12th Science Students of SVEM (GM) and E N Ginwala School on 27th April 2021 through online mode-Google Meet. Mr. Dharmesh Patel guided and informed students regarding various scope of higher studies after 12thScience . Mr. Dharmesh Patel also explained the admission process for engineering and pharmacy colleges. Students appreciated the efforts taken by SRICT. Dr. PurviNaik, HOD MSH, thanked Principals of SVEM (GM) and E N Ginwala High School,Mr.MilendraKesarola and Mr. IshwarParmar for their kind support. The program was coordinated by Dr. Nikhil Parekh, Assistant Professor,MSH Department.

Felicitation

An onlineFelicitation Program Abhyutthan -2021 to felicitate the students who scoredremarkable achievement in their GTU results of Summer 2020 was organized on 23rd March,2021.

188 students of semester 2and 4 who scored above the SPI of 8.5 were felicitated with cash prizes of Rs. 3,63,000/- in the august presence of ARESChairperson. Mrs Sandra Shroff ,Vice Chairman Mr.AshokPanjwani ,Secretary Mr. AngirasShukla,Principal Lions International Academy ,Mr.BinojPeethambaran Principal ShravanVidyalay, MrsDipikaModi, Principal SRICT

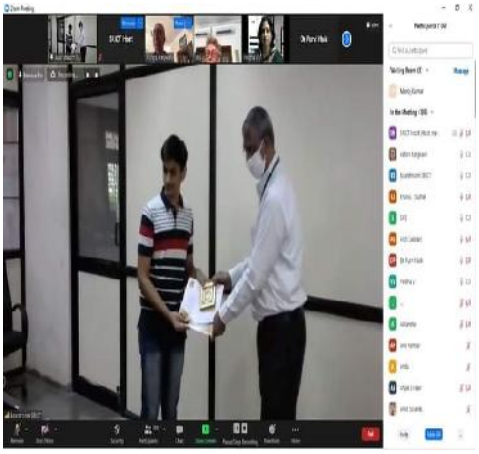
Professor Dr.Shrikant J Wagh, Vice Principal Dr.SnehalLokhandwala ,HoDMathematics, Science and Humanities Dr.Purvi J Naik,Heads of other Departments, Parents of our students, Faculty ,Staff Members SRICT andstudents attended the event.Students who received UPL sponsored gold medals for their score of 10 SPI are the following

1.Shah Deep Yogesh (CE)

2.ShaishMoinuuddin S(EST)

3.ThakerYashDattubhai(CE)

4.Kale Prasad Vilas (EST)



World of Computer Engineering

WORLD OF IOT

The internet of things, or IoT, is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.

A thing in the internet of things can be a person with a heart monitor implant, a farm animal with a biochip transponder, an automobile that has built-in sensors to alert the driver when tire pressure is low or any other natural or man-made object that can be assigned an Internet Protocol (IP) address and is able to transfer data over a network.

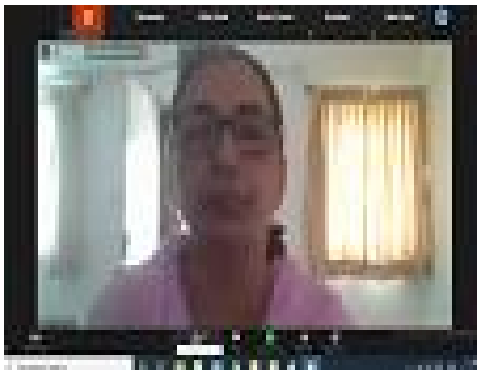
Increasingly, organizations in a variety of industries are using IoT to operate more efficiently, better understand customers to deliver enhanced customer service, improve decision-making and increase the value of the business.

Masks and Sanitizer Distribution

Under the guidance of Dr.PurviNaik,HoD-MSH, masks, sanitizers and foot operated sanitizer dispenserswere distributed to schools in Ankleswar and Bharuch. It was a gesture of social commitment and humanitarian concern in a period

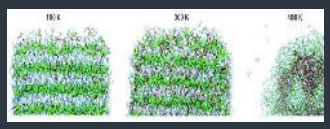
Guidance session for GTU online exam

Online guidance session for the upcoming GTU online exam of sem-1 was organized on 29-4-2021 by MSH department. It was attended by all first year students and was guided by MSH HoD, Dr. PurviNaik, with class coordinators and IT team members.Mr. DhananjayChauhan, exam coordinator of MSH department provided guidance on online GTU exams and also trained students to follow instructions given by GTU.Students were guided about all important technical aspects required for online exams and all their queries were resolved by the IT team.



World of Chemistry

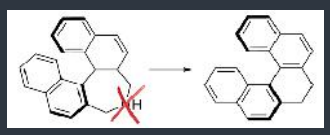
NEW TYPE OF CRYSTAL EXPELS LIQUID WHEN SQUEEZED



A new type of crystalline solid changes phase and reversibly releases one equivalent of solvent when heated or put under pressure. It's 'a unique behaviour we haven't seen in any previous materials,' says Michael Zdilla of Temple University in the US, part of a team that discovered the property by accident. 'Accidents are, in my experience, the most exciting thing that can happen in science.'

Zdilla and his colleagues were investigating solid electrolyte materials with conductivities approaching those of ceramics when they came across the unique system, which they call a solvate sponge crystal. Typically, when heating crystals, either the material melts, losing no solvent, then reforms when cooled; or it melts, and then decomposes, and the materials cannot reform on cooling. This crystal is different – rather than melting or decomposing, it changes to a different solvate.

NITROGEN DELETION REACTION OFFER'NEW WAY TO THINK ABOUT MOLECULAR EDITING'



US researchers have developed a chemical reaction that deletes nitrogen atoms in organic molecules, including in ring structures, connecting the carbon atoms on either side. In the first ever publication from Mark Levin's University of Chicago laboratory, the chemists trigger the deletion with the help of an unusual electrophilic amide. The reaction offers 'a new way to think about molecular editing',

Single element atom-swapping was on the wish list of five reactions that organic chemists told Chemistry World they wanted in 2019. Levin founded his lab specifically to attempt single-atom skeletal editing, but nitrogen deletion wasn't his initial focus. However, while seeking something completely different.

Activities in SRICT-ISR

Motivational Lecture

Principal Dr. Shrikant Wagh delivered a lecture for the M.Sc. students of semester I and IV on 23rdMarch,and 2021. The topic of the session was "BRING JOY IN OUR LIFE" In the session sir described 'How one can become happy in life?' He wonderfully explained the meaning of knowledge and wisdom. He also sketched a difference between Mind & Intellect and enlightened the students on the meaning of being smart. He also focused on the values of life and the principles of hard work, determination, making a goal and achievement.

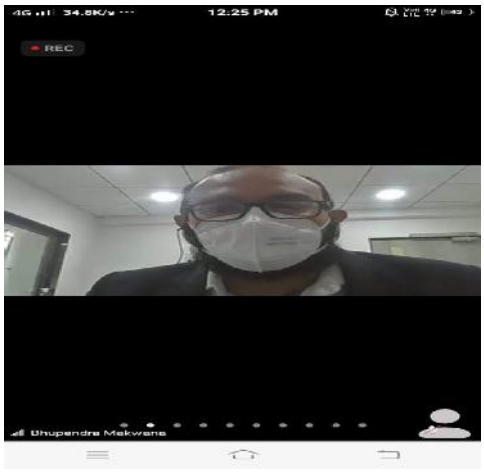
It was a good opportunity for students to learn a lesson on moral values.

Expert Lectures

An expert lecture was organised by SRICT-ISR on 31st March 2021 on the topic of "Career opportunities in chemical industries" for the M.Sc. chemistry students. Mr. JayeshPandya, head of the research and development, suyog life science served as resource person.

This lecture was coordinate by Dr. Jyotindra Mahyavanshi,Assistant Professor SRICT-ISR .

Another expert lecture was organized on 29th March, 2021. The Topic of lecture was "PREVENTATIVE MEASURES FOR COVID-19 IN PRESENT SCENARIO" By Dr. BhupendraMakwana, Unit Head, Surat Institute of Medical Science Experience in Critical Care more than 10 years. Mr.Makwana talkedabout the present situation,the preventive steps we could take and the hospitalization situation. This lecture was coordinate by Dr. JyotindraMahyavanshi, Assistant professor SRICT.

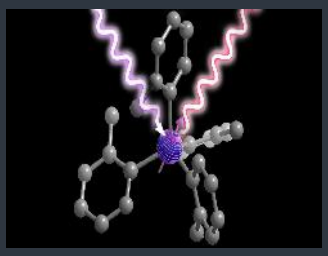


World of Chemistry

AUTOMATED ORGANIC SYNTHESIS MADE EASIER WITH CAPSULE BASED CONSOLE

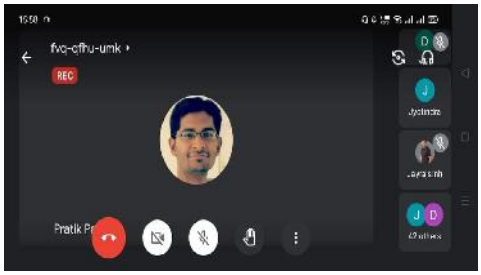
Integrated console to synthesise drug-like molecules requires minimal user input. Chemists in Switzerland have developed a standardised console for the automated synthesis of complex organic molecules. Using prepacked capsules, and requiring minimal involvement from the user, this instrument produces and purifies drug-like compounds at the push of a button.

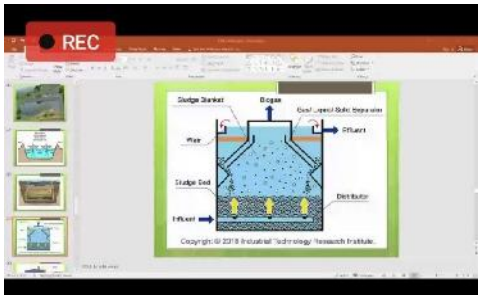
DESIGNER MOLECULES COULD CREAT TAILER-MADE QUANTUM DEVICES



Quantum bits made from "designer molecules" are coming into fashion. By carefully tailoring the composition of molecules, researchers are creating chemical systems suited to a variety of quantum tasks.Quantumbits, or qubits, are analogous to the bits found in conventional computers. But rather than existing in a state of either 0 or 1, as standard bits do, qubits can possess both values simultaneously, enabling new typesof calculations impossible for conventional computers. .Besides their potential use in quantum computers, molecules can also serve as quantum sensors, devicesthat can make extremely sensitive measurements.

Another online expert lecture was organized on 30thMarch 2021. Dr. Pratik Patel served as resource person and talked about effluent treatment in industry. He explained various primary and secondary treatment of waste water and the various industrial parameters. This lecture was coordinated by Dr. JyotindraMahyavanshi, Assistant professor SRICT-ISR .





Industry Visits

Several industry visits were organized and studentswere explained the processes of ,landfilling , incineration process and various vessels used in production of dyes,safety parameters , Quality Control and Assurance , various laboratory Instruments such as GC , HPLC and Ion-Exchange chromatography. Shade matching, applying dyes on the fabric and many other important skills of dying were explained. This Industrial Visit was co-ordinated by Mr. ShivamsinhKesrola,Assistanat

Date of Industrial Visit	Name of The Industries	Students
16/03/2021	SHREE COLOSPERSE PVT.LTD, Ankleswar	M.SC Sem 4
17/03/2021	SHREE COLOSPERSE PVT.LTD, Ankleswar	M.SC Sem 1
18/03/2021	BEIL , Ankleswar	M.SC Sem 1
18/03/2021	ETL, Ankleswar	M.SC Sem 1

Rotary EHS e- Conclave 2021

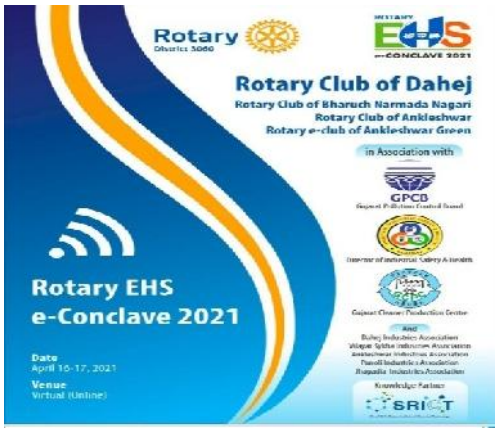
All faculty and staff members with students of MSc attended the online two days seminar organized by Rotary club of Dahej on various topics like OHS compliance and its importance, Safety in industries for sustainable business continuity, Process safety-innovative ways of safety excellence, HSE Culture development through contractor safety management, Accident prevention Through Process Safety unit on 16th and 17th April,2021.

There were several interesting sessions onWaste to Wealth through Cleaner Production Initiative, Present Scenario on Environmental Sustainability, Hazardous Waste Management, Water Conservation, Chemical Hazards and Toxic Substance –its implication on Human health etc.

World of Chemistry

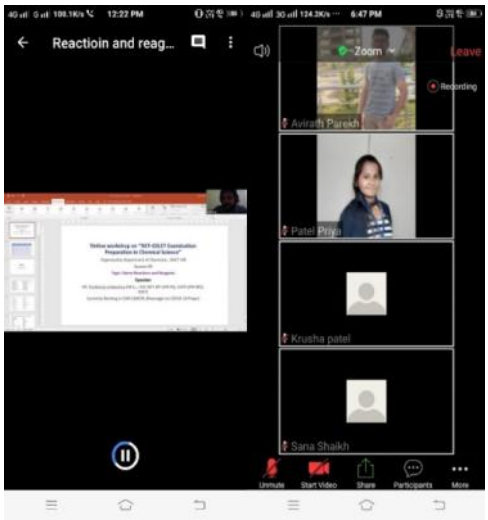
ACIDIC SEAS: HOW CARBON DIOXIDE IS CHANGIUNG THE OCEANS

Alexa adjusts her snorkel, mask,and fins as she prepares to plunge into clear, blue water. She and four other U.S. high school students are two miles from Isla Ballena, an island off the Pacific coast of Costa Rica. The waters surrounding the island—part of Costa Rica's Marino Ballena National Park—contain coral reefs that attract visitors from around the world. The students are attending Ocean Camp, a university-sponsored two-week research program that exposes students to oceanography and marine biology. Here, Alexa and her classmates will learn firsthand about marine life, as well as check the health of the reefs and 18 species of coral. Along with their instructors and a snorkeling guide, the students swim past swaying tentacle-like coral polyps and colorful fish. All the while, they watch closely for corals that have faded color or that seem to be weakened or crumbling. Alexa and her classmates have learned that these are signs of unhealthy corals, which are being threatened by warming and increasingly acidic oceans due to rapidchanges in the Earth's climate. Although corals typically thrive in warm water, it places too much stress on them if the ocean gets too warm. This causes them to lose their beautiful colorsand turn white, as if bleached. And a more acidic ocean can make it harder for corals to get the materials they need to grow and that causes them to weaken and crumble. This is concerning because although coral reefs make up less than 1% of the Earth's surface, they play a crucial role in the ocean ecosystem—corals provide shelter for perhaps a quarter of the ocean's species. This is why researchers studychanging ocean waters and ask the important question: How will a warmer and more acidic ocean affect corals and what does that mean for the health of our oceans?



Online Workshop on " NET-GSLET" Examination Preparation

A 10 days online workshop on NET-GSLET examination preparation in chemical science was organized from 4th March to 13th March, 2021. This workshop will give an excellent opportunity for the CSIR-NET and GSLET Chemistry aspirants to achieve their target. Faculty members from various institutions have served excellent lectures. The whole program was coordinated by Dr. JyotindraMahyavanshi, Assistant Professor.



At the end of the program there was a quiz based on lectures and the winners are as given below.

1. Utkarsh BhattDepartment of chemistryGujarat University, Ahmedabad
2. Nisha Patel, Iqra Science college Bharuch
3. Hemangini Patel, Adarsh Science collegeTarsadi.

Training And Placement

Batch 2019 27.77% Placement done till 1stMay, 2021

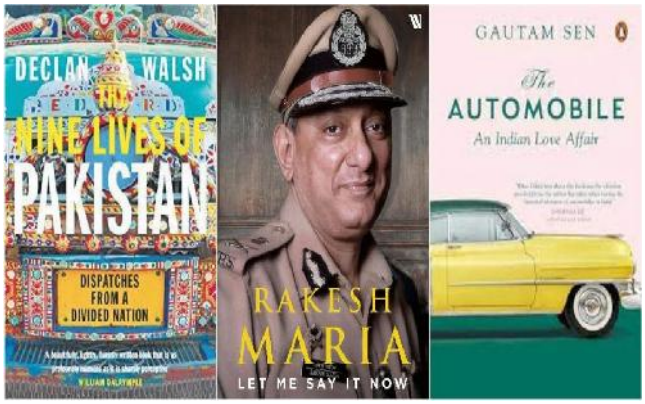
Sr. no.	Name of Students	Name of Company
1	Patel Sharmila	BEIL,Ankleswar
2	Patel Priyanka	BEIL,Ankleswar
3	ChaudhryRitu	BEIL,Ankleswar
4	RavalKinnari	BEIL,Ankleswar
5	RanaBhavyata	BEIL,Ankleswar

In **2018 batch, 100%** Placement For Eligible students

Art by Mr.KishanPanchal
BE Sem6 Chemical Engineering

CHASING THE TRUTH: HOW COVID-19 HAS CHANGED READING HABITS

Yogesh S. Shinde-Assistant librarian, SRICT



The year 2020 brought about a paradigm shift in our lives. We began thinking differently, eating differently, living differently, and even reading differently. According to Nielsen's report on the Impact of COVID-19 on the India Book Consumer, reading time has increased from nine hours a week to 16 hours a week.

The fear of going out, contamination, unpredictable political climate, sudden death - the year was stranger than fiction. Readers reached out to relate and find an explanation in nonfiction. They sought answers in Science, Technology, Self-help, Spirituality, History and Enterprise to figure their place in a new, unsure world.

As serious nonfiction started flying off shelves or online ebook portals, the numbers told the truth. Adult nonfiction revenue for Amazon grew 22.8 percent in the last five years. Amazon Health, Fitness and Dieting, Politics and Social Science.

In 2020, YA fiction sales rose 21.4 percent and nonfiction sales increased 38.3 percent.The Nielsen report said that Indian nonfiction readers bought historical/political biographies followed by self-help/personal development and self-study like learning new languages.

Indian authors writing in English are looking beyond fiction. So are publishers. For every Samit Basu or Megha Majumdar, there is Urijit Patel writing about the credit market, Manan Ahmed Asif foraying into South Asian history in the context of majoritarianism, Sonia Shah writing on the next migration wave-provoked climate change and Raj Tilak Roushan uncovering real crimes in The Good, The Bad and The Unknown: Deep, Dark And Captivating Crime Stories from India.

"When publishing Indian writing in English got going in the 1980s, it was mainly fiction by a generation of great writers such as Vikram Seth, Amitav Ghosh, Salman Rushdie, Anita Desai, etc," says William Dalrymple, co-director of the Jaipur Literature Festival.

The reason is that Indian publishing ecosystem has got more sophisticated and smart. India has the youngest readership market, which is a curiosity-consumed demographic.

Technology and travel have exposed youth to accessible vectors. Hence Indian readers will pay for a book like, The New World Disorder and the Indian Imperative by Shashi Tharoor and Samir Saran, which explains how India can shape the world's future.

The rise of Dalit politics and Hindutva is a heated topic that make the translation of I Could Not Be Hindu: The Story of a Dalit in the RSS by Bhanwar Meghwanshi a read in demand. Reading trends represent current topics of interest.

Currently, it is Medicine thanks to the pandemic, the Constitution because of debates over its sanctity, and Hindutva because of Prime Minister Narendra Modi's charisma as well as escalating attacks on Muslims.

In Republic of Religion: The Rise and Fall of Colonial Secularism in India, Abhinav Chandrachud argues that though many of our laws are based on the British legal system and our parliamentary democracy being a colonial derivative, Indian secularism is an atypical and forceful imposition by the British.

The past is the fertile valley of belief for nationalists and secularists alike. Author Ira Mukhoty believes that in India, society has changed a great deal in the last 20 years and the structure of families is changing too. "The usual storytellers, grandparents for example, may not always be integrated into these new family units. This means that we have lost some connectivity with a sense of our past," she explains.

According to her, the growth of nonfiction is fuelled by this need to better understand the past, and incorporate a mature and vibrant sense of identity. "There is greater awareness that a lot of the history we have been taught in the past, was quite literally written by the victors. There is a greater desire for alternative histories," she adds.

There is history you know and history that is forgotten. People Called Lucknow: 45 Narratives Unlayering Time in Awadhi Andaz by Jyotsna Kaur Habibullah and Siddharth Srivastava narrates a secret Lucknow told by 44 Lucknowphiles about the forgotten queen of Awadh and Farid Faridi legendary for his hospitality.

Says Yashaswini Chandra, author of The Tale of the Horse: A History of India on Horseback, "The divide between literary nonfiction and academic literature is shrinking as more and more scholars are writing for a general audience and making their work accessible."

The Pandemic Effect

The pandemic had a host of memoirs flooding the market.Aarti David, Director-Publishing at SAGE Publications India, believes the reason is that the lockdown gave people time to focus on their book writing projects as events and physical meetings took a backseat.

According to Alliance of Independent Authors, indie authors account for 30-34 percent of all e-book sales in the largest English-language markets, and are making forays into the audiobook market. "Once people got fed up with binge-watching series/shows and trying out their culinary talents, reading brought hope and comfort," David says.

She is not alone. The lockdown and subsequent WFH practice created mixed emotions in people, and books became an escape, believes Bushra Ahmed, Commissioning Editor, HarperCollins India, who says that Indian readers have always been more partial to nonfiction. "Nonfiction strikes close to the heart due to its immediacy," she adds.

People turn to different kinds of books to tide over challenging times. Contemporary concerns reflect on sales. The environment and sustainability are dominant millennial concerns, as capitalism and its global ramifications are seen as modern day scourges.

This Changes Everything: Capitalism vs the Climate by Naomi Klein, which The New York Times called "the most momentous and contentious environmental book since Silent Spring", blames free market ideology for blocking climate change.

As the octaves of nationalism rise higher by the day, the thirst to know the history of Independence has grown. The inventiveness of the Indian academic mind is the fresh change in present Indian nonfiction. For example, Meghaa Gupta in Unearthed: The Environmental History of Independent India offers respite from dusty tomes.

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"Away from the screen and the internet, readers might find nonfiction an interesting gateway to information," says Gupta. True, provided it is told lucidly. New writers have a chatty anecdotal stye, which combined with extensive research makes history a lively read.

For example, the author of The Execution of Bhagat Singh, Legal Heresies of the Raj, Satvinder Singh Juss, a Law professor at King's College London, gives such a detailed description of the martyr's walk to the gallows that it seems we are watching it in real time nearly a century later.

The Greatest Ode to Lord Ram author Pavan K Varma, which was launched during the pandemic, says, "Long weeks of solitude and isolation, turned people's mind towards the basic truths of life; what matters, what does not and how to acquire such meaningful knowledge that can help us grapple with life when it is so opaque and volatile."

A massive dislocation caused by the pandemic pushed people to look for answers to troubling questions. "The kind of nonfiction books that are succeeding in this atmosphere can provide such succour," believes bestselling author Amish.

Self-help and soul-searching books boomed more than usual the difference now is that their subjects have acquired more variety. "Much of what we took for granted has been turned upside down. A nonfiction upswing makes sense. People would naturally turn to books as a way of understanding their old and new lives," says author Taran Khan.

Raising a Humanist by Manisha Pathak-Shelat and Kiran Bhatia teaches how to raise a humanist child in a divided and broken world. India's mythmaker Devdutt Pattanaik's Dharma Artha Kama Moksha uses his unique ability of talking to the common man and explaining in layman's terms what the shastras are all about.

The pandemic has pushed sales of star topics such as food, health and travel. The pandemic became a home chef factory since restaurants were closed; out came grandmothers' recipes and family food secrets.

Home chefs experimented and won; Somali chef Hawa Hassan and American food writer Julia Turshen present 75 recipes that teach how to make the famous Ajemibread with carrots and green pepper; or Matoke (stewed plantains with beans and beef); and Kicha (Eritrean flatbread), with evocative photographs shot on location.

Renuka Chatterjee, VP Publishing, Speaking Tiger Books, says, "Readers are looking for books that will help them cope with depression and anxiety. They want to eat healthy, build immunity, restart their businesses and recover their finances."

KNOWLEDGE IS POWER

The growing appetite for nonfiction in India is partly due to the fact that a new breed of writers has emerged in the last decade or so. Like Dalrymple, author Kishwar Desai believes that people are writing nonfiction because many new and forbidden areas are opening up for research, and multiple points of view are permissible. "Thanks to the internet, libraries and archives are more accessible all over the world. It's easier now to get the information one needs," she believes.

The reader also gets credit. The slant towards reading more nonfiction has happened primarily due to a mature readership. Rupa Publications MD Kapish Mehra believes that the trend has something to do with a lot of conventional consumers of fiction moving to popular OTT platforms for bite-sized entertainment.

"Nonfiction, on the other hand, is very wide in scope, and does not have a replacement. It is therefore, unique in its own right," he says. It is a widely accepted fact that the internet is not always an accurate source of information. By filling this lacuna, nonfiction works assume a pivotal role in the modern age.

Aleph Book Company co-founder David Davidar says that nonfiction has traditionally outsold fiction. "Maybe it's because no new Chetan Bhagat or Amish has appeared," he weighs in.

Author of A Forgotten Ambassador in Cairo: The Life and Times of Syud Hossain, NS Vinodh adds that many books are by non-academics and journalists who write racy copy without compromising on the depth of research, in contrast to the pedantry of an academic. The same holds true for children's books.

For example, until sometime back nonfiction books for children were like extensions of school textbooks. "Writers now approach the genre creatively, and illustrators add their magic," reveals children's author Shruthi Rao.

Dr Devika Rangachari, author of Queen of Earth, concurs. She believes that authors are aware that they will potentially make more money with nonfiction than fiction. "In this age of information overload, books written in engaging prose are more popular," she says.

Authors are experimenting with subjects that are simultaneously serious and entertaining. The writing style is changing, often with description and dramatisation thrown in.

Amish adds that many authors are writing narrative nonfiction, which makes for an easier read, and may aid to the expansion of the market. There is no doubt that readers consider nonfiction knowledge-enhancing.

Books that deal with weight loss, diets and other 'how to' books are always on top. Moreover, real life is often stranger than fiction, and can offer more excitement. Histories and biographies sell well. Celebrity writing by the likes of Twinkle Khanna get wide readership. Priyanka Chopra Jonas made it to the NYT bestseller list.

Here for the Long Run?

Is this newfound fascination with nonfiction temporary? "Sometimes passing phases leave permanent imprints behind," says Amish. Varma agrees that the trend will consolidate in the years to come."In a world where so many ideas are contested, often acrimonious, and different viewpoints abound, readers want to find out for themselves where they should stand on issues. Nonfiction books fill that need," he says. The search to know more never endsfor both writers ad readers. Publishers are listening.

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