

DEPARTMENT OF CHEMISTRY NEWSLETTER

JUNE 2020 - JAN 2021

STATE LEVEL WORKSHOP

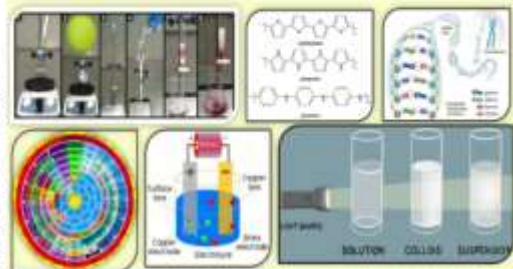
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STATE LEVEL WORKSHOP FOR PU COLLEGE CHEMISTRY LECTURERS ON EXPERIMENT BASED CLASSROOM TEACHING TO INSPIRE YOUNG MINDS ON 6th AUGUST-2020

Scope of the Programme:

Chemistry subject requires significant focus on experimentation for better understanding of concepts. Analytical and critical thinking skills required for a wide range of careers are inculcated through concepts of Chemistry. The main objective of this workshop is to train the teachers with a sound foundation of practical knowledge and skills that emphasize them to deliver PUC chemistry Curriculum through experiments. This will make the subject more interesting for students and encourage them to development of scientific concept. Participants will be provided training on experiment based learning. The distinguished and experienced faculty from the Department of Chemistry at CMRIT will conduct the experimental sessions.



Coordinators

Dr. Fazlur Rahaman; Dr. Manjunatha M; Dr. Priti Gupta;
Dr. Subhi Baishya ; Dr. Prabhat Gautam; Dr. Satyabrata Das ;
Dr. Subrata Mondal

ORGANIZED BY
DEPARTMENT OF CHEMISTRY
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DEPARTMENTAL ACTIVITY

CMR Institute of Technology
Department of Chemistry
Webinar-cum-discussion
Healthy body and equanimous mind - A prerequisite to fulfil the engineering dream
What's Your Relationship? **Mind Body**

About webinar: A reasonable understanding of the basic nature of life processes and its relation with the environment will help us to live in harmony. A healthy body and equanimous mind is essential to maintain harmony. It is essential to lead a happy and peaceful life and for the expression of highest human potential. Healthy body and equanimous mind will help students to develop experiential wisdom and excel in academics as well as in life. Are we living in harmony? What is the reality?

Registration is mandatory for E-certificate.
Registration link:
<https://forms.gle/dP5GXLuYqQRSDdp05>

Date: 30-12-2020; Time: 4:00-5:00 PM

Join with Google Meet
meet.google.com/gvx-jawx-stx

Speaker-and-moderator: Dr. Satyabrata Das
M: +91-9483531004, E-mail: satyabrata.d@cmrit.ac.in

MOOC COMPLETED

Dr. Fazlur Rahaman
Coursera – Organic Solar Cells-Theory and Practice

Dr. Manjunatha M
Coursera – Air pollution-a global threat to our health

Dr. Priti Gupta
Coursera – Air pollution-a global threat to our health

Dr. Subhi Baishya
NPTEL – Entrepreneurship and IP Strategy

Dr. Prabhat Gautam
Coursera- Organic Solar Cells-Theory and Practice

Dr. Satyabrata Das
Coursera- Patent drafting for beginners

Dr. Subrata Mondal
Coursera- Air pollution-a global threat to our health

PUBLICATIONS

Pradip Bera, Abhishek Aher, Paula Brandao, Sunil Kumar Manna, Indranil Bhattacharyya, Chandana Pramanik, Basudev Mandal, **Satyabrata Das**, Pulakesh Bera, Synthesis, structure elucidation and dft study of a new thiazole–pyridine anchored nnn donor and it's cobalt(II) complex: In-vitro antitumor activity against U937 cancer cells, DNA binding property and molecular docking study, *Journal of Molecular Structure*, 1224, 2021, 129015

PATENTS FILED/PUBLISHED

| NAME OF THE FACULTY | TITLE OF THE PATENT | STATUS (FILED/PUBLISHED) |
|------------------------------|---|--------------------------|
| DR. FAZLUR RAHAMAN | LOW COST RODENT GUARD FLOOR DRAIN | FILED |
| DR. MANJUNATHA M | HERBAL COMPOSITION FOR TREATING FOOT CORNS & CALLUSES DISORDER | FILED |
| DR. PRITI GUPTA | USER FRIENDLY LAB COAT | FILED |
| DR. SUBHI BAISHYA | A UNIVERSAL ATTACHMENT ASSEMBLY FOR FACE MASK | FILED |
| DR. PRABHAT GAUTAM | HEAD COVERING WITH MULTIFUNCTIONAL SUPPORT | FILED |
| DR. SATYABRATA DAS | PORTABLE SPROUT MAKING CONTAINER | FILED |
| DR. SUBRATA MONDAL | LOW COST CO ₂ EMISSION CONTROL DEVICE | FILED |
| DR. CHAITANYA LEKSHMI INDIRA | A PORTABLE NANO-BIOSENSOR FOR CATECHOL ESTIMATION IN AQUEOUS MEDIUM | PUBLISHED |
| DR. PRITI GUPTA | GILOY BASED HERBAL IMMUNITY BOOSTING CANDY | FILED |
| DR. PRABHAT GAUTAM | THIN LAYER CHROMATOGRAPHY (TLC) SPOTTING CAPILLARY PEN | FILED |

DESIGN THINKING WORKSHOP FOR FACULTY



Scope of the Event:

A design thinking workshop was conducted for Basic Science faculties on 3rd July 2020. Around 15 faculties participated in the workshop. The workshop was organized to inculcate innovative design thinking for problem solving. Various activities were included during the workshop.



ACTIVITIES UNDER INNOVATION & ENTREPRENEURSHIP CELL

AICTE SPONSORED STTP ON IPR



AICTE has sponsored short term training program in patent drafting and it was done in 3 phases. The phase 1 done in November 2020 has covered the basics, phase 2 done in first week of December has covered essentials of patent aspects by reputed patent agents and the phase 3 covered the claim drafting, drawing of figures, patent prosecution, criminal law and patent infringement aspects. The trainers included from KSCST, RGNIPM, reputed patent firms, and industry experts from GE etc. The patent workshop is conducted by Prof. Srinivas Reddy M, Prof Chidhanand R S along with Prof. Phani Kumar Pullela and is ably supported by faculty from basic Science and Mechanical Engineering.

IPR TRAINING



An IPR training was conducted at CMR University by Dr Phani Kumar Pullela on 7th to 9th Jan. The focus of the training is to teach essentials of patent drafting with a focus on building basics of the intellectual property. This is an external training conducted at CMR University's Bagalur, Bangalore campus.



REVIEW PAPER TRAINING



This review paper training is to teach how to do a literature survey for entrepreneurial projects pursued for respective student entrepreneurs. The training on 23rd December involved systematic literature survey on patent prior art search and also published citation search to identify niche opportunities to pursue. The training is sponsored by AICTE SAMRIDDHI and AICTE PRERANA.



PATENT DRAFTING TRAINING FOR SC/ST ENTREPRENEURSHIP CELL ENTREPRENEURS

The training on 24th December was meant to document the results in such a way that a patent can be applied. It covered book keeping, result documentation, prior art search and drafting the provisional patent. This training was sponsored by AICTE SAMRIDDHI and AICTE SPDP



JOB-RELATED TRAINING FOR SC/ST CELL STUDENTS

AICTE has sponsored SPDP training on 23rd January for unplaced SC/ST students at CMRIT. Four students went through the machine learning training with Devahuthi's support through an MOU. Two of the students have been placed through the training, and the students were paid monthly stipend from Devahuthi



SALES & MARKETING TRAINING FOR FACULTY AND SC/ST ENTREPRENEURS

Vishwajith is an Insurance Consultant who has visited CMRIT on 28th January, 2021 to train SC/ST entrepreneur in sales and marketing. The training is meant for teaching the niche aspects followed in the insurance industry like connecting with customers, speaking in terms of the need of customer, projecting the salient features of product that make a positive impact on customer etc. The training is undertaken by SC/ST entrepreneurship faculty along with student entrepreneurs, and it is sponsored by AICTE SAMRIDDHI Program.



PATENT TRAINING

MRIT SC/ST entrepreneurship cell has invited Alumni Mr Pranav Bhat, a freelancer and a premium patent technology consultant on 9th January, 2021 for a personalized training for the faculty and entrepreneurs. The training was attended by Prof. Phani Kumar Pullela and AICTE SAMRIDDHI entrepreneurs and is meant to gain knowledge about improving the chance of getting a patent granted, avoiding mistakes in claim drafting, ensuring the claims are well supported by the specification, avoiding rejections under section 3 of the Indian patent law. The training is sponsored by AICTE SAMRIDDHI and AICTE PRERANA.



ACHIEVEMENTS

NBEC AWARD 27th December



CMRIT student team PURE VISION comprising of Tanish T Sridhar (ECE), Nishal Bharadwaj(ECE), Likith M (ECE) and Rashmi A Gowda (ISE) has won first prize in C-Camp's National Bio-Entrepreneurship Competition (NBEC), 2020. It is the highest honour for the student entrepreneurship in India for bio-related inventions. The prize award is Rs. 5 Lakh and the project is in sewage treatment domain. The mentors of the project are Prof. Srinivas Reddy, Prof Chidhananda R S, Prof Kodandapani and Prof. Phani Kumar Pullela.

ELEVATE 2020 22nd January

Three CMRIT SC/ST entrepreneurship cell supported startups have won ELEVATE 2020. The startup names are ELEPHOEBE (led by Chethan S, Mechanical Alumni) NUN SELENE (led By Swetha Shree, CSE and Vidyashree, Mech) DIN HARMANIA (led by Venkatesh Murthy A, Mech). The projects are in the domains of COVID 19 and gaming. The mentors of startups are Prof. Srinivas Reddy, Prof Chidhananda R S, Prof Kodandapani and Prof. Phani Kumar Pullela.



PMI GAME-A-THON 2021 – 30th January



The student team of Zain Ahmed (CSE), Rahul S Mahendrakar (CSE) Swethashree (CSE) Amrutha C K (CSE) and Vidhyashree (Mech) have won 2nd runner up prize and the reward is Rs 50,000/-. The project is designing a board and eventually software game on project management. The mentors of the team are Dhruva Vatsa Mishra (ISE Alumni), Bhavya (CSE Alumni) and Prof Phani Kumar Pullela.



MHRD IIC - December

The team of PURE VISION lead by TANISH T SRIDHAR (ECE), Nishal Bharadwaj(ECE), Likith M (ECE) has received Rs 1,50,000/- from MHRD and AICTE for Proof of Concept (POC) Contest conducted for the academic year 2019-2020.

SCIENCE CLUB

Development of rural life and agriculture- Role of Science & Technology

Transforming Rural India

Diversifying Livelihoods
Improving Infrastructure
Reducing Poverty
Improving Well-being

Smart Village - Competition -
Propose a science & technology based model - sustainable, eco-friendly and future ready.
*Prepare a poster with description and upload in the registration link. Join the meeting to explain your model.
*Certificate will be awarded to selected model.
Link: meet.google.com/ir-gtyc-dk

Science club - Chemistry decided to explore the application of Science & Technology in various aspects of life. All students are invited to actively participate in all these activities and become future ready.

Smart Village - Competition -
*Prepare a poster with description and upload in the registration link. Join the meeting to explain your model.
*Certificate will be awarded to selected model.
Link: meet.google.com/ir-gtyc-dk

Science Club activity scheduled on 15-10-2020
Topic: "Development of rural life and agriculture-Role of Science & Technology"
Smart Village - Competition
Objective: To increase awareness about the role of Science and Technology to build a happy and prosperous society. Also to find out the gap areas for future development.

Science Club activity scheduled on 26-09-2020
Topic: "Aatma Nirbhar Bharat: Role of Science & Technology"
Objective: To increase awareness about the role of Science and Technology to build a happy and prosperous society. Also to find out the gap areas for future development.

Aatma Nirbhar Bharat: Role of Science & Technology

Self-Reliant INDIA

"Take up one idea, make that one idea your life. Think of it, dream of it, live on that idea. Let the brain, muscles, nerves, every part of your body be full of that idea, and just leave every other idea alone. This is the way to success."
- Swami Vivekananda

Essay Competition
(Use following link for submission)
<https://forms.gle/JtkUAXW31stpRLEd7>

500 is the word limit
 Say no to plagiarism
 Submit by 10:00 PM on 27-06-2020
 Certificate will be awarded to best three participants

Contact person: Dr. Satyabrata Das
M: +91-9483521004, Email: satyabrata.d@cmrit.ac.in

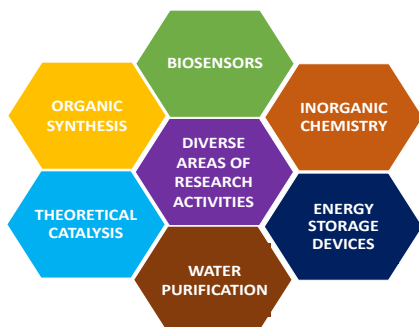
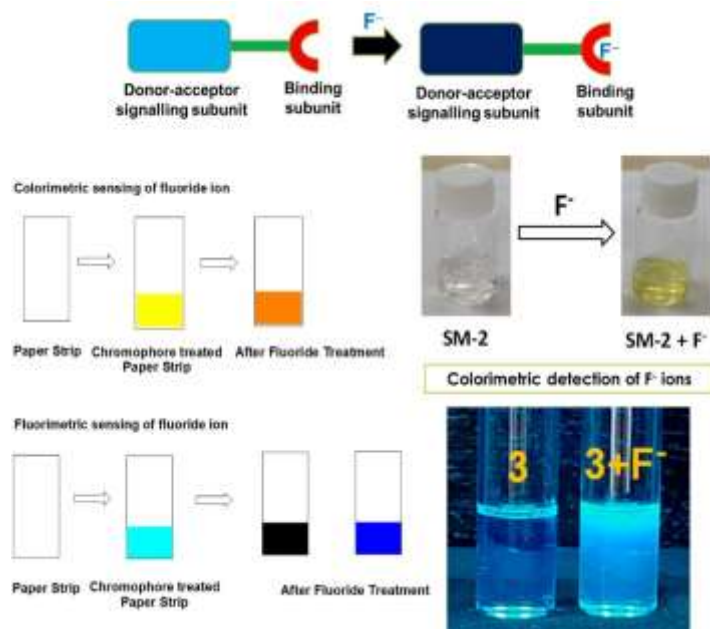
Department of Chemistry
CMR Institute of Technology

FACULTY TECH TALK

| FACULTY NAME | TITLE OF THE TALK | DATE |
|-----------------------|--|---------------------------|
| DR. SUBRATA MONDAL | Efficient catalyst for water splitting | 23 rd Jan 2021 |
| DR. PRABHAT GAUTAM | Boron-based stimuli-responsive materials | 23 rd Jan 2021 |
| DR. PRITI GUPTA | Organic Electroactive compounds-Application in O-LED | 25 th Jan 2021 |
| DR. SUBHI BAISHYA | Innovation and IP Process in Entrepreneurship | 25 th Jan 2021 |
| DR. MANJUNATHA M | History of coordination compounds - Coumarin based Schiff base metal complexes and Their Biological Applications | 27 th Jan 2021 |
| DR. FAZLUR RAHAMAN | An overview on detection and removal of metal ions | 27 th Jan 2021 |
| DR. CHAITANYA LEKSHMI | UV-Vis Spectrophotometry: Origin & Principles | 28 th Jan 2021 |
| DR. SATYABRATA DAS | Food and nutrition: an overview of the 20th-century research outcomes and challenges ahead in 21st century | 28 th Jan 2021 |

DEPARTMENTAL MEGA PROJECT

Development of Donor-Acceptor small organic molecule for fluoride ion sensing- Dr. Fazlur Rahaman, Dr. Priti Gupta, Dr. Prabhat Gautam, Dr. Subrata Mondal



SPONSORED RESEARCH PROJECTS

DST-Technology Mission Division (2 yrs: 2020-2022)

Title: Design and construction of amperometric catechol biosensor and investigations on analyte interferences for technology development to aid near zero discharge of effluents to Indian waterbody systems

Principal Investigator: **Dr. Chaitanya lekshmi Indira**

Start Date: 27/01/ 2020

Total Budget: Rs. 38,08,816/-

SERB-Teachers Associateship for Research Excellence (TARE)

Title: Investigations on colossal magneto-dielectrics of Fe₃O₄-ZnO, Fe₃O₄- α -Fe₂O₃ and NiFe₂O₄-NiO nanocomposites analysing A and B site transition metal ion ordering of the ferrite lattice

Principal Investigator: **Dr. Chaitanya lekshmi Indira**

Start Date: 01/11/ 2019

Total Budget: Rs. 18,30,000/-



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