

## **Department of Chemistry & Research Centre**

St. Albert's College (Autonomous), Ernakulam

Department DIARY 2020-2021



#### Department of Chemistry & Research Centre

St. Albert's College (Autonomous), Ernakulam

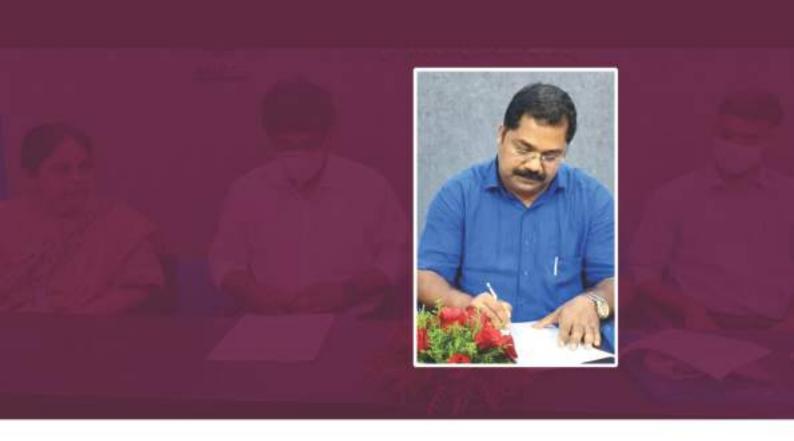
The Department of Chemistry and Research Centre came into existence in 1947, with the inception of the three-year degree course, under the leadership of Prof. K. A. Joseph. In 1982 the Department became a Post Graduate Department as a result of the strenuous efforts put in by Prof. A. J. Benjamin, andbecame a Research Centre in the year 2000, approved by Mahatma Gandhi University. In 2001, a new degree course in Vocational Chemistry was also introduced in the semester pattern. The Kerala State Pollution Control Board accredited the Department laboratory as a B Grade Analytical Laboratory in 2007 and is continued to be accredited till date. The Ministry of Science and Technology, Govt. of India, has identified the department as a "FIST Aided Department" in 2008 and in 2013. Department of Chemistry is one of the beneficiary Departments of "Star College" scheme of DBT.

#### Vision

To be a Department of excellence in chemistry, and to become a R&D centre in the field of chemical science and technology in par with industry and society and thereby to establish a balance between education, innovation, research and service

#### Mission

To advance in chemical sciences through the education of undergraduate and postgraduate students by providing quality education, research and job opportunities and to make them excel in the field of Chemistry.



## HoD's Message

The year 2020-21 was a challenging one and we were forced to live in a web world. Fortunately we were able to overcome many hurdles paused by the pandemic – Covid-19. Being involved in the educational activities in this turbulent academic year we practiced and participated in many academic and non academic proceedings. We have learned to live with the ill effects of the world wide misshape.

The Department of Chemistry and Research Centre have meticulously planned and materialized plentiful events so that our students shall not lose what they otherwise would get in a normal academic year. In this Department Diary we are trying to place on record all the activities of the Department before the Albertian Family. This is an overview with a rapid flight over the fragmented programmes conducted by the Department beyond the limitations of this pandemic situation.

As the Head of the Department I would like to acknowledge and highlight the diligent support by the corroborative colleagues of the Department of Chemistry & Research Centre. I hope this Diary could be a road map for a prospective future of the department ahead.

## **Faculty Members**



Dr. M.A. Solomon Associate Professor COE



Dr. P.A. Nelson
Associate Professor



Dr. Vijay John Gerson Head of the Department



Dr. Krishankumar Assistant Exam Controller E-Governance Coordinator



Mr. Alex Kuriakose V.J. Treasurer



Dr. Nifi Benny DQAC Coordinator

## Faculty Members



Dr. Saji John K. Staff Secretary



Dr. Nisha V.S.

Programme Coordinator



Dr. Smitha George Media Coordinator



Mr. Joseph Prince D
Deputy Dean (Funding)
Exam Coordinator



Dr. Sreejith S.S Sports Coordinator



Dr. Rajesh Kunjanpillai Dean -Research Secretary -BOS



Dr. Ambili K.S.
Social Outreach
Coordinator



Dr. Soumya Salas IEDC Coordinator



## **ACADEMIC ACTIVITIES**

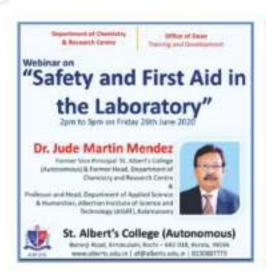
JUNE

#### Webinar on "Safety and First Aid in the Laboratory"

Department of chemistry, St. Albert's College Autonomous organized a Webinar on "Safety and First Aid in the Laboratory" on Friday 26th June 2020. Prof. Dr. Jude Martin Mendez, Professor and Head, Department of Applied Sciences and Humanities, Albertian Institute of Science and Technology, Kalamassery gave a talk on Lab safety. He was former Vice Principal St. Albert's College (Autonomous) and Former Head, Department of Chemistry and Research Centre. Dr. Rajesh. K, Dean Research and the coordinator of this webinar gave an introduction about the chief guest and welcomed the participants to this webinar.

The talk incorporated hazards of chemicals and the safety measures to be adopted. The topics discussed were safety precautions, safety measures, safe working with chemicals and first aid. This talk was highly beneficial to the students, faculty and laboratory staff. It gave an insight for the safe handling of laboratory activities,

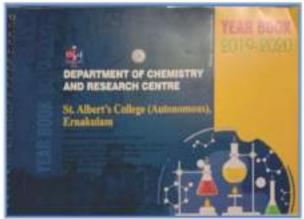
More than sixty students participated in this webinar. Dr. Vijay John Gerson, Head of the Department, Department of chemistry proposed the vote of thanks.





Department Year Book 2019-20 containing the Departmental Activities of the previous Academic Year was released by Rev. Fr. Joseph Palliparambil, Governing Council Member and Assistant Manager, St. Paul's College, Kalamassery during a function held on 15<sup>th</sup> June 2020 at Emmanuel Hall. Rev. Fr. Antony Arackal, Chairman, St Albert's College (Autonomous) Presided over the function. Dr. M. A. Solomon, CoE handed over the Year Book. Dr. Vijay John Gerson, HoD welcomed the gathering. Dr.Sajeesh T. H., Dean, Academics proposed the vote of thanks.





#### JULY

#### Webinar on Career Opportunities in Chemistry

The Department organized a Webinar on "Career Opportunities in Chemistry" on Wednesday, 22nd July 2020 at 11.30am. Dr. Basheer M.C, Assistant Professor, Department of Chemistry, PSMO College, Thirurangadi, Malappuram gave a talk on the. This webinar was organized in collaboration with Albertian Foundation. Dr. Rajesh. K, Assistant Professor, Department of chemistry, Dean Research and the Coordinator, Department Placement Cell welcomed the participants with an opening remark. Dr. Nisha. V. S, Assistant Professor, Department of chemistry, St.Albert's college introduced the chief guest. Two hundred and fifty participants joined the webinar making it a great success. Lot of participants were in queue, but could not be accommodated due to technical limitations. Dr. Basheer, in his presentation reminded that acquiring a degree or any higher qualification, chemistry open the doors to a wide range career opportunities across the world. He also gave an insight into various jobs and careers open to those who have taken chemistry at any level. The webinar was well received and it addressed lots of queries by the participants related to higher studies and opportunities in chemistry. Dr. Vijay John Gerson, Head, Department of chemistry & Research Centre proposed the vote of thanks.



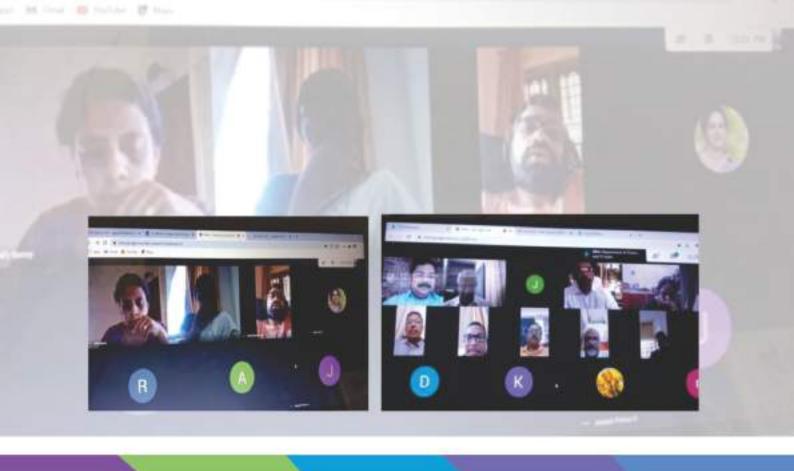


#### DQAR 2019-20 - Workshop

The Department conducted an online workshop on 20<sup>th</sup> July 2020 at 11.30am to discuss the various criteria of DQAR 2019-20. The Workshop was led by Dr. Nify Benny, DQAC Coordinator of the Department.

In the department of chemistry, seven faculty members were assigned to handle the different NAAC criteria. This session was meant for discussing the DQAR 2019-2020. Dr. Nisha. V. S, who was in charge of Criterion 1, gave a brief outlook on the curriculum related parameters and she pointed out that Course Code of the Certificate program was not added. Criterion 2 was done by Prof. Alex Kuriakose

who discussed the Teaching-learning session and cleared the doubtful areas with others. Criterion 3 which required the details of research, publications and extension activities was explained by Dr. Krishnakumar K. S and Dr Rajesh K. Dr. Saji John was in charge of Criterion 4 which deals with infrastructure. Prof Joseph prince discussed the details of Scholarships and student Progression in Criterion 5. Criterion 6 and 7 which included the best practices of the Department was done by Dr. Nify Benny. Head of the Department Dr. Vijay John Gerson conveyed a word of gratitude to each and every faculty members for their active participation in the workshop



#### AUGUST

#### Online Release of Monthly News Letter "Chem-Express" & International Webinar Series Brochure

Department of chemistry and Research Center released a monthly Newsletter and the Brochure for the international webinar series-Rhenium 75 commemorating the Platinum Jubilee Year of the college on 17th August 2020. Department of chemistry came up with a new initiative "Chem-Express" as a medium to highlight the monthly activities of the Department. It corroborates departmental activities, achievements, Professor's Note (Retired Teacher's Write up) and a Research corner (Resent Developments in Chemistry).

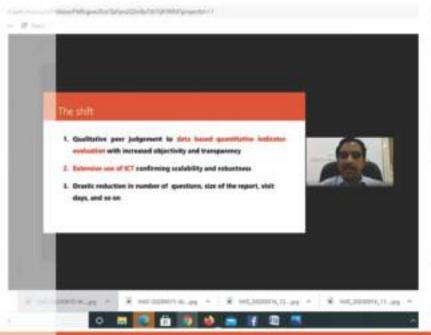
The program started with prayer by Fida Fathima, student of II Industrial Chemistry. Head of the Department Dr. Vijay John Gerson welcomed the gathering. Rev. Fr. Anthony Arackal, Chairman, St. Albert's college (Autonomous) officially released the June & July editions of Chem-Express. He congratulated the Department on this new venture. He also mentioned that this moment would be a turning point in the history of the Department of Chemistry & Research Centre. He expressed his sincere gratitude to the retired faculties for their gracious presence.

The official release of the brochure International Webinar Series-Rhenium 75 was done by Dr. Nelson Rodriguez, Principal, St. Albert's College (Autonomous). He appreciated the Department for this novel venture. Vice Principal of the College Dr. Rosalind Gonsaga was also present on the occasion. The Coordinator, Dr. Krishnakumar. K.S proposed the vote of thanks. The program was anchored by our II MSc students Ms. Joyce Jose and Ms. Ashifa. The programme was a memorable one as we were blessed with the presence of our Chairman, Principal, Vice-Principal, the Retired Teachers, the Teaching and non-Teaching Staff and our Students.

# SEPTEMBER Webinar on Quality Enhancement and Sustenance: Volunteering for NAAC

The Department of Chemistry and Research Centre organized a Webinar on the topic "Quality Enhancement and Sustenance: Volunteering for NAAC" on 18th September 2020 at 2 pm. The resource person was Dr. Viju Kumar V. G., Department of Chemistry, University College, Thiruvananthapuram. The Webinar was organized in collaboration with the Office of the Dean Academics. Head of the Department, Dr. Vijay John Gerson gave the opening remarks. Prof. Francis M. C, Deputy Dean, Academics, welcomed the gathering and introduced the speaker.

About 60 faculty members from various colleges participated in the webinar. Dr. Viju Kumar, who is the NAAC coordinator of University College, shared the overall procedures included in the accreditation process. He highlighted the areas that the College, the Department and each faculty member has to focus for the successful completion of accreditation. He urged the importance of coordination among faculties aiming to prepare for NAAC accreditation. He illustrated the way of documentation that has to be maintained in each department. This talk gave a filled insight into the details of 7 criteria and the key indicators of NAAC Accreditation. The webinar was very well appreciated by all the faculty members. The queries raised by the participants were clarified by the resource person. Dr. Nify Benny, coordinator of the program, proposed the vote of thanks.





#### **OCTOBER**

#### M. Sc. Chemistry Syllabus Revision - Preliminary Meeting

As directed by the Chairman of the Board of Studies in Chemistry, Dr. Vijay John Gerson, a syllabus revision sub-committee for revising the existing M. Sc. Chemistry Syllabus was constituted with the Board of Studies Secretary Dr. Rajesh Kunjanpillai and other members of the Board of Studies Dr. Krishnakumar K. S, Dr. Nisha v. S. and Sri. Joseph Prince D. The committee met on 03<sup>rd</sup> October 2020 and discussed the preliminary aspects with regard to syllabus revision and proposed few recommendations.

#### Online Internship Program

Department of chemistry & Research Centre celebrated the World Student's Day on 15th October 2020. To commemorate the Missile Man of India, Dr. A. P. J. Abdul Kalam, this day we launched a new programme for the upliftment of students in the Department. The Department of Chemistry & Research Centre of St. Albert's College in collaboration with the JJ Murphy Research Centre, Rubber Park India (P) Limited has initiated an Online Internship Programme for our final year students. This is a new landmark in the history the Department and St. Albert's College. The JJ Murphy Research Centre, Rubber Park India (P) Limited is the first integrated research and technology research hub based in India and it is the first industrial park dedicated to rubber based industries. It is also a complete research and technical services provider for all rubber based industry units.

Dr. Vijay John Gerson, Head, Department of Chemistry & Research Centre, St. Albert's College formally welcomed the gathering. In his opening remarks, he mentioned about the importance & relevance of an online internship program in this pandemic situation.

This program was inaugurated by Dr. Rani Joseph, Professor Emeritus of the Department of Polymer Science and Rubber Technology, Cochin University of Science and Technology. She is a world known face in rubber industry and is an appropriate person for this event. In her inaugural speech, she pointed out the scope of internship programmes and also explained the great opportunities in rubber industries.

Dr. Dileep. P., Assistant Director, JJ Murphy Research Centre, Rubber Park India delivered the keynote address. He offered their support to this internship program and also gave a detailed picture of various industries in Rubber Park India.

Dr. Rajesh Kunjanpillai, Research Dean, St. Albert's College (Autonomous) bestowed a felicitation speech. Joseph Prince D, Assistant Professor Department of Chemistry proposed the vote of thanks. After the inaugural session, Dr. Rani Joseph gave the first lecture for the internship programme. Dr. Rani elucidated the basic idea of polymers and polymerization.







#### World Students day

World Students Day is celebrated on October 15 worldwide to commemorate the birth anniversary of Dr. A.P.J Abdul Kalam who was a great scientist and teacher. The Department of Chemistry & Research Centre celebrated World Student's Day by organizing a JAM (Just a Minute) "Speak and share your thoughts". The topic of this speech was "You have to dream before your dreams can come true". Faseena of II Industrial chemistry secured First Prize for this event.

#### Industry - Institute Interaction (i i i - 2020)

The Department of Chemistry St. Albert's College (Autonomous), organized an Industry-Institute Interaction (i i i - 2020) on 22nd October, 2020. This is an interactive session with eminent personalities of many prestigious industries. This program was aimed at the mutual benefit and growth of institution as well as industries. With the Collaboration of five industries, we organized this event through Google Meet. The presence of our collaborators Prof. Dr. Rani Joseph. General Manager, Chemie Corp. Polymer Solutions, Mr. B. M. Joseph, CEO, ISF Chitin and Marine Products LLP Kochi, Dr. Dileep P, Assistant Director, JJ Murphy Research Centre, Rubber Park India, Mr. Anish .K. Venu, R&D Executive, Riotech Industries. Pala and Mr. Alexander Nebu. P, Director, AXIOM Analytical & Research Centre, made this event a glorious one. Dr. Vijay John Gerson, Head, Department of Chemistry & Research Centre, St. Albert's college (Autonomous) formally welcomed the gathering. Dr. Nisha V. S, Assistant professor of the Department and the Coordinator of the Program screened an online presentation for introducing the eminent personalities from various industries.

Principal of the College Dr. Nelson Rodrigues presided over the function. He congratulated the Department for this new venture and also highlighted that such interactions are the need of the hour. Rev. Fr. John Christopher Vadassery, Bursar and Vice Principal of the College inaugurated the program. In his inaugural speech, he pointed out that this is the first time that a science department is initiating such an academia-institute interaction and it is a proud moment for St. Albert's College (Autonomous). Shri. M. D Josemon, General Manager, Kerala State Industrial Enterprises Limited delivered the Keynote Address. After his speech, he invited our collaborators for introducing their industry. Prof. Rani Joseph gave a brief outlook into Chemie Corp. Polymer

Solutions Industry, their research and products. Mr. B. M. Joseph presented a power point on ISF Chitin, Marine Products. It was a detailed presentation about their production, research, value added products etc. Dr. Dileep explained about Rubber Park, its facilities, opportunities etc. Mr. Anish. K. Venu from Riotech elucidated about the details of industry, various plants and their products. Mr. Alexander Nebu from Axiom Research Lab mentioned about different analytical and research facilities in their laboratory.

In the interactive session, moderated by Sri. M. D. Josemon, many students asked various queries and explored this opportunity. The effective participation of our students has made this a fruitful session. The program ended up with the vote of thanks by Prof. Alex Kuriakose. V. J. The auspicious presence of all the speakers, teachers and students have made this programme a memorable one and this day will be land marked in the history of the Department of Chemistry and Research Centre.



#### NOVEMBER

#### **BoS Meeting**

The Department of Chemistry & Research Centre conducted the first Board of Study Meeting for the Academic Year 2020-21 on 19th November 2020. The meeting was convened online. BoS Chairman Dr. Vijay John Gerson presided over the meeting. The external experts Dr. Paulson Mathew, Associate Professor & Controller of Examinations, St. Thomas College (Autonomous) Trissur and Dr. Kochu Baby Manjooran, former Sr. Manager, BPCL were present in the meeting. Dr. M. A. Solomon CoE, St. Albert's College (Autonomous), Dr. Rajesh Kunjanpillai, Dean Research, Dr. Krishnakumar K. S., Sri. Alex Kuriakose V. J., Dr. Nisha V. S., and Dr. Nify Benny from the Department actively participated in the meeting. The meeting discussed the changes to be made in MSc. Syllabus.



#### BRIDGE COURSE

**Bridge Course 2020** 

A course for beginners in B. Sc Chemistry (Model I and II)



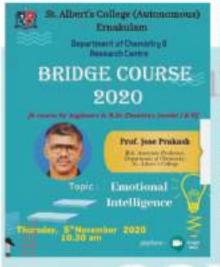
The Bridge Course in Chemistry offered by the Department of Chemistry & Research Centre is conducted for the newly admitted students in the bachelor programs offered by the Department. It is planned to be conducted every year before the commencement of the first semester classes of the degree programs. The Bridge Course 2020 was conducted by the Department from 27th October to

November R. RR. am

RIDE

BRID

6th November 2020. The main objective of the course was to bridge the gap between subjects studied at the plus-two level and subjects they would be studying in the degree level. The syllabus for the course was framed in such a way that they get basic knowledge on the subjects which they would be learning through the bachelor programs.Dr. Krishnakumar K. S (Tutor B.Sc Chemistry) and Dr. Nisha V S (Tutor, BSc Industrial Chemistry) co-ordinated the Bridge Course Program 2020. The course began with the opening remarks by Dr. Vijay John Gerson (HoD) followed by the lectures from the tutors. Lectures of very eminent resource persons with vast experience and in-depth knowledge on relevant subjects were also conducted. Sessions included Talks on 'Introduction to quantum mechanics' by Dr. Cyriac Mathew (Former Vice-Principal and Head, Department of Chemistry, St. Albert's College), 'Scientific Endeavor' by Dr. P. A. Jerald (Former Head, Department of Chemistry, St. Albert's College), 'Volumetric analysis' by Dr. Jude Martin Mendez (Former Vice-Principal and Head, Department of Chemistry, St. Albert's College), and 'Foundations of Mathematics' by Prof. Bernard K. A (Assistant Professor, Govt. Arts and Science College, Vypin).

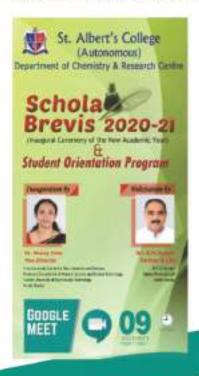


Students with higher levels of emotional intelligence are able to keep a check on their emotions better and be empathetic to others around them. In this regard we have also included a lecture on 'Emotional Intelligence' by Prof. Jose Prakash (Rtd. Associate Professor, Department of Chemistry, St. Albert's College) which will certainly help our students to manage their emotions and to become more confident learners.

## BRIDGE COURSE 2020

The inaugural ceremony of SCHOLA BREVIS 2020 and UG student orientation program was held on 9 th November 2020. Dr. Krishnakumar K S, welcomed the gathering. Dr. Vijay John Gerson, Head of the Department of Chemistry & Research Centre gave the presidential address. Dr. Honey John, Hon. Director, Inter University Centre for Nano Science and Devices inaugurated the program. Through her speech, she enhanced the interest, attitudes and motivation of students towards chemistry. She also highlighted the importance of chemistry in our day to day life. After inauguration, Dr. M. A. Solomon, CEO, St. Albert's College guided the students to take the oath. Mr. B. M. Joseph, CEO & Partner, Chitin and Marine Products LLP, Kannamali gave the felicitation. In his felicitation, He pointed out the various areas of research and job opportunities for a Chemistry student. Mr. Alex Kuriakose V. J proposed the vote of thanks.

After this inaugural session, orientation program was continued for one week. Closing ceremony of this event was held on 13th November 2020. The highlight of the closing ceremony was an interactive session. Three eminent personalities from different areas interacted with our students in this event. The first session on this day was an interaction with Alumni. Ms. Gadha V Binoy (2014-2016 batch) Scientist, Reddy's Laboratory shared her Albert's life with our new students. After this session, Dr. Radhika. T, Scientist, C-MET, Trissur interacted with our new students. She introduced the wonderful world of chemistry and also explained the innumerable opportunities for chemistry students. The last part of the interaction session was with Mr. Aneesh. K. Venu, R & D Executive of Riotech Industries, Pala. He introduced the manufacturing unit of Riotech through a powerpoint presentation.





The inaugural ceremony of SCHOLA BREVIS 2020 and PG student orientation program was held on 16th November 2020. Mr. Alex Kuriakose V.J., welcomed the gathering. Dr. Vijay John Gerson, Head of the Department of Chemistry gave the presidential address. In his presidential address, Research Centre, he introduced the department to the new comers. Dr. Dominic Thomas, Former Head of Department of Chemistry and Research Centre inaugurated the program. He enhanced the interest, attitudes and motivation of students towards chemistry. He also highlighted the importance of chemistry in our day to day life. After inauguration, Dr. M.A. Solomon, Controller of Examinations, St. Albert's college guided the students to take the oath. Mr. Joseph Prince proposed the vote of thanks.

After this inaugural session, orientation program was continued for one week. Closing ceremony of this event was held on 20 November 2020. The highlight of the closing ceremony was an interactive session. Three eminent personalities from different areas interacted with our students in this event. The first session on this day was an interaction with Academician. Prof. Abraham K Koshy, former Head of Department of Chemistry and Research Centre interacted with our students. He explained the innumerable opportunities for chemistry students. After this session, Dr. Kochu Baby Manjooran, Scientist, BPCL, Kochi, interacted with our new students. The last part of the interaction session was with Mr. Josemon M D, General Manager, Kerala State Industrial Enterprises Limited. He shared the experiences in St Albert's college and mentioned the importance of student-teacher relationship in the campus.



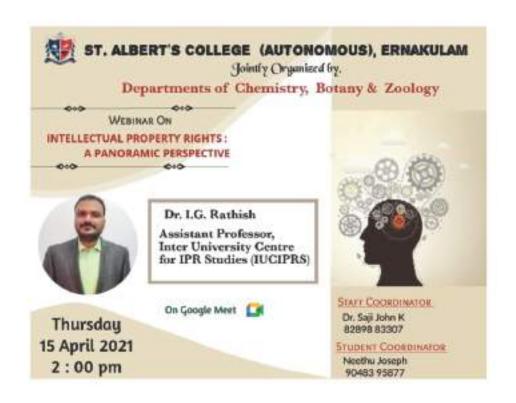






#### Webinar on IPR

Department of Chemistry and Research Centre in association with Department of Botany and Zoology, organized a webinar on the topic'Intellectual Property Rights; A Panoramic Perspective' on 15 th April 2021: The resource person was Dr. I. G. Rathish, Assistant Professor, Inter University Centre for IPR studies, CUSAT. The programme started with a prayer song by final MSC students of Chemistry Department. Dr. J. Jameson, Head of the Department of Botany delivered the welcome speech. Dr. Saji John K (Assistant Professor, Department of Chemistry), Program Coordinator, introduced the speaker. Thereafter Dr. I. G. Rathish delivered a talk on IPR. He has covered topics like legal rights that provide creators to protect their original work, inventions or the appearance of products, artistic works, scientific developments and so on. He also discussed the details of copyrights, trade marks and patents. Dr. Don Xavier, Assistant Professor, Department of Zoology, delivered the vote of thanks. About 64 participants were present in the programme. The staff coordinator for the programme was Dr. Saji John K. and student coordinator was Ms. Neethu Joseph, II MSc student of Chemistry.

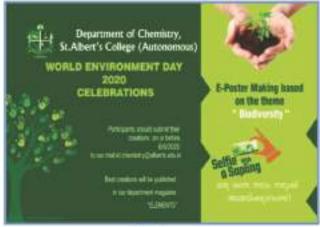


## EXTENSION ACTIVITIES

#### The World Environment Day celebrations 2020

The World Environment Day celebrations 2020 was organized by the Department of Chemistry were inaugurated by Dr. M. A. Solomon, CoE, St.Albert's college (Autonomous) by planting a sapling. Dr. Vijay John Gerson, Head of the Department presided over the function. Programmes like selfie with sapling, E-poster making were organized online by the social outreach wing of the department. Coordinator Dr. Nisha V.S proposed the vote of thanks.

The topic of the e-Poster making was 'Biodiversity". Sixteen students from our department actively participated in these activities. Faculty of the Department released a promo video in connection with the World Environmental Day. Online





Planting a succulent by Dr. M. A. Solomon, CoE

#### Brochure

Certificates are distributed to the students participated in the events.

The faculty member s of the departm



ent released

a promo video to convey the message of necessity for preserving our mother nature to the public. (Link for the video: https://youtu.be/pEuie3r79CI).



Selfie with sampling

E-poster

#### Webinar on Gender Sensitization

Department of chemistry, St. Albert's College (Autonomous) organized Webinar Gender Sensitisation "സധൈര്യം മുന്നോട്ട്" on Wednesday, 24th June 2020 at 2pm. Dr. Kochurani Former Associate Joseph. Professor. Department of Economics, Bharta Matha College gave a talk on "Gender Sensitization." This webinar was organized collaboration with Anti Sexual Harassment Cell and Albertian Foundation. Dr. Nify Benny, Assistant Professor, Department of chemistry Coordinator, Anti Sexual Harassment Cell introduced the chief guest and welcomed the participants to the webinar.

The webinar was well received and the participants asked several queries related to gender equality. The students acquired a sense of the role that gender equality plays in the process of growth of the country. Dr. Kochurani mentioned that gender equality begins at home, and families are the primary

agents of gender socialization. More than eighty students participated in this webinar. Dr. Vijay John Gerson, Head, Department of chemistry & Research Centre proposed the vote of thanks.



#### Social Outreach

The pandemic Covid - 19 has changed the Teaching-Learning process to switch over to online platform from the traditional physical class room method. This sudden transition to the online teaching made some of our students to find it difficult to attend the classes due to the financial difficulties to afford a smart phone. As a part of our social commitment the Faculty together with the involvement of students of the Department distributed two smart phones to two of our needy BSc Final Year Chemistry Students. This will enable them to join the online classes regularly. The generous efforts by the Students and Faculty are appreciable,

#### JULY

## Photography Competition

Department of chemistry & research centre organized a photography competition in the month of July. The theme of this competition was "Mazhakazhcha" which meant to capture the special rainy moments.

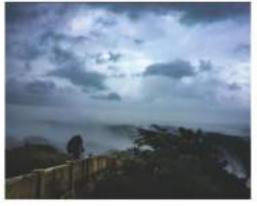


The very purpose of this competition was to identify the best photographer and provide them an opportunity to participate in inter college events. It was a creative event at which the participants got an opportunity to click their beautiful monsoon moments with the Environment. Several students participated in this competition.

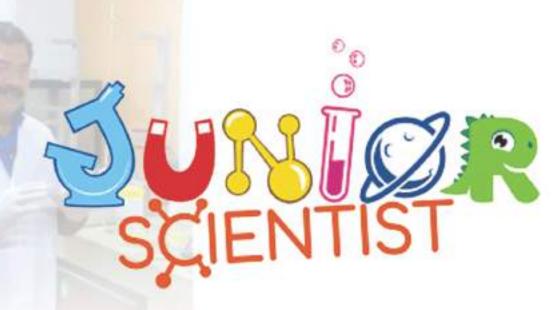
#### Winners of Photography Competition

The monsoon photography competition conducted in the month of July was evaluated by T. J. Varghese, Former State President, All Kerala Photographers' Association. Congratulations to the prize winning photographs and all the participants. Prize winning photographs are published in this issue of Chem-Express.









## JUNIOR SCIENTIST PROGRAAM

Due to the ongoing pandemic, the Junior Scientist Program was conducted as a video recording program. Dr. Vijay John Gerson, Head of the department introduced the programs offered by the department of chemistry and the significance of this subject. He explained the importance of Chemistry as a central science and the role of chemistry in making our everyday life better. He inaugurated the experimental session by demonstrating the Blue Bottle experiment. Mr. Joseph Prince D and Dr. Nisha V.S faculties of department of Chemistry conducted several experiments.

Mr. Joseph Prince D introduced different laboratory equipments and apparatus used in chemistry laboratory. He also conducted several magical experiments which opens the door way to the wonderful world of chemistry.

Dr. Nisha.V.S gave a talk on Chemistry in Covid-19. In this presentation she explained the key role of chemistry in explaining viral structure, isolation of vaccines, development of new materials and health care products. A demonstration of different healthcare products like soap, liquid soap and sanitizer was also carried out.









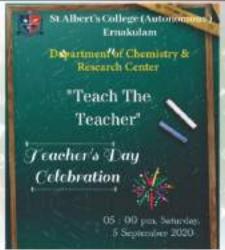
#### SEPTEMBER

#### **Teachers Day Celebrations**

The role of a teacher is something which is beyond mention with regard to molding a student's personality. Considering the fact that today's children are tomorrow's world citizens, it is teachers who play the central role in children not only to the school level, but also to the levels of higher education, inculcating in them the qualities to live as a responsible social being. Teachers' Day is celebrated annually September 5 to mark the birthday of our former President, Bharat Ratna, SarvepalliRadhakrishnan, who was born on this day in 1888. Dr. Radhakrishnan was also a renowned scholar and a philosopher.

Teacher's day celebration 2020 in the department of chemistry was organized by the 2<sup>nd</sup> year M. Sc. students of the Department on 5<sup>th</sup> September at 05.00pm, via Google Meet platform. The programme started with an introductory speech by Ms. Joyce Jose, M. Sc. Student. The main highlight of this event was "Teach the Teacher" programme. This programme was an initiative of our Department from 2016





onwards. It was a programme meant for advanced learners. The Student Teacher selects a topic to be studied, learned and taught. Student-centered teaching focuses on the teaching skill of the student and, in particular, on the cognitive development of the student.

In this session, students of II year M. Sc., Ms. Jaisha gave a motivational talk and Ms. Ashifa gave a presentation on accidental inventions. These two talks were very encouraging and informative. Dr. M.A. Solomon, Controller of Examinations & Associate Professor of Chemistry and Dr. Vijay John Gerson, Head of the Department, Teachers gave Day messages congratulated the students for organizing this event. Followed by the official session, various brain teasing games were organized for teachers. This function brought light into students-teachers the importance of interaction beyond the regular academic activities.

## St. Albert's College (Autonomous ), Ernakulam



Ozene Day Celebration

Alchemy Science Forum

Wear Voisse Minne Times

Secolars of the day

## Inauguration of Alchemy Science Forum and Ozone Day Celebration

popularization of science technology is intended to provide broad sectors of the population, awareness and need for conservation of nature. In this regard, the Department of Chemistry and Research Centre initiated a new venture named "Alchemy Science Forum", in connection with platinum jubilee of the college. The activities of Alchemy Science Forum aim at strengthening academic and social integrity of the students and to bridge in transferring the general scientific aspects to the society. This programme is designed in such a way that the students will get the opportunity to organize different activities presentations. like quizzes. discussion forum etc. All science and technology related national days are going to celebrate through this alchemy science forum and it will be a platform for the students to express their ideas.

The inauguration of "Alchemy Science Forum" and Ozone day celebration was held on 16th September 2020, through online. Dr. Vijay John Gerson, Head of the Department welcomed the gathering. The programme was inaugurated by Dr. M. L. Joseph, the former principal of St Albert's College (Autonomous) and presently, the Principal of Bharata Matha College of Commerce and

Arts, Aluva. In his inaugural talk, he appreciated the platform of Alchemy Science Forum and conveyed his message on the importance of ozone day and the measures we should take care to protect the ozone layer.

The highlight of this event was the youngster's talk: "What Young Minds Think". Danny George from 2<sup>nd</sup> MSc., Chemistry, Anjana Vinod of 3<sup>rd</sup> B. Sc Chemistry and George Antony from 3<sup>rd</sup> B. Sc. Industrial Chemistry were the speakers of the day. They shared their own views and thoughts about the ozone layer depletion and its protection, which was really encouraging.

The staff coordinator Dr. Saji John K. proposed vote of thanks. The programme was hosted by 2<sup>nd</sup> MSc., chemistry students Ms. Radhika and Ms. Aparna.

The programme witnessed 117 participants including teachers and students.

## **Academic Extension Programmes**

## "Athmadeep" - Training on Soap Making & Fresh Flower Making

Department of Chemistry and Research Centre organized an Academic Extension Program "आत्मदीप" / Aathmadeep on 30th September 2020 at 12 pm. The program involves training on soap making and fresh flower arrangement on Google meet platform.

Few years back, the department started the programme of soap making, especially for the industrial chemistry students, aiming at the women empowerment and also it has a vision of 'Earningwith Learning', the concept which gives an insight into the modern educational system. The name "Aathmadeep" literally translates to ' be your own light ', which signifies the target of the program, which is to illuminate the society and oneself with the light of your own.

Dr. Vijay John Gerson, Head of the Department, welcomed the gathering and presented the objective of this programme. Dr. Rosalind Gonzaga, Vice Principal of St.Albert's College inaugurated the function. The first session was on soap making. In the first session, Dr. Nisha V.S. briefly discussed the chemistry of soap making with a demonstration. Dr. Nify Benny gave a power point presentation on the details of variety of flower arrangements. After the



Soap Making

power point presentation, she gave a demonstration on vertical oval shaped The Student flower arrangement. Coordinator Ms. Joyce Jose proposed the vote of thanks. The auspicious presence of 125 students made "Aathmadeep" a wide acceptance and this has encouraged the organizers to conduct more such programmes in future.





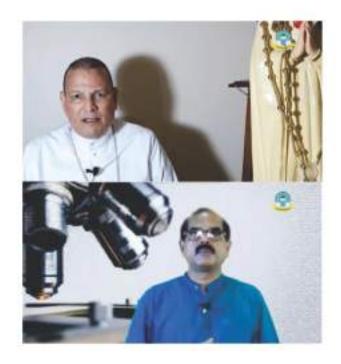
Second part of ATHMADEEP was organized on January 2021 for first year students. In the first session, Dr.Nisha V S discussed the chemistry of soap making and gave a small demonstration. In the second session Dr. Nify Benny gave the details of variety of flower arrangements.



## Release of Video Content Series on Chemistry Lab Experiments

Navadarsan, the educational agency of the Archdiocese of Verapoly, in collaboration with the Department of Chemistry & Research Centre released the Video Content Series 1 & 2 as part of the Academic Extension Programme for the students enrolled in the Junior Scientist Programme. His Grace Dr. Joseph Kalathiparambil, the Metropolitan Archbishop of Verapoly officially released the video series. Rev. Fr. BibuKadamparambil, Antony Navadarsan and Sri. C. R Joseph, the Course Coordinator delivered introductory notes with regard to the programme. Dr. Vijay John Gerson, Sri. Joseph Prince and Dr. Nisha V. S. demonstrated the laboratory experiments.



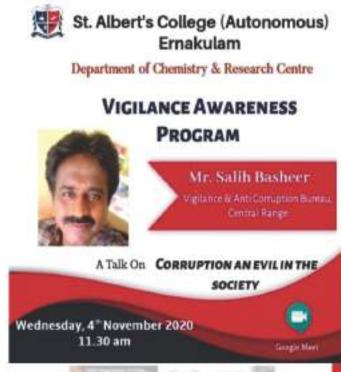




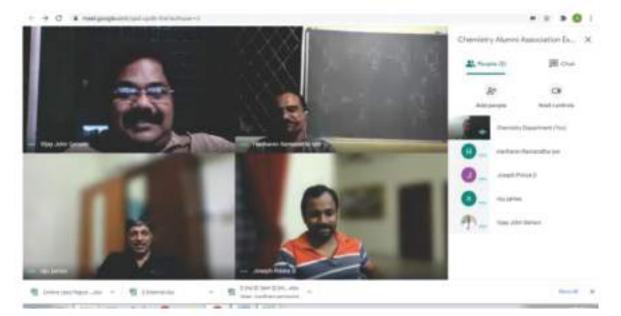


## Vigilance Awareness Program

Department of Chemistry and Research Centre conducted a Vigilance awareness program on 4th November 2020 in collaboration with Vigilance and Anti-Corruption Bureau, Central Range through google meet. Ms. Radhika, of II MSc welcomed the gathering and introduced the speaker. Mr. Salih Basheer from Vigilance and Anti-Corruption Bureau gave a talk on "Corruption: An evil in the society". This alertness talk was highly informative and enlightened the young minds. Ms. Joyce Jose of II MSc proposed the vote of thanks. This program was organized by second year MSc students.







#### OCTOBER

#### Chemistry Alumni Executive committee meeting

Alumni Executive committee of the Department of Chemistry conducted on 28th October 2020 at 7.00 pm through google meet platform. Dr. Vijay John Gerson, Head of the Department welcomed the gathering, Mr. Hariharan, President of the Chemistry Alumni addressed the gathering and he mentioned that this meeting should consider as a pilot meeting before the General Body Meeting. The Executive Committee decided to conduct a General Body Meeting in google meet platform and to ensure maximum participation, and decided to contact atleast one person from each batch. The members cherished their memories about the College and their wonderful moments in the campus. They reminisced about the great time of university youth

festivals. Dr. Vijay John Gerson, Head of the Department and Alex Kuriakose V.J. Assistant Professor explained the importance of Alumni Forum and its major role in the NAAC accreditation and assessment process. The committee also planned to organize a Webinar by Prof. Harry Cletus (Former Principal) to show the alumni how much their contribution influence the progress of the College. All the members expressed their willingness to take part in this endeavor, Prof. Alex Kuriakose V. J. proposed the vote of thanks. Honorable Members Sri. Josemon M. D. Adv. Franklin, Dr. Krishnakumar K. S and Sri. Joseph Prince D were also present.





#### November 10

Celebrating the

**World Science Day for Peace and Development** 

#### "Trace the Pioneers"

Students' Presentations on the

Contribution of Eminent Scientists of the World in Chemistry



Tuesday, 10 November, 2020 12.00 noon - 12.45 pm

Department of Chemistry & Research Centre St. Albert's College (Autonomous) Ernakulam, Kerala - 682 018, India

#### International Science Day Celebration 2020

International Science Day celebration was held on 10th November 2020. Dr. Rajesh .K, Dean Research, St Albert's College (Autonomous) welcomed the gathering. Dr. Vijay John Gerson, Head of Department of Chemistry and Research Centre inaugurated the celebration and gave the message for the Day. He conveyed his message on the importance of role of Science in Society and also highlighted Peace and Development of the Society.

The best part of this event was 'Trace the Pioneers' a student presentation on the Contribution of Eminent Scientists of the World in the field of Chemistry. Ms. Anjana Vinod of III BSc Chemistry and Akhil S. B of III BSc Chemistry gave presentations in this regard. This program was very informative and interesting.

#### JANUARY

## RASAVYUHAM

CHEMISTRY ASSOCIATION INAUGURATION



The inauguration of Chemistry Association both offline and online mode in which the first year UG and PG students along with their parents participated. Dr. Vijay John Gerson, Head of the Department welcom objective of the Chemistry association. He introduced all faculty members and lab staff to the audience. Prof. Aravind K., Department of Chemistry, S. B. College, Changanassery inaugurated Association of Chemistry. He enlightened the young minds throug session, he has given a talk on "Science of Bubbles". The technical session was followed by an interactive session in which the parents of first year students inte CHEMISTRY ASSOCIATION INAUGURATION:

(RAASAVYUHAM-2021) Chemistry Association was held on 23 January 2021. The program was conducted in both offline and online mode in which the first year UG and PG students along with their parents participated. Dr. Vijay John Gerson, Head of the Department welcomed the gathering and talked about the objective of the Chemistry association. He introduced all faculty members



PHILE ADDRESS OF



and lab staff to the audience. Prof. Aravind K., Department of Chemistry, S. B. College, Changanassery inaugurated 'Raasavyuham of Chemistry. He enlightened the young minds through his inaugural speech. In the Technical session, he has given a talk on "Science of Bubbles". The technical session was followed by an interactive session in which the parents of first year students interacted with the teachers. 2021) was held on 23 January 2021. The program was conducted in both offline and online mode in which the first year UG and PG students along with their parents ed the gathering and talked about the objective of the Chemistry association. He introduced all faculty members and lab staff to the audience. Raasavyuham', the h his inaugural speech. In the Technical session, he has given a talk on "Science of Bubbles". The technical session was followed by an interactive sssession.

## **FEBRUARY**

## WALK WITH THE SCIENTIST

The Department of Chemistry and Research Centre have initiated and instituted an innovative programme "Walk with a Scientist" in 2017. In this programme the eminent scientists from the country as well as abroad interact with the students. Walk with the Scientist program of this academic year was held on 18 th February 2021 on virtual platform. The chief guest for this programme was Dr. Chetna Dhand, Senior Scientist at CSIR-Advanced Materials and Processes Research Institute, Bhopal. Dr. Vijay John Gerson, the Head of the Department of Chemistry and Research Centre welcomed the gathering and he mentioned the objectives of this Program. Dr. Nisha V.S, the Program coordinator introduced the Chief Guest. Dr. Chetna gave a presentation on "The Journey towards a Scientist". She motivated our students sharing her her educational backgrounds and research life experiences with them. Dr. Chetna, explained. She also shared her research activities, which are being carried out at National University Singapore. Her journey from an ordinary student to a Senior Scientist, motivated the young minds a lot. They asked several questions related to research possibilities, projects and possibilities of higher studies in India and other countries. Dr. Rajesh K, Dean, St. Albert's College (Autonomous) led the interactions and he proposed the vote of thanks. Our first online Walk with the Scientist program was a grand success by the active participation and interaction of the students.









## RASAJALAKAM

The Department of Chemistry and Research Centre is running an Academic Extension Programme known as "Rasajalakam" opening a window towards the wonderful world of Chemistry and its importance in our daily life especially for the budding young minds in the nearby Schools. The main aim of this programme is to impart chemical literacy to school students and to show them the huge role Chemistry plays in their daily lives. This also aims to rouse the interest in Science that is dormant in them through a variety of magical experiments and demonstrations. We are confident that such programmes will create genuine interest to our students to develop scientific knowledge, skill and they could have the opportunity to have a first-hand experience in various chemical experiments.

RASAJALAKAM of this academic year was held on 20 february2021 in collaboration with Exodus Public School, Kochi in virtual platform. Mrs. Mary Mol, Principal, Exodus Public School welcomed the gathering. Dr. Vijay John Gerson, Head of the Department of Chemistry and Research Centre explained the main objectives of this programmme. After this, Dr. Nisha. V.S gave a presentation on "Step into the wonderful world of Chemistry". Prof. Joseph Prince D, Assistant Professor St. Albert's College demonstrated various chemistry magic. Dr. Nisha V.S demonstrated the preparation of different health care products like, Soap, Sanitizer

#### INDUSTRIAL VISIT

Industrial visits have its own importance in the career of students pursuing a degree. The main objective of industrial visits is to provide students an insight of the practical applications of what they are learning in theory. With an aim to go beyond academics, industrial visits provide student a practical perspective on the world of work. Industrial visits also provide an excellent opportunity to interact with industries and know more about industrial environment.

Keeping in view the ample potentials of the same, Department of Chemistry and Research Centre, St Albert's College, provided a golden opportunity to its students of B.Sc. 6<sup>th</sup> semester to visit INDIA SEA FOOD CHITIN AND MARINE PRODUCTS LLP, KOCHI. As part of the on the job training programme, sixteen undergraduate students along with Dr. Vijay John Gerson, Head of the Department of Chemistry and Research Centre, Dr. Krishnakumar.K.S, and Dr. Nisha.V.S visited the ISF, Kochi on 23<sup>rd</sup> February 2021. Mr. Deepu Sebastian





Technical coordinator, ISF, Kochi gave an introduction about the different stages of chitin extraction and he also introduced the different value added products extracted from the effluent after chitin production. Students visited Different processing and testing laboratories. The programme gave a wide

spread exposure to our students. They found it very interesting and informative. They discovered the riches hidden in sea food waste, something that is considered useless by most. They also visited a vegetable garden that displayed the ample uses of sea food waste with regard to agriculture. It provided an interactive forum for exchange of new knowledge and opportunities for stimulating young minds.



## Industrial Visit- CIPET Kochi

Educational visits have its own importance in the career of students pursuing a degree. The main objective of industrial visits is to provide students an insight of the practical applications of what they are learning in theory. With an aim to go beyond academics, industrial visits provide student a practical perspective on the world of work. Industrial visits also provide an excellent opportunity to interact with industries and know more about industrial environment.

Keeping in view the ample potentials of the same, Department of Chemistry, St.Albert's college (Autonomous), Ernakulam provided a golden opportunity to its students of B.Sc. semester to visit Central Institute of Plastic Engineering and Technology (CIPET), Kochi. As part of the academic extension programme, seventy two Undergraduate students and four teachers of St. Albert's College, Ernakulam

visited CIPET, Kochi on 30th March 2021. Smt. Jayalekshmi, Assistant professor, CIPET, Kochi gave an introduction about the different programs and activities conducted in CIPET. She also made aware the students about the opportunities in the area of plastic engineering and technology. They visited different processing and testing laboratories. CIPET has the state of the arts lab facilities for research and development in the area of plastic processing and testing. Students were taken to specialized sections where tests are performed and got a chance to understand the functioning of all the latest and updated instruments used to perform the testing of plastics.

The programme had a wide spread exposure to our students. It was very interesting and informative for the students to know about the various molding techniques and processing. It also provided an interactive platform for exchange of new knowledge and opportunities for the stimulating young minds.



#### MARCH

### Chem-Expo 2021



India has been observing National Science Day (NSD) on 28th February since 1987. The day commemorates the Nobel Prize winning discovery of the Raman Effect. It was on this day in 1928 that C.V. Raman decided to announce his discovery to the world. Since 28th February 2021 was observed to be a holiday, Department of Chemistry, St Albert's College (Autonomous) conducted National Science Day celebrations on 1st March 2021.

The department of Chemistry orgnizeded an Expo entitled as "Chem Expo2021" for the students and faculties in the college. The purpose of this event
was to give awareness about the importance of science day among the students
of various streams.

The inaugural function started at 9.30 am with the welcome speech by Dr. Rajesh Kunjanpilla (Coordinator). Rev Fr. Jolly John Odathackal (Vice Chairman, St Albert's College) inaugurated the Expo. In his inaugural speech he emphasised the need for popularising the science and its applications in the society. He congratulated the Department of Chemistry and Research Centre for organising such a wonderful event. The Expo was opened to students and faculties from 10.00 am onwards.

Faculties, Research Scholars and Post Graduate Students of the department equipped the P.G lab in the college for demonstrating various experiments in chemistry. Elephant toothpaste experiment, Blue bottle experiment, Chemical Volcano, Chemical Dragon, Fire on Finger Tips, Magic lollipop, etc. were performed by the post graduate students of the department. Students from various science departments visited the P.G lab and experienced the magic of





chemistry through various experiments demonstrated by our students, which in turn helped to ignite the scientific temper in young minds. Faculty members from other departments also visited the laboratory to gather more information about the chemistry behind the demonstrated experiments.

By 12.30 pm in the afternoon, the expo ceremony was closed officially with the valedictory note by Dr. Vijay John Gerson (Head of the Department of Chemistry and Research Centre).





#### RELEASE OF STUDENT'S MAGAZINE (ELEMENT'S)

Our Department Magazine "Elements" highlights the literary and artistic segments of Albchemy. It is a platform for our students to showcase their creative abilities, hidden dreams and aspirations for writing. It aims at bringing out talents through articles, poems, stories, cartoons, and paintings. The various activities held during the academic year 2020-2021 have been highlighted. This issue of Elements is released on the occasion of the commemoration of the 75th year of our Department.

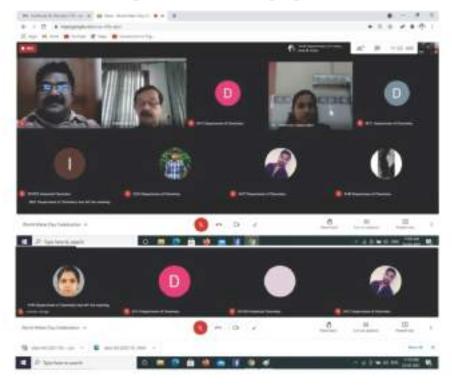
This academic year's student magazine was released on 12 March 2021 by Mr. T.I. Joseph, Superintendent, St.Albert;s college (Autonomous) by handing it over Prof. Lazar Thomas Mani. He congratulate the contributors for their exquisite creations. I also applaud the coordination and efforts behind editors to bring out this issue.





#### WORLD WATERDAY CELEBRATION

Department of Chemistry and Research Centre of St. Albert's college (Autonomous) celebrated World Water day on March 22<sup>nd</sup> 2021. In connection with the waterday celebration, an interactive session was organized on 23<sup>rd</sup> March 2021, in which Dr. Harikumar P. S, Head and Senior Principal Scientist, Ecology and Environment Research group KSCSTE-CWRDM Kozhikode was the chief guest. The program was started with a prayer by Rinu Theresa of III BSc Chemistry. Dr. Vijay John Gerson, Head of the Department of Chemistry and Research Centre delivered the opening remarks and welcomed the gathering. The chief guest Dr. Harikumar P.S talked about the water management, water harvesting and water purification. He gave an awareness to the students about the need of preserving water and water resources. He also highlighted the possibility of water audit in colleges and other educational institutions. It was a very informative and interesting interaction session for our students. Dr. Ambili KS, Program Coordinator proposed the vote of thanks.



# Seminars / Lecture Series 2020-2021



#### International Webinar Series: Rhenium 75

#### Rhenium 75 - Talk 1

An International Webinar Series – Rhenium 75 was formally inaugurated on 26th August 2020 by the Hounarable Vice Chancellor of the University of Calicut Dr. M. K. Jayaraj. His motivating and inspiring speech go deeper into the fascinating field of Nano Science and Technology. Rhenium being the 75th element of the Periodic Table resembles the 75th year of existence of the College. Rev. Fr. Jolly John Odathakkal, the vice Chairman of the College presided over the function. In his presidential address he congratulated the department for this new venture. Dr. Nelson Rodrigues, the Principal of the College gave a felicitation note. Dr. Vijay John Gerson, Head of Department welcomed the gathering. Dr. Krishnakumar K.S. Coordinator of this International Webinar Series proposed the vote of thanks for the inaugural session and he also invited the speaker, Dr. K.R. Krishnadas, University of Geneva for the technical session by giving a brief introduction about the speaker.

The talk was about "Atomically Precise Clusters". Dr. K.R. Krishnadas gave a brief outlook into Cluster science, which is an interdisciplinary subject connecting physics, chemistry and materials science. He explained the importance of atomically precise clusters in understanding the evolution of properties from atoms or molecules to condensed matter. In this talk, he highlighted ligand-protected, atomically precise noble metal clusters, general methods of their synthesis, characterization and some of the fascinating aspects of their chemistry.

Dr. Rajesh. K, Assistant Professor & Dean Research and the College moderated the technical session. Around 190 delegates joined the Webinar.



#### Rhenium -75 - Talk 2

Commemorating the Platinum Jubilee Year of St. Albert's College (Autonomous), Emakulam, the Department of Chemistry and Research Centre organized an international webinar series "Rhenium -75Re". The second talk of this Series was on 29th September 2020 at 12.30 pm via google meet. This talk was on "Thiolate-based Autocatalytic Reaction Networks" by Dr. Sergey Semenov (Weizmann Institute of Science, Israel).

Dr. Rajesh kunjanpillai, Dean Research, St.Albert's College welcomed the gathering and introduced the Speaker. Dr. Sergey Semenov, in his talk highlighted the importance of nucleophilic catalysis by thiolates reactions, which can be a driving force for autocatalytic reactions involving cyano-compounds and reactions of hydrogen cyanide, cyanamide, thiourea, thiols, disulfides, thioesters. He also explained thiouronium salts reaction with some disulfides autocatalytically forming guanidines. He mentioned that these types of reactions formed a variety of oligomeric products such as oligomers of hydrogen cyanide and oligothiirane.

Dr. Vijay John Gerson, Head of the Department proposed the vote thanks. The webinar was a great success with the presence of wide spectrum of participants including Students and Faculties from various Institutions.



#### Rhenium 75 - Talk 3

The Department of Chemistry and Research Centre started an International Webinar Series Rhenium 75 as part of the Platinum Jubilee year of the College.

As the 75<sup>th</sup> element, Rhenium signifies the platinum jubilee year of our College and Department. The third talk of this Webinar series was organized on 28<sup>th</sup> October 2020. Dr. Vijay John Gerson, Head of Department, welcomed the gathering. Dr. Nisha.V.S, Coordinator of this talk introduced the speaker, Dr. Jimmy Nelson, University of Sains Malasia for the talk.

The talk was about "Mesoporous materials: Synthesis, Characterization and its applications". Dr. Jimmy Nelson gave a brief outlook into different mesoporous materials. He explained the importance of mesoporous materials their synthesis. In this talk, he highlighted the important applications of mesoporous materials and the synthesis and characterization of nano porous materials. He also discussed the applications of ordered, large-pore, functionalized mesoporous silicates to immobilize proteins for biocatalysis. Dr.Rajesh Kunjanpillai, Dean Research was the moderator of this webinar and he proposed the vote of thanks.



#### M. R. Joseph Memorial 7th Lecture [ Rhenium-Re 75 -Talk4 ]

The fourth talk of the international webinar series was organized on 26th November 2020 and Prof. M R Joseph Memorial 7th Lecture was also conducted along with. Dr. Vijay John Gerson, Head of the Department, welcomed the gathering. Dr. Nelson Rodriguez, Principal delivered the presidential address and Rev. Father Jolly John Odatthakkal, the Vice Chairman of the College gave the commemorative talk. This year's Prof. M. R Joseph Endowment award the Best Outgoing PG Student was given to Ms. Thasleena N. R. (2017-19 Batch) Dr. Saji John K., Coordinator of the webinar proposed the vote of thanks. Dr. Rajesh K., Assistant Professor and Dean Research moderated the technical session. Around 70 deligates were present for the seminar. Dr. Jinesh C. Manayil, Research Technician, Energy and Bioproducts Research Institute, Aston University, Birmingham, UK gave a talk on

Heterogeneous acid catalysts for pyrolysis bio-oil upgrading reactions. Biomasses are promising sustainable resources to obtain chemicals and transportation fuels. The high amount of acid components in bio-oils make them unstable, and an efficient removal of acids from bio-oil is desirable to reduce its acidity and stabilize bio-oil to achieve fuel grade. As acetic acid is one of the major impurities of bio-oil, catalytic esterification with alcohol helps to get rid of acetic acid and reduce the acidity inbio-oil. Ordered mesoporous acid catalysts are promising materials to esterify acetic acid with a view to application in bio-oil upgrading.





#### RHENIUM 75 – TALK 5

The fifth talk in 'Rhenium-75Re - An International Webinar Series Commemorating the Platinum Jubilee of the College' organized by Department of Chemistry and Research Centre, St. Albert's College (Autonomous) was held on 16th December 2020 at 4.30 PM IST through google meet platform. The talk was about "Nanotechnology and its Environmental Applications" by Prof. Suresh C. Pillai, Head of Nanotechnology and Bio Engineering Research Division, Institute of Technology, Sligo, Ireland. The webinar was

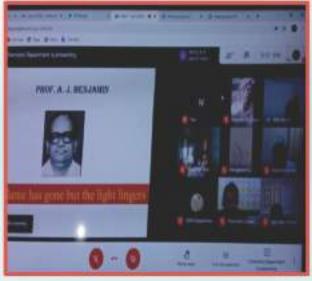
started with a silent prayer. The head of the department Dr. Vijay John Gerson gave an introductory speech. Miss. Varsha Varghese and Miss Rosemary of 1st PG chemistry were the student coordinators. Dr. Smitha George, Faculty coordinator of the program introduced the speaker and Dr. Rajesh K., Dean research moderated the technical session. Students and teachers from other states and outside India, also were participated the programme.



#### Prof. A J Benjamin Memorial 13th Lecture [ Rhenium-Re 75 -Talk6 ]

13th Prof. A J Benjamin Memorial Lecture series and the sixth talk of the international webinar series Rhenium-75 was organized on 29th January 2021 at 5.30 pm on Google meetplatform. Dr.M. A. Solomon, Controller of Examinations, St. Albert's College (Autonomous), welcomed the gathering. Dr.Nelson Rodrigues, Principal delivered the presidential address. Dr. Dominic Thomas, former Head of the Department of Chemistry and Research Centre, gave the commemorative talk. Senior faculty members Prof. K. J. Varughese, Prof. N. R. Krishnakumar, Prof. M. N.Bivera, Prof. P. A. Jerald, Dr. Jude Martin Mendez and the family members of Prof. A. J. Benjamin participated in the webinar. Dr.Nify Benny, Coordinator of the webinar proposed the vote of thanks. Dr. Rajesh K. Dean (Research), moderated the technical session .Our Alumni, Dr.Ajikumar Parayil, Founder and CEO, Manusbio, Cambridge, gave a talk on Biotech 3.0: Path to a Sustainable Bioeconomy. He spoke about the physical, digital and biological applications of biotechnology. He also emphasized the importance of studying chemistry to become a successful entrepreneur. He answered the queries related to the careers in biotechnology. More than 60 delegates were present for the seminar. The webinar came to an end at 7.30 pm with the concluding remarks of Dr. Rajesh K







#### Rhenium-Re 75 -Talk7

Rhenium 75, an International Webinar Series organized by the Department of Chemistry and Research Centre, St. Albert's College. Commemorating the Platinum Jubilee year, Rhenium 75 was formally inaugurated on 26th August by Dr. M. K. Jayaraj, the honourable Vice Chancellor of the University of Calicut, Department have already conducted six webinars of Rhenium 75. 7th talk of this webinar of Rhenium 75 was on 23 February 2021. The talk was on "2D nanomaterials for biomedical application" by Dr. Sreejith Mangalath, Post Doctoral Research Fellow, Georgia Institute of Technology, Atlanta, USA.



Dr. Vijay John Gerson, Head of the Department of Chemistry and Research Centre, St. Albert's College, welcomed the gathering. The coordinator Prof. Alex Kuriakose V. J. introduced the chief guest Dr. Sreejith Mangalath. The talk was on the details of nanoparticles and its applications in the area of biomedical field. After the presentation, Dr. Rajesh Kunjanpillai, the Dean, Research moderated the discussion. Both UG and PG students actively participated the in the discussion.





#### ALBERTIAN KNOWLEDGE SUMMIT (AKS) 2021

St. Albert's College (Autonomous), Ernakulum

St. Albert's College (Autonomous) is a pioneer educational institution in Kerala celebrating its platinum jubilee in the year 2021. From 2017 onwards the college is organizing an international seminar "ALBERTIAN KNOWLEDGE SUMMIT (AKS)" which forms a platform for Students, Research Scholars, Faculty Members and Scientists from various academic as well as industrial collaborators to share their knowledge. The seminar is based on the theme "Knowledge for everyone in the society". Each department in the college organizes individual talks and symposiums as part of the AKS. Since this year celebrates the platinum jubilee of the college, the students, research scholars, teaching, non-teaching and the management officials were happy to organize AKS 2021 in online platform due to the Covid -19 pandemic situation.



The Department of Chemistry organised plenary lectures of 5 eminent personalities as part of the AKS

2021. The inaugural talk of AKS 2021, by Prof. Dr. Sankaran Subramanian, Adjunct Professor & INSA scientist, IIT Madras, Chennal was hosted jointly by the Office of Dean Research and The Department of Chemistry in online mode through Google Meet platform on 8th march 2021. In augural session started at 2.00 pm with a prayer. Dr. Nelson Rodrigues (Principal) delivered the opening remarks and welcome speech. Felicitation by Dr. Vijay John Gerson (HOD, Chemistry) also added colours to the



inaugural function. Dr. Rajesh Kunjanpillai(Dean-Research & Convenor) welcomed and introduced Prof. Dr.Sankaran Subramanian to the gathering. Later Prof. Subramanian inaugurated the AKS 2021 and delivered a lecture on the topic "Chemistry: The most versatile Interdisciplinary and Transdisciplinary subject in advanced Research & Teaching". In his speech he congratulated the College officials for organizing the summit with the aim to educate young minds. He gave an informative talk on the current aspects of research and teaching, which was beneficial for students belonging to all streams of science. Active participation from the students, researchers and teachers were observed. After a one hour informative talk and interactive session by students, the meeting was concluded with the vote of thanks proposed by Dr.Anisha. S (Deputy Dean-Research).



The second plenary lecture was organized on the same day (08/03/2021) at 4.30 pm. The lecture arranged in Google Meet platform was coordinated by Mr. Joseph Prince D. (Assistant Professor, Chemistry) and Mr. Rajesh R Menon (Research Scholar, Chemistry). The key speaker of the session was Dr.ViktoriyaSokolova, Head of Biological Laboratories, University of Duisburg- Essen, Duisburg, Germany. Dr.Sokolova led the session based on the topic "Biological and Medical Applications of Calcium Phosphate"

nano particles". The session started with a prayer by IInd M.Sc students. Dr. Vijay John Gerson (HoD, Chemistry) welcomed the gathering and made the opening remarks followed by the formal introduction of

the speaker by Prof. Joseph Prince. By 4.45 pm Dr. Sokolova started the lecture and she gave an exciting as well as informative talk. The applicability of calcium phosphate nano particles in medical fields was numerous and students enjoyed the lecture session very much. They interacted with the speaker and raised some questions also. The session came to an end by 5.45 pm and Dr. Rajesh Kunjanpillai (Dean-Research & Assistant Professor, Chemistry) proposed the vote of thanks.



The plenary Lecture III was scheduled to be at 10.30 am on 15th March 2021. The key speaker for the session was Dr. Vijay Kumar A., Assistant Professor in Organic Chemistry, Department of Chemistry, Institute of Chemical Technology (ICT-Mumbai). The plenary session was convened by Mr. Joseph Prince D. (Assistant Professor, Chemistry) and Mr. Rajesh R Menon (Research Scholar, Chemistry). The official start of the lecture session was made by the opening remarks and welcome speech by Dr. Vijay John Gerson (HOD, Chemistry). Dr. Rajesh Kunjanpillai (Dean - Research &

Assistant Professor, Chemistry) introduced the speaker to the gathered delegates, teachers, research scholars and students. Dr. Vijay Kumar started his lecture at 10.45 am and spoke about his research in the area of \*Biomimectic Organic synthesis\*. The participants eagerly attended the speaker and also actively participated in the session. Students clarified their doubts in this area by raising questions and Dr. Vijay Kumar effectively clarified their concerns. The lecture came to an end by 12.00 pm and Prof. Joseph Prince proposed the vote of thanks.

The Department of Chemistry forms one of the vibrant departments of this college and stands in the forefront in all activities of the college. The department took an initiative to celebrate the platinum jubilee of the college by commemorating a webinar series named "Rhenium". Since rhenium form the 75th element in the periodic table department selected the name as Rhenium for this initiative. The webinar series helped to convey scientific ideas to students and teachers of the department. The Albertian Knowledge Summit (AKS 2021) came along with these celebrations and the department decided to club these two celebrations and conducted a joint webinar.

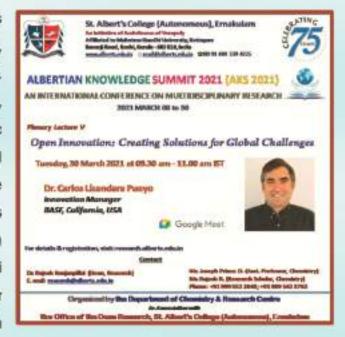


The plenary lecture IV was organized by the department at 1.45 pm on 23rd March 2021. The key speaker for the webinar was Dr. Jeyashelly Andas, Faculty of Applied Sciences, University Teknologi, MARA, Perlis, Malaysia. The plenary session discussed about the topic "Turning waste into wealth". The session kick started at 1.45 p m itself with the welcome speech by Dr. Vijay John Gerson (HOD, Chemistry). Prof. Alex Kuriakose V.J (Assistant Professor, Chemistry) introduced the speaker to the webinar gathering and Dr. Jeyashelly Andas started

the lecture by 2.00 pm. Active participation by teachers, research scholars and students were observed till the end of the session. Dr. Nisha V.S (Assistant Professor, Chemistry) raised her concerns during the session and the key speaker cleared it. Postgraduate students also actively participated in the discussions and the session became highly productive. The whole webinar session was effectively convened by Mr. Joseph Prince D. (Assistant Professor, Chemistry) and Mr. Rajesh R Menon (Research Scholar, Chemistry). Finally the session was ended with the concluding remarks and vote of thanks proposed by Dr. Smitha George, Assistant Professor, Chemistry).

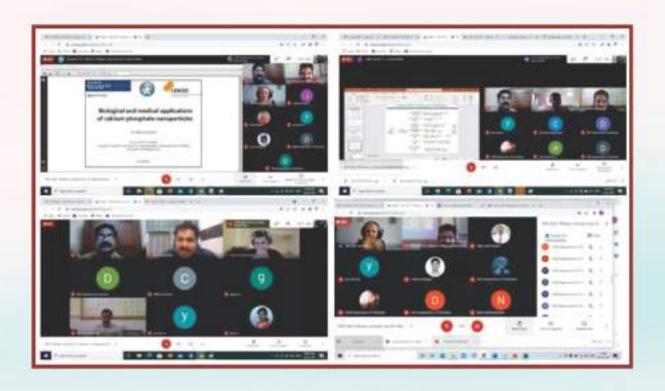
The fifth and final webinar plenary lecture as part of AKS 2021 was executed on 30th March 2021. The

session started at 9.30 am with the opening remarks and welcome speech by Dr. Vijay John Gerson (HOD, Chemistry). The key speaker of the webinar was Dr. Carlos Lizandara Pueyo, Innovation Manager, BASF, California, USA. The session was based on the topic "Open Innovation: Creating Solutions for Global Challenges". The speaker Dr Carlos belongs to the famous university UC Berkeley. The department was so proud to get such an eminent personality as a speaker in AKS 2021. Dr. Rajesh Kunjanpillai introduced the speaker to the webinar delegates. Dr Carlos started his lecture at 9.45 am. In his speech



he detailed about the how various innovations in research world create solution to global challenges. The webinar was pointed out to be the apt one in this scenario of Covid -19 pandemic. This webinar also faced active participation from the researchers, teachers and students of both post graduate and undergraduate level. Students raised questions and Dr. Carlos effectively answered their concerns. The session ended by the vote of thanks proposed by Mr. Joseph Prince D. (Assistant Professor, Chemistry).

The success of every programme lies behind the hard work and dedication. The coordination and hardworking mentality of each staff member (teaching as well as non-teaching) in the Department of Chemistry should be greatly appreciated. The contributions from research scholars and students of the department are also greatly acknowledged. Being the coordinators we whole heartedly express our sincere thanks to each and every person related to the department for their support.





Chem-Onam 2020

## CORONAM 2@2@

A chemist can't think of a life without experiments. CORONAM 2020 was such an experimental attempt during this pandemic situation, and it ends up with immense satisfaction. CORONAM 2020 was a week long program started from August 22<sup>rd</sup> to 30<sup>th</sup>.

22sd August 2020 - Flower Carpet Competition (Both Natural & digital)

23rd August 2020 - Cartoon Making Competition

24th August 2020 - Poster Making Competition

25th August 2020 - Troll Making Competition

26th August 2020 - Onappattu Competition

27th August 2020 - Memory Video Competition

28th August 2020 - Omakkavitha Competition

29th August 2020 - Malayali Manka-Purushakesari Competition

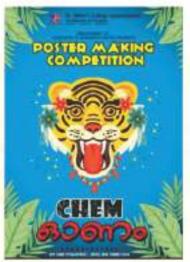
30th August 2020 - Selfie with Pookkalam

Department of Chemistry and Research Centre celebrated Chem-Onam 2020 with great enthusiassm with the overall participation of students and staff members on 29 august 2020 through google meet. The program started with prayer by Sherin. K. Mathew. Ms. Ashifa Asharaf of Il MSc chemistry welcomed the gathering. Dr. Nisha V.S staff coordinator gave an outlook into the details of all competitions held from 22 August on wards and she also announced the winners of those programs. Prof. P.A Jerald former HoD gave the Onam message. He gave a thoughtful message in which he connected the story of Mahabali to the theory of relativity. After this our alumni Mr. Josemon M.D gave the onam message and he made this event a memorable one through his beautiful onappattu. Dr. Vijay John Gerson, Head of the Department also gave the Onam message and he congratulated all the student coordinators for organizing Chem-Onam 2020. Various fun games were also conducted, both for teachers and students. Ms. Joyce Jose, student coordinator proposed the vote of thanks.

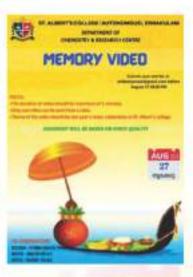






























# Kerala Piravi Celebrations

Kerala Piravi marks the birth of Kerala State and the Keralites all around the world celebrate the day on November 1st every year. The Department of Chemistry and Research Centre celebrated this day significantly remembering the 64th year of existence of the State of Kerala on 2nd November 2020. Since this is also the day of Malayalam Language the Department conducted a quiz program exclusively in our Mother Tongue, Malayalam. Five teams participated from various classes were Team 'Anavandy' from first BSc Chemistry, Team 'Rithu' from second BSc Chemistry, Team 'Dhwany' from second Industrial Chemistry, Team 'Thalir' from third BSc Chemistry and Team 'Varnam' from third Industrial Chemistry. Head of the Department Dr. Vijay John Gerson welcomed the participants. The program coordinator Dr. Nify Benny gave a felicitation. Mr. Yadukrishnan K. S & Vineeth Babu representing Team 'Dhwani' secured the First Prize and Mr. Akhil S. B & Ms. Sandra Rose Nelson representing Team 'Thalir' got the Second Prize. Student coordinator Ms. Joyce Jose proposed the vote of thanks.



#### **MERRY CHEM 2020**

Christmas, a season of lights, love, joy & celebration. Even though we are in a pandemic situation, Christmas season brings a lots of joy within our hearts. This Christmas is a different one but it doesn't means that it cannot be a Merry one. ALCHEMY'S MERRY CHEM 2020 was an initiative by department of Chemistry and Research Center, St. Albert's College to bring back the merry & warmth of Christmas. The department organised various events such as Card making, Icing the cake, Carol singing, Photography & Documentary Competition.

The main Celebration was on 22<sup>nd</sup> December 2020 at 11.30am. Dr. Vijay John Gerson Head of the department welcomed the gathering. The Christmas message was given by Prof. Lazar Thomas Mani, Former Head, Department of Commerce, St. Albert's College (Automous). He gave an inspiring thought that" Christmas should be a Christmas of Healing ". After the message winners of various events was announced by Dr. Nisha V. S Faculty Coordinator of

Alchemy's Merry Chem 2020. 1st Bsc chemistry badged as the winner of Carol singing & Documentary. Soumya P. D of 2nd MSc chemistry secured first prize for Card Making. The Winner of Icing on the Cake Competition was Ebin M sunny of 1st BSc chemistry. Sana Al Majeed K. A of 1st BSc Chemistry secured prize for photography competition. The creations of students which won prizes were also presented. Anchoring of the program was done by Ms. Ashifa Ashraf of 2nd Msc Chemistry. Student Coordinator Ms. Joyce Jose proposed the Vote of Thanks. The program was a grand success and the students really enjoyed their first online Christmas celebration.











St. Albert's College Ernskulans Department of Chemistry 6



The Department of Chemistry & Research Centre Celebrated Women's Day on 8th March 2021. Women's day holds a great significance and it is a celebration of respect, appreciation, love and care towards women in our life and society. The Chief Guest was Prof. Honey John, Hon. Director, IUCND,CUSAT, Kochi. The program was started with a prayer. Then Dr. Nify Benny welcomed the gathering. Dr. Saji John, Secretary, Department of Chemistry introduced the speaker. Prof. Honey John Interacted with the students and she mentioned the importance of the theme "Choose the challenge". She also shared her life experiences, the ups and downs in her career with the students. Dr. Vijay John Gerson, Head of the Department of Chemistry gave felicitation for the event and Dr. Nisha V. S proposed vote of thanks.







Dr. M. A. Solomon former Head of the Department of Chemistry and Research Centre took charge as Principal of St. Albert's College (Autonomous). He served as the CoE of the College and ANO of NCC Naval Wing as a Lieutenant. He is also a Research Guide specialized in Polymer Chemistry with 31 years of teaching experience.



# Adieu

Dr. P. A. Nelson is retiring after his 31 years of his meritorious service to the Department of Chemistry and Research Centre. He served the College as the Student Adviser and Secretary of the Co-operative Society in his teaching tenure.







# DIARY PARTMENT 0-2021 DEF 2020



**Department of Chemistry & Research Centre** 

St. Albert's College (Autonomous), Ernakulam