

THE NUCLEUS

Greetings from the Core!

Monthly Newsletter of the Department of Chemistry, Mar Ivanios College | Issue no. 1, October 2017

“The lamp stopped burning after a while... but the ignited minds won't ever lose its flame...”



The activities of Chemistry Association for the academic year 2017-18, was inaugurated by Dr. Suresh Das, executive vice president of KSCSTE and Principal Secretary to State Government for Science and Technology and former director of the NIIST, Trivandrum on 29th August 2017.

Dr. Sumol Varghese, Head of the Department welcomed the guests and college Principal Rev. Dr. Gigi Thomas presided over the function. Dr. K. Oommachan, vice principal of the college, Rev. Fr. Joshua Kochuvilayil, the bursar of the college felicitated the function. Dr. Suresh Das gave a 40 minute talk about science and scientists and discussed why it is important to grow scientific temper among the young minds. The chemistry association welcomed the new faces in FDP and PG programmes to the department with flowers and sweets as our token of love and care.

Dr. Sajith Kurian
Assistant Professor,
Department of Chemistry

Visit to NIIST

NIIST had invited bright students from various colleges in Trivandrum, for a visit to their institute on 18.09.17. From our college, selected students from the science departments went for the visit, out of which 7 students were from the department of chemistry. It was a good exposure to our students and they were introduced to various instrumentation techniques and benefited from lectures of various scientists.

Chemistry Onam 2017

The Onam celebration conducted by the Chemistry Association on the 29th of August 2017 was a memorable one. With active participation of the department in whole, we were able to make the celebration a success. Teachers and students enjoyed the day by engaging themselves in various games and activities. Students participated in various inter-departmental competitions such as the Athappookkalam competition, the Onam Song competition and the Tug of War. Though we were not able to bag any prizes, each of us enjoyed to our fullest and returned home with memories to cherish the rest of our life.

Hearty Congratulations!



NIVEDYA B M
of S1 Chemistry

Recipient of
"L'Oréal India For
Young Women In
Science Scholarship
2017"

“If I have a thousand ideas and only one turns out to be good, I am satisfied.” - Alfred Nobel

The 2017 Chemistry Nobel Prize Awardees

Jacques Dubochet
University of Lausanne,
Switzerland

Joachim Frank
Columbia University, New
York, USA

Richard Henderson
MRC Laboratory of Molecular
Biology, Cambridge, UK

"for developing cryo-electron microscopy for the high-resolution structure determination of biomolecules in solution"



Element of the Month Bromine (Br)

Atomic Number: 35
Atomic Weight: 79.901
Oxidation States: 7, 5, 4, 3, 1, -1
Crystal Structure: Orthorhombic
Electronic Configuration:
[Ar] 3d¹⁰ 4s² 4p⁵

Scientist of the Month:

Alfred Nobel

Born 21st October 1833, Alfred Nobel was a Swedish chemist and inventor, who became famous for the invention of the dynamite. He found out that when **Nitroglycerin** (discovered by an Italian chemist **Ascanio Sobrero** three years earlier) was adsorbed in diatomaceous earth, it became safer to handle and thus he patented this discovery and initially named it “Nobel’s Safety Powder” which became later on known as dynamite.



After reading a premature obituary which read “**The Merchant of Death is Dead**”, which condemned him for profiting from the sales of arms, he passed his fortune to institute the famous Nobel Prizes, which is awarded every year for those who excel in the fields of Physics, Chemistry, Physiology or Medicine, Economics, Peace and Literature. Until now, the Nobel Prize is not awarded for the field of Mathematics. There has been an old rumour saying that Nobel himself wrote in his will that the prize mustn’t be awarded in the same field as his lover had eloped with a mathematician. There has not yet been any proof for this and is believed by many to be an interesting hoax. Nobel died on 10 December 1896, due to a stroke, aged 63.

Bromine (Atomic No. 35 and Atomic Mass: 79.901) is the third-lightest halogen, and is a fuming red-brown liquid at room temperature that evaporates readily to form a similarly coloured gas. Its properties are thus intermediate between those of chlorine and iodine. Isolated independently by two chemists, Carl Jacob Löwig (in 1825) and Antoine Jérôme Balard (in 1826), its name was derived from the Ancient Greek “βρῶμος” i.e. “stench”, referencing to its sharp and disagreeable smell.

What is so special about the 23rd of October?

Mole day is an unofficial holiday celebrated among chemists, chemistry students and chemistry enthusiasts. It is celebrated on the 23rd of October between 6:02 a.m. and 6:02 p.m. Mole day commemorates Avogadro's number, which is a basic measuring unit in chemistry. The Avogadro's Number which is approximately 6.022×10^{23} , defining the number of atoms or molecules in one mole of a substance.



We can find the number of moles of a compound, simply by dividing the mass we have of the compound by the molar mass. Using moles we can easily predict the mass of products. In general one mole of any substance contains Avogadro's Number of molecules. This relationship was discovered by Amedeo Avogadro and he received credit for this after his death.

Akshaya Madanan (II BSc Chemistry)

Visit to the National Centre for Earth Science Studies

It was indeed a memorable and a great opportunity for us, the Semester 3 students of BSc Chemistry and MSc Chemistry, when we got the chance to visit the **NCESS (National Centre for Earth Science Studies)** located in Pulayanarkotta, Trivandrum. NCESS is a research oriented institution that is controlled by the Govt. of India so as to promote studies related to the Earth. Many scientists who expertise in the fields of Geology, Geophysics, Geochemistry, Oceanography etcetera have been working in this prestigious institution for the past few decades and has been successful in contributing their work to our nation. Our visit to this prestigious institution made us familiarise many of the instrumentation techniques used in various fields of earth sciences. We were introduced to various instruments like the **Gas Chromatography with Mass Spectroscopy**, **CFA (Continuous Flow Analyser)**, **Volta-metric Analyser**, the **XRD (X-Ray Diffractometer)** and the **SEM (The Scanning Electron Microscope)** We also got to check out various mineral and rock collection which the institute had showcased for exhibition, before we returned to our college.

Rohit Pyngottu Jacob (II BSc Chemistry)



Present Your Ideas!

We'd love to put your articles in our newsletter. Feel free to contribute. E-mail your articles to pyngottujacob@yahoo.in or contact the editorial board.

Editorial

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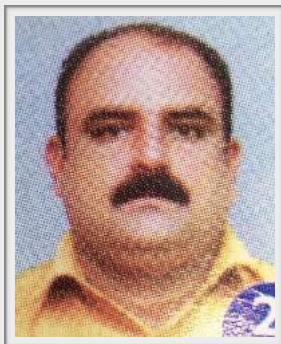
Akshaya Madanan
Secretary, Chemistry Association

Contact Us

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Obituary



Prayers for our former lab assistant, **Lukose B** who recently passed away. The funeral was conducted on October 2nd.

Best wishes to all our newly elected Class Representatives for the academic year 2017-18



Ajithkumar V S
(II PG Class Representative and UUC)



Sreehari P R
(I PG Class Representative)



Akhilesh A
(III UG Class Representative and IIIrd Year Union Representative)



Abhirami Prasannan
(III UG Class Representative)



Anand S R Nair
(II UG Class Representative)



Akshaya Madanan
(II UG Class Representative)



Abhijith S R
(I UG Class Representative)



Blaze Angela Gomez
(I UG Class Representative)