

## Departmental Activities along with College Organized Events and Contribution of Chemistry Hons. Students

1. **Quiz Contest** (Organized by College Authority) and award-winning performance of Chemistry Hons. Students on 15.12.2022.



2. **Recitation Contest** (Organized by College Authority) and award winner of Chemistry Hons. Student: Anwasha Saha



3. Chemistry department arranged *Farewell to 6th Semester Students* & *Fresher's welcome* for *1st Semester Chemistry Hons students* on 02.09.2023:



V88V+RJW, Guchoitpara, West Bengal 712139, India

Latitude  
22.8669783°

Longitude  
88.343833°

Local 11:53:14 AM  
GMT 06:23:14 AM

Altitude 14 m  
Saturday, 02.09.2023

V88V+RJW, Guchoitpara, West Bengal 712139, India  
Latitude  
22.8669783°  
Longitude  
88.343833°  
Altitude 14 m  
Saturday, 02.09.2023  
Local 07:18:25 PM  
GMT 03:48:25 MA

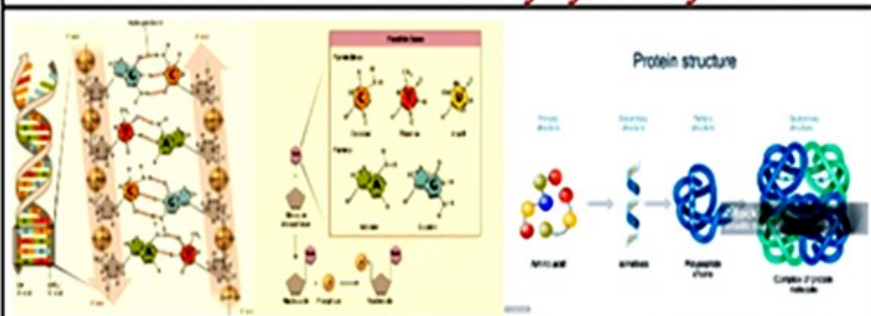


4. Science Day Celebration in the Chemistry Department & Inauguration of Wall Magazine "Chemica" on 02.09.2024:



*Chemica -2024*  
**Chemistry Department**  
 Khalisani Mahavidyalaya

**Proteins and amino acids have an integral relationship. The basic building blocks of proteins, amino acids form peptide bonds to create different types of proteins. The relationship between the two is that an amino acid monomer is a basis for protein synthesis.**



- ❖ A phosphate - deoxyribose polymer composes the backbone of the DNA
  - ❖ Adjacent sugars are connected by phosphate linkage.
  - ❖ Nitrogenous bases are covalently bonded to the 1' carbon of the deoxyribose.
    - ❖ Two DNA strands are anti parallel and held together by H bonds.
- Contributed by:** *Pragna Ghosh, Tanushree Chandra, Malay Das, Sanku Das, Subbaraj, Debika Das, Tridib Das, Adhikar Prady, Anand Ghosh and Ananya Saha. (Students)*

## 5. On behalf of Science Day Chemistry Department organized Scientific Poster Presentations:

National Science Day Celebration (28<sup>th</sup> February, 2024)  
Department of Chemistry,  
Khalikani Mahavidyalaya, Chandernagore, Dist - Hooghly, W.B. - 712138

Early days of his life and family background:

- C.V. Raman was born in Tiruchirappalli in the Madras Presidency of British India (now Tiruchirappalli, Tamil Nadu, India) to Iyer Brahmin parents, Chandrasekhara Ramanathan Iyer and Parvathi Ammal. He was the second of eight siblings. His father was a teacher at a local high school, and earned a modest income. In 1912, his family moved to Visakhapatnam as his father was appointed to the faculty of physics at Mrs A.V. Narasimha Rao College.
- Raman was educated at the St. Albert's Anglo-Indian High School of Visakhapatnam. He passed matriculation at the age of 15 years and the First Examination in Arts examination (equivalent to today's intermediate examination, pre-university course) with a scholarship at age 18, securing first position in both under the Andhra Pradesh school board (now Andhra Pradesh Board of Secondary Education) examination.
- In 1920, Raman joined Presidency College in Madras and in 1924, he obtained a B.A. degree from the University of Madras, where he stood first and won the gold medal in Physics and English. As a graduate student at the age of 18 years, he published his first scientific paper on "Compositional diffraction bands due to a rectangular aperture" in the British journal *Philosophical Magazine* in 1920. He earned an M.A. degree from the same university with highest distinction in 1921. His second paper published in the same journal that year was on surface tension of liquids. It was alongside Lord Rayleigh's paper on the sensitivity of ear to sound, and from which Lord Rayleigh started to communicate with Raman, eventually addressing him as "Professor".

In 1928, Chandrasekhara Lakshmi Raman and his student K. S. Krishnan discovered that when light traverses a transparent material, the deflected light changes its wavelength and frequency. This phenomenon, a hitherto unknown type of scattering of light, which they called "modified scattering" was subsequently termed the Raman effect or Raman scattering. Raman received the 1930 Nobel Prize in Physics for his discovery and was the first Indian to receive a Nobel Prize in any branch of science.

Mile stone of Raman Spectroscopy:

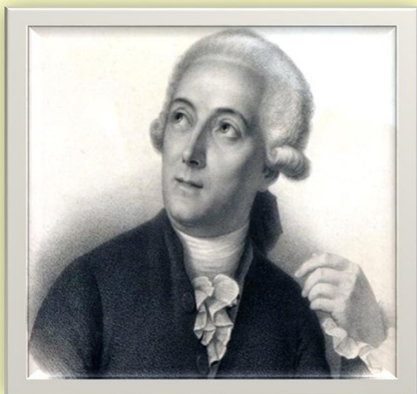
1. Raman effect discovered by A. Raman in 1928.
2. C.V. Raman and K. S. Krishnan - "secondary radiation" from most solvents awarded Nobel Prize 1930.
3. Invention of laser: Breakthrough for Raman Spectroscopy.

It is a very important to know and appreciate the Raman scattering.



Laboratory flasks are used for explanation during the announcement of the winners of the 2023 Nobel Prize in chemistry at Royal Swedish Academy of Sciences in Stockholm on October 4, 2023.

Alexei I. Ekimov, Louis E. Brus, and Moungi G. Bawendi have been awarded the 2023 Nobel Prize for chemistry "for the discovery and synthesis of "quantum dots".



### Antoine Lavoisier

**Born :** August 26, 1743 at Paris, France

**Died :** 8 May 1794

**Discovered :** Oxygen, Silicon

**Parents :** Emilie Punctis, Jean Antoine Lavoisier

**Spouse :** Marie Anne Paulze Lavoisier

**Research Interests :** Chimie, Industrie Des Poudres, Agronomie, Economie

### Father of Chemistry:

*Antoine Lavoisier* a meticulous experimenter, revolutionized chemistry. He established the law of conservation of mass, determined that combustion and respiration are caused by chemical reactions with what he named "oxygen," and helped systematize chemical nomenclature, among many other accomplishments.

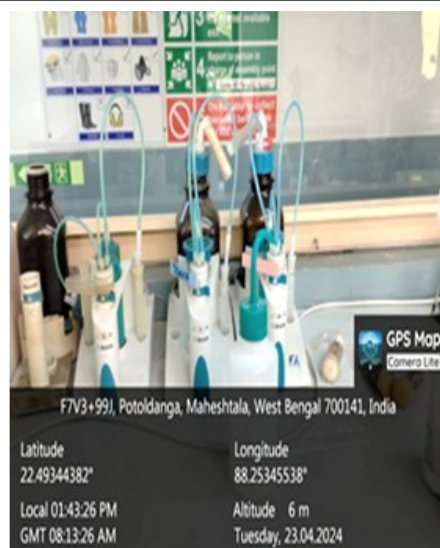


Lavoisier's experiment on air, 1776



## 6. Industrial visit on 23.04.2024 to the R & D Unit of Quaker Houghton R & D Unit (Quaker Chemical India Pvt Ltd.) organized by the Chemistry Department, Khalisani Mahavidyalaya

Industrial visit to the R & D Unit of Quaker Houghton R & D (Quaker Chemical India Pvt Ltd.), Kolkata, was organized by the Chemistry Department 23/04/2024 to aware our science students about the working atmosphere, safety precautions, human skill and real-world insights into the chemical manufacturing industry. This industrial visit encouraged students about the use of sophisticated instruments such as UV-Visible spectrophotometer, FTIR, viscometer, auto titration technique, surface chemistry used for the corrosion resistance for the materials, modern viscometers, emulsion laboratories and specially biological divisions where scientists working enormously for the stabilization / sustainability of chemical within temperature range 50 °C – 55 °C. Students have also learned that how safety measures are usually taken while performing hazardous reactions in a chemical laboratory.



- Department of Chemistry, Khalisani Mahavidyalaya

7. Like previous year, **National Library Day (12<sup>th</sup> August)** is also celebrated in Central library and college authority arranged several awareness programs to encourage students. On behalf of this auspicious day, **5<sup>th</sup> Semester Chemistry Hon's student, Ranjima Ghatak** performed **bharatnatyam dance**:



**- Department of Chemistry, Khalisani Mahavidyalaya**



8. Constant encouragement and active role of departmental teachers along with our pass-out hon's students (year 2022 & 2023) initiative, helps the publication (13.08.2024) of the Chemistry Magazine "**Correlation**".



**- Department of Chemistry, Khalisani Mahavidyalaya**