

# **SREE NARAYANA COLLEGE, SIVAGIRI, VARKALA**

## **Post Graduate Department of Physics**

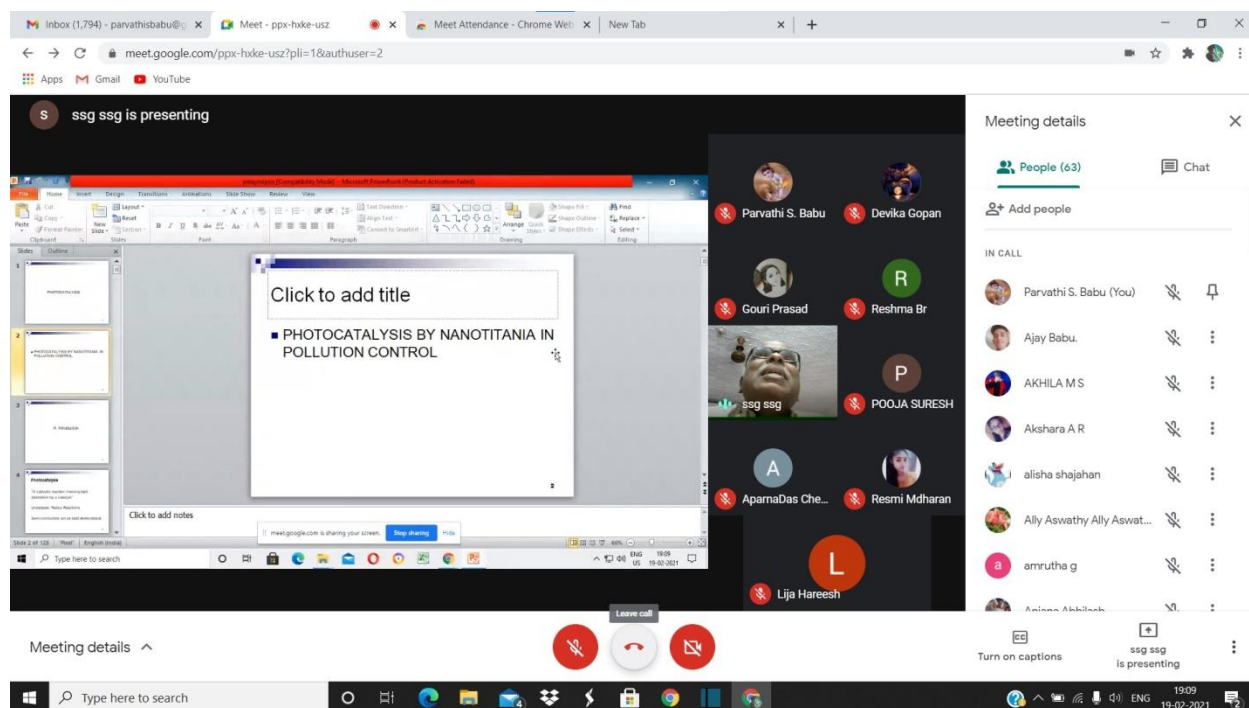
### **DBT STAR COLLEGE SCHEME**

#### **WEBINAR REPORT**

The Science Club and P.G. Department of Physics in association with DBT STAR College Scheme jointly organized the National Science Day – 2021 Celebrations. National Science Day is celebrated on February 28 each year in India commemorating Indian physicist C.V Raman's discovery in 1928 of the Raman effect - the scattering of photons or light particles by matter. In this era of rapid development of science and technology, it is of prior importance to update and to maintain our scientific temper. Science has transformed our lives and outlook towards our sustainable living. Therefore, the Science Day celebration is immensely valuable in the present scenario. The main objectives of celebrating the National Science Day are to bring awareness to the public about the importance of scientific applications in their day to day life and to encourage them by popularizing science and technology. It allows the scientists from their fields and experts, to discuss the issues and new technologies trending in their fields. It also provides a platform to share their knowledge and ideas and to help students start a wonderful career in Science. The focal theme of National Science Day Celebrations 2021 is 'Future of STI: Impacts on Education, Skills and Work'.

A webinar on 'Photocatalysis by Nanotitania in Pollution Control' was conducted on 19<sup>th</sup> February 2021 at 07.00 p.m. jointly by the Science Club, Post graduate Department of Physics and the DBT STAR College Scheme as part of the National Science Day Celebrations 2021. Dr. Parvathi S. Babu (Co-ordinator of Science Club and Assistant Professor, Department of Physics) delivered the welcome address to the webinar session. The presidential address was delivered

by Dr. K. C. Preetha, Principal. The webinar on 'Photocatalysis by Nanotitania in Pollution Control' was inaugurated by Dr. Sugunan S., Emeritus Professor, Department of Applied Chemistry, Cochin University of Science and Technology (CUSAT). Sri. Aji S.R.M, Sree Narayana Trust Executive Member, Dr. Joly A., Former Principal and HOD of Chemistry, Dr. Leji J. (Co-ordinator of DBT STAR College Scheme, Assistant Professor, Department of Zoology), Dr. Soju S., IQAC Coordinator, Smt Sini V., PTA Secretary offered felicitations to the function. The teachers from various departments, Dr. Leji J. (Co-ordinator of DBT STAR College Scheme, Assistant Professor, Department of Zoology), Dr. Aranya S. (Assistant Professor, Department of Physics), Lija P. Lekshmanan (Assistant Professor, Department of Chemistry), Sajesh Sasidharan (Assistant Professor, Department of Physics), Neelima N. L. (Assistant Professor, Department of Mathematics), the members of the science club and the students of Department of Physics participated in the function. The students were actively involved in the webinar.



**Invited Lecture by Dr. Sugunan S. on the topic**

***'Photocatalysis by Nanotitania in Pollution Control'***



The screenshot displays a Google Meet session. The central focus is a presentation slide titled "Water splitting". The slide contains the following text:

- Water splitting - carry out both the redox reactions simultaneously - reduction of hydrogen ions ( $2\text{H}^+ + 2\text{e}^- \rightarrow \text{H}_2$ ) as well as ( $2\text{OH}^- + 2\text{H}^+ \rightarrow \text{H}_2\text{O} + \frac{1}{2}\text{O}_2$ ) oxygen evolution from the hydroxyl ions.
- Essentially for photo-catalytic splitting of water, the semiconductors with band edges (the top of valence band and bottom of the conduction band or the oxidizing power and reducing power respectively) have to be shifted in opposite directions so that the reduction reaction and the oxidation reactions are facile. Doping process facilitates such enhancement.

On the right side of the screen, a "Meeting details" sidebar is visible, showing a list of participants under the heading "IN CALL". The participants listed are: Parvathi S. Babu (You), AKHILA M S, Ally Aswathy Ally Aswat..., Anjana Abhilash, Arksha S Prakash, Athira S S, BHAGYA C R, and BHAVANA C R. At the bottom of the screen, the Windows taskbar is visible, showing the time as 19:55 on 19-02-2021.

The talk figured around the topic Photocatalysis and the role of Titanium Dioxide in Pollution Control. It was a highly informative and useful talk to the science stream students and also provided a deep insight about the properties of semiconductors, and mentined the relationship between the role of nano titania in polution control. The talk extended to a longer duration but the sudents were highlyly enthusiastic as the speaker was taking the students over an intersting journry starting with the synthesis methods to the various characterisation methods used finally paving way for the appliction of nanotitania. A interactive session was also allotted to the students where the students were given a chance to open up their minds and to ask the relavnat questions and to clear their doubts. The programme was concluded by the vote of thanks by Sreelekshmi S. S., II B.Sc Physics student and science club member. Undoubtedly the weminar proved to be very successful.