

A Report on National Science Day 2022

Ever since 1987, our country has been celebrating the National Science Day on 28th February to commemorate the discovery of the 'Raman Effect' by one of the renowned Physicist of India- Sir CV Raman. This year, the theme was '**Integrated Approach in Science and Technology for Sustainable Future**'. As a part of its enterprise to conduct a wide range of extra-curricular programmes and activities to sensitize the students on social, cultural and ethical issues, the **Department of Science and Humanities in association with IQAC Vignan's Foundation of Science Technology and Research** had organized a Webinar on the same topic. Apart from it, a range of other activities like quiz competition, essay writing competitions and power point presentations were also arranged. Students from various under graduate and post-graduate courses had participated enthusiastically in these events. As the final event of these celebrations, the department invited Dr. S N Achary (Chemistry Department, Bhabha Atomic Research Centre) as the guest of honour in the Webinar where he delivered a talk on the topic titled: "**Inorganic Phosphates: A class of Versatile Functional Materials**". The Convenor of the webinar-Dr.Srinivasadesikan V delivered the opening remarks. He formally welcomed all the participants gathered for the celebration. It was inaugurated by Prof. P.M.V Rao (Registrar). Prof. N. Srinivasu, Prof. K. Prabhakara Rao, Prof. M. Sreenivasulu and Prof. J.N. Kiran from Sciences and Humanities department, had addressed the gathering with their stimulating thoughts on Science & Technology. Prof.M.Srinivasulu spoke on the importance of National Science Day and the life and works of noble laureate Sir C V Raman. Prof.K.Prabhara Rao reflected on how Science and Technology should walk hand in hand to solve the current societal problems. Prof.Srinivasu, HoD S&H had highlighted the importance of Materials science and the role of Department of Atomic Energy in India. Dr. P.M.V. Rao highlighted on how the generation of new ideas is possible through the organization and celebration of such events. More than 100 participants from all over attended the webinar.

Dr. S.N. Achary gave a thought provoking speech on the application of inorganic Phosphates which occur in wider geological environments such as alluvial soil, sand, terrains, rocks. Complex Phosphates with xenotime, monazite, apatite, zircon retain varieties of functional properties like optical, dielectric, mechanical, catalytic and sorbent which leaves room for further exploration. Several interesting facts regarding the applications of these synthetic inorganic phosphates system were discussed. Although, inorganic phosphates have been investigated worldwide since long but still the research interest remains due to their structural

complexity and wider functionalities. The complex and diversified properties of such phosphates are related to their composition, microstructure and crystal structure. Varieties of inorganic phosphates occur in wider geological environments like alluvial soil/sand, terrains and rocks or prepared in laboratories. Such phosphates usually exhibit high stability in weathering conditions as well as in wide range of thermo dynamical environments. During his talk, he explained the importance of ion exchange process that determines the phosphate derivatives. The speaker concluded by explaining the future research possibilities and also discussed about the various internship projects that students might undertake at BARC-Mumbai. Faculty members, research scholars, various under-graduate and post-graduate students were not only benefitted but also highly overwhelmed by the speech. After the talk, an interactive session was held where the guest had patiently attended and answered each and every question. At the end of it, the results of various competitions like Quiz, Essay writing, and Oral presentation were announced by Dr. S. Devaraju. The higher authority congratulated all the prize-winners. Finally, Dr. Subhalakshami Sengupta, Scientist, VFSTR delivered the vote of thanks.