

Report of Two day Faculty Development Programme on AFM & FTIR based Material Testing for Research held on 17 & 18 Dec 2019 at AVIT

A two days Faculty development programme (FDP) was successfully conducted in Aarupadai Veedu Institute of Technology on 17 & 18 by the Departments of Science & Humanities, Biotechnology and Biomedical Engineering. The FDP received a good response with 28 participants from various Engineering and Science institutions around Chennai. A brief report of the two days FDP is given below with the feedback from the participants at the end.

The programme was inaugurated in the morning at the Digital room IV of AVIT on 17 Dec 2019 by **Dr. K. L. Shunmuganathan**, Principal of AVIT, **Dr. T.N. Sairam** (Chief Guest and a Resource person), Scientist, Indira Gandhi Centre for Atomic Research, **Dr. R. Devika**, Head of the Department of Biotechnology, **Dr. G. Latha**, Head of the Department of Humanities and Sciences, **Dr. M. Ravindirn**, Head of the Department of Biomedical Engineering.



The beloved principal **Dr. K. L. Shunmuganathan** addressed the faculty participants the importance of the FDP. The chief guest **Dr. T.N. Sairam** was felicitated thereafter.



The resource person and the chief guest Dr. T. N. Sairam, gave two scientific presentations titled “Fundamentals of FTIR spectroscopy“ and “Applications of FTIR spectroscopy” in the morning session. Dr. Sairam explained the fundamentals and working principles of FTIR, advantageous and limitations of FTIR, how the FTIR instrument works, spectral analysis, interpretation of the FTIR results and the ways to identify molecular components and structure. In the later part of his presentation, the advantages of the conventional FTIR coupled with Attenuated Total Reflection (ATR) method were discussed.



In the afternoon session on 17.12.2019, **Dr. G. Suresh** and **Dr. K. Sanghamitra** have shown the operation of the FTIR and UV-Vis spectrometers.

On the second day of the FDP, **Dr. R.N. Viswanath** highlighted the importance of Atomic force microscopy techniques with special emphasis on the technological importance of Atomic Force Microscopy. Dr. Viswanath covered the AFM sub topics viz., background information about the microscope, advantages and disadvantages AFM, AFM experimental set-up, force-distance relationship, types of AFM scanning modes, how does AFM works, etc during the two lecture presentations.

The AFM demonstration to the participants was carried out in the afternoon technical session on 18.12.2019.



The participants attended both the theory and the technical sessions on 17 & 18 Dec. 2019 and interacted with the resource persons. The experts responded the participant's queries in clearing their doubts. Participants felt that such FDP should be arranged regularly in order to motivate the faculties to contribute more in scientific field and to strengthen academic curriculum.

The two days FDP concluded with the vote of thanks, expressed gratitude to all for their contributions for the success of the FDP and the distribution of certificates to the participants.