

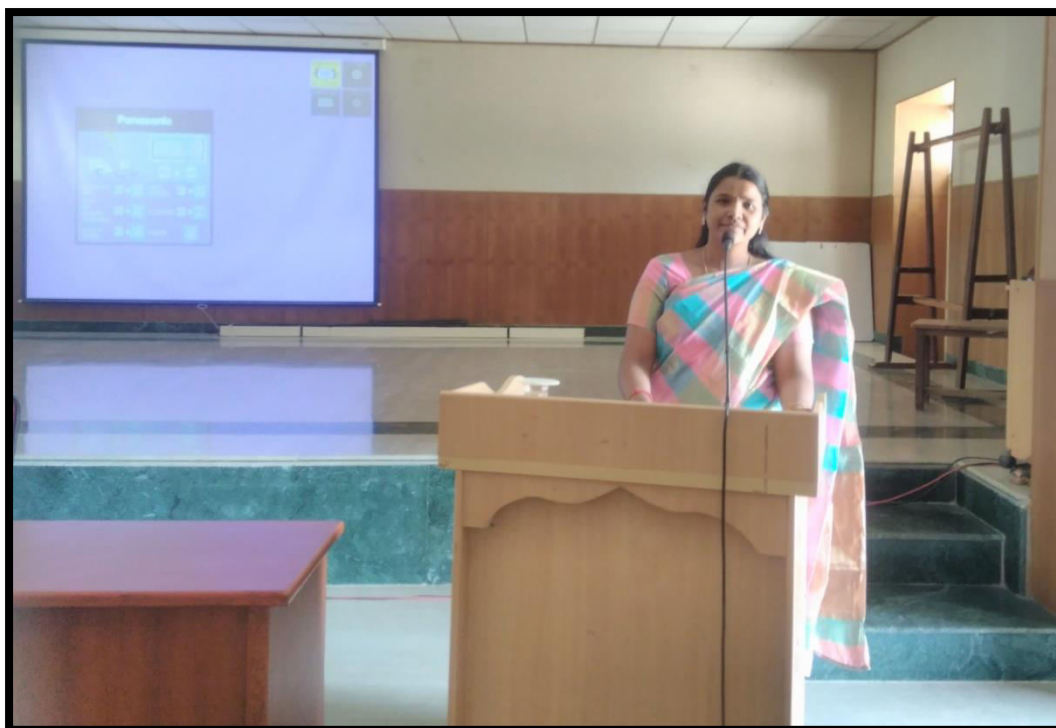
Sri GVG Visalakshi College for Women (Autonomous)
Department of Chemistry
Report for Hands on training
Synthesis and Characterization of Nanoparticles

The Department of Chemistry, Sri GVG Visalakshi College organized a one day hands on training program on 29th December 2017. The Chief Guest for this program is Dr.N.Neelakandeswari, Associate professor of Chemistry from Sri Ramakrishna Engineering College (SREC), Coimbatore. The program started with a pleasant prayer song followed by welcome address by Mrs. M.Malarvizhi, Head of the Department.

The first session covered the basic of Nanoscience and synthesis of nanomaterials. The guest faculty addressed on the topic entitled “Synthesis and Characterization of Nanoparticles”. The lecture started around 9.30 AM and ended around 11.30 AM.



The session was made interactive by thought provoking questions posed by **Dr. N. Neelakandeswarai** to the student audience for which convincing answers were given by the student. The lectures come to an end with vote of thanks proposed by Dr. E.Vaishnavi



After that the 47 III rd year BSc., Chemistry students and 5 of the PG students from physics were separated into 5 batches. The second session was started by 1:30pm and this session was dedicated to the synthesis and characterisation of nanomaterials and discussion with student participants.

In this session the following nanomaterials were synthesised.

1. Chemical Synthesis of Copper nanoparticles
2. Chemical Synthesis of CdS Nanoparticles
3. Bandgap calculation of nanoparticle using UV-Visible spectroscopy.
4. Chemical Synthesis of Silver nanoparticles.
5. Synthesis of ZnO Nanoparticles using Sol-gel methods.
6. Synthesis of nanoparticles using Ball milling technique.

She demonstrated all the above experiments by giving a brief procedure and also initiated the students to carry out the experiments. After synthesising the nanoparticles each batch students characterised the nanoparticles using UV analysis. The absorbance spectra were recorded for copper, cadmium sulphide, silver, zinc oxide nanoparticles. Band gap of metal oxide nanoparticles were calculated. From the results we could able to interpret the formation of nanoparticles. The absorbance peaks matches well with the literature report.



She also suggested III year students to pursue higher education and choose research as their carrier option. She concluded the session by explaining the basic concepts of spectroscopy.

The Hands on training has proven to be very inspiring and informative for the students. By the end of the day our students acquired practical experience through completing real-world, hands-on exercises and got the opportunity to synthesis nanoparticles.