# **Training program CUK**

#### FINAL REPORT

# 17<sup>TH</sup> AUG TO 23<sup>RD</sup> AUG 2023

#### Day 1:- 17/08/2023

At 9 am the program has started with the registrations process of candidates and also distributions of stationary to the participants. Then program has been started with national song followed by inauguration by key guest honors. From 10 30 to 11 30 AM, Theory session on Theory on Polarimetry was taken up by Prof. Venkata Srilakshmi P NITW. 11 30 AM TO 1 PM Theory session on DFT Calculations using Gaussian 16 Software was taken up by Dr. Deepa Janardanan Department of chemistry Central University of Kerala. Then in the afternoon session, from 2 to 6 PM, UV-VIS-NIR spectroscopy for optical and structural characterization was taken up by Prof. K. Muruga Poopathi Raja Department of chemistry Central University of Kerala.

## Day 2:- 18/08/2023

In the morning from 9 to 1 PM, Theory session on FT-IR Spectral analysis for structural characterization of materials was taken up by Prof. A. Sakthivel Department of chemistry Central University of Kerala. Then in the afternoon session, from 2 to 6 PM, participants divided in two groups, Batch A:- Hands on training on "Polarimeter, was explained by Dr. Ravi Kumar Kanaparthi, Department of chemistry Central University of Kerala and Batch B:- Hands on Training DFT Calculations using Gaussian 16 Software was explained by Dr. Deepa Janardanan Department of chemistry Central University of Kerala, simultaneously both the batches completed both the hands on sessions by the end of the day.

## Day 3:- 19/08/2023

In the morning from 9 to 1 PM, Batch A:- Hands on Training on UV-VIS-NIR spectrophotometer for optical and structural characterization was explained by Prof. K. Muruga Poopathi Raja Department of chemistry Central University of Kerala, Batch B:- Hands on Training on FT-IR spectrophotometer was explained by Prof. A. Sakthivel Department of chemistry Central University of Kerala simultaneously both the batches completed both the hands on sessions before lunch. Then in the afternoon session, from 2 to 6 PM, Electrochemical characterization for energy storage and conversion was taken up by Dr. M. Bhagiyalakshmi Department of chemistry Central University of Kerala.

## Day 4:- 20/08/2023

In the morning from 9 to 1 PM, Theory session on Thermal Analysis of Samples was taken up by Dr. Ravi Kumar Kanaparthi, Department of chemistry Central University of Kerala. Then in the afternoon session, from 2 to 6 PM, Batch A:- Hands on Training on Electrochemical work station, Biologics SP240 was explained by Dr. M. Bhagiyalakshmi Department of chemistry Central University of Kerala and Batch B:- Hands on training on Thermal Analysis of Samples (TGA) was explained by Dr. Ravi Kumar Kanaparthi, Department of chemistry Central University of Kerala, simultaneously both the batches completed both the hands on sessions by the end of the day.

## Day 5:- 21/08/2023

In the morning from 9 to 1 PM, Theory session on Topography and Morphology characterization of Nanomaterials, was taken up by Prof. Swapna S. Nair, Department of Physics Central University of Kerala. Then in the afternoon session, from 2 to 6 PM, Theory session on X-ray diffraction (XRD) for characterization of materials, was taken up by Dr. Aneesh PM, Department of Physics Central University of Kerala.

## Day 6:- 22/08/2023

In the morning from 9 to 1 PM, Hands on Training on Atomic Force Microscope (AFM) Nanosurf Swizz, was explained by Prof. Swapna S. Nair Department of Physics Central University of Kerala. Then in the afternoon session, from 2 to 6 PM, Theory session on Fluorescence Spectroscopy: Theory and Application, was taken up by Dr. Ravi Kumar Kanaparthi, Department of chemistry Central University of Kerala.

#### Day 7:- 23/08/2023

In the morning from 9 to 1 PM, Theory session on Atomic Absorption Spectrometer was taken up by Dr. Muripi Venkanna Department of Education Central University of Kerala and Hands on Training on Atomic Absorption Spectrometer was explained by Dr. Muripi Venkanna Department of Education Central University of Kerala. Then in the afternoon session, from 2 to 6 PM, Hands on Training on Spectrofluorometers Agilent, Cary-6000 was explained by Dr. Ravi Kumar Kanaparthi, Department of chemistry Central University of Kerala and Hands on Training on Rigaku MiniFlex X-ray diffractometer was explained by Dr. Aneesh PM, Department of Physics Central University of Kerala. At the end of the day feedback and Validictory session.