**Rayat Shikshan Santha's**
**Yashavantrao Chavan Institute of Science, Satara (Autonomous)**

## Research and Development Cell and Metrohm India Pvt. Ltd.

**In Collaboration With**

## Department of Physics and Material Science

**Title of Activity: One Day National Workshop and Hands on Training On 'Applied Techniques in Electrochemical Analysis'**

**Day and Date: Friday 7th October 2022**
**Time: 10:30 am to 5:30 pm**
**No of beneficiary- 35 (Research students + M. Sc. Physics Students)**
**Description of activity**
**Introduction:**

One Day Workshop on '**One Day National Workshop and Hands on Training**' organized by Yashavantrao Chavan Institute of Science, Satara (Autonomous) Research and Development Cell and Metrohm India Pvt. Ltd. on Friday 7th October 2022. Inaugural function started at 10.30 am with welcome of dignitaries, resource person, faculty and students. After that Dr. S. H. Mujawar, Research Dean, Yashavantrao Chavan Institute of Science, Satara gave the address talk. In his address speech he discussed the need of electrochemical workstation in different areas of research. Also, he highlighted purpose and benefits of this one-day workshop for researchers and M.Sc student. The workshop was scheduled in three sessions and for this workshop Mr. Sujay Patil, Engineer Metrohm India Private Ltd. was present as resource person.

**Address by Chief Guest / Resource Person:**

**Session I: Resource person- Mr. Sujay Patil**

In the first session Mr. Sujay Patil mainly focused on basics of electrochemistry. Further, he introduced the electrochemical impedance spectroscopy (EIS) with proper explanation of Nyquist plot and Bode plot. Also, he talked on how the different types of resistance are impactful in different areas of research such as

supercapacitors, water splitting, batteries, electrocatalysis, PEC solar cell, bio sensors and corrosion chemistry etc. Participants have actively taken part in the discussion and cleared their doubts.

**Session II: Resource person- Mr. Sujay Patil**

The second session was started at 1.00 pm, the topic of second session rotating ring disc electrode for the dynamic electrochemistry. Rotating ring disc electrode is the important instrument for the measurements of the oxygen reduction reaction occurring in fuel cell and electrochemical impedance spectroscopy. Mr. Sujay Patil explained the use and application of rotating ring disc electrode for electrochemistry.

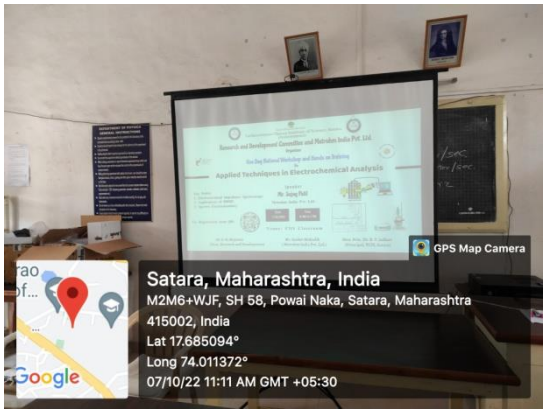
**Session III: Resource person- Mr. Sujay Patil**

In the third and last session of the day, he introduced UV-VIS/UV-VIS-NIR spectrophotometer and discussed about spectroelectrochemistry along with their role in situ optical measurements. He demonstrated in situ transmittance for standard samples.

After three sessions, valedictory function was organized and for this Dr. A. P. Torane, Head, Department of Physics was present as Chief Guest. Vote of thanks was given by Mr. S. D. Jituri.

**Outcomes:** All the participants get introduced to the electrochemistry and electrochemical workstation. The participants also learnt how to use various electrochemical characterization techniques while working in the field of electrochemistry.

**Photograph-**



Head,
Department of Physics