

Capacity Building and Establishment of a Research Consortium Higher Education and Research collaboration on Nanomaterials for Clean Energy Technologies (HRNCET) (2017-2021)



University of
Jaffna



Western Norway
University of
Applied Sciences

Funded by

Norwegian Partnership Programme for Global Academic Cooperation (NORPART)

Norwegian Centre for International Cooperation in Education SIU

SIU

Norwegian Embassy in Colombo



Training workshop on

Atomic Force Microscope (AFM) and

X-Ray Diffractometer (XRD) : Effective research tools for material research

Resource Persons

Dr. M. Thanihaichelvan

BSc Hons (Eng.) (Anna, India), MSc (UK), PhD (Wellington, New Zealand), MIEEE, MIET, MInstP.

Senior Lecturer, Department of Physics, University of Jaffna

Dr. (Ms). U. Sutharsini

BSc Hons (Physics) (Jaffna), PhD (Malaya, Malaysia)

Senior Lecturer, Department of Physics, University of Jaffna

- Target group** : MPhil/PhD students
Venue : Clean Energy Research Laboratory (CERL), Dept of Physics, University of Jaffna
Date : September 12-13, 2020 (Saturday & Sunday)

Clean Energy Research Laboratory, Dept. of Physics received an Atomic Force Microscope (AFM) and an X-Ray Diffractometer (XRD) (worth of 12 million rupees each) from the State Ministry of Skills Development, Vocational Education, Research & Innovations, and Royal Norwegian Embassy in Sri Lanka, respectively. XRD is a nondestructive technique that provides the detailed information about the crystallographic structure, chemical composition, and physical properties of materials. AFM is an ideal tool for characterization of surface morphologies of thin films and nanostructures with near-atomic resolution. This programme is to provide hands-on training on using sophisticated AFM and XRD machines available at CERL for material research. The workshop will be conducted for a limited number of researchers who wish to do collaborative work with Clean Energy Research group of the University of Jaffna. Each participant can bring up to 2 good samples for both XRD and AFM measurements during the workshop.

For registration, please contact Sharma, Research Assistant, CERL, Dept. of Physics, University of Jaffna

Email: tsarma1990@gmail.com, Mobile No. 077 845 8448

Coordinator/CBERC project

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Training workshop on AFM and XRD

Schedule of the training workshop

Day 01 : 12.09.2020 (Saturday)

Time	Title	Resource person
09.00 to 10.00	XRD as a research tool and radiation safety	Dr. U. Sutharsini
10.00 to 10.30	Tea Break	
10.30 to 12.30	Demonstration and Hands on training on operating XRD machine	Dr. U. Sutharsini
12.30 to 13.30	Lunch break	
13.30 to 14.30	AFM: Basic concepts, Hardware and image processing tools	Dr. M. Thanihaichelvan
14.30 to 15.00	Tea Break	
15.30 to 17.30	AFM demonstration and discussion	Dr. M. Thanihaichelvan

Day 02 : 13.09.2020 (Sunday)

The whole day will be dedicated for hands on training on AFM. The Research students can characterize their own samples under supervision of Dr. M. Thanihaichelvan

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Application for the Training workshop on AFM and XRD

Full Name :

E-Mail :

Contact No. :

Affiliation :

Supervisor :

Thesis title :

Nature of the sample:

What are the information to be extracted from the samples?

Signature of the researcher

Signature of the Supervisor