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Varsity ventures into scientific instrument production

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The Assam Don Bosco University (ADBU (/taxonomy/term/268)) Vice Chancellor Dr. Stephen Mavely, inaugurated the second in-house built instrument called "Superhydrophobicity Tester"on March 20. He also witnessed a live lab test using a small piece of yam leaf on which a tiny drop of water was poured. The experiment consisted of demonstrating how it could be weighed and measured with the help of a instrument with computer interface.

“It is matter of great pride that we are able to produce scientific instruments needed for research and industry testing of nano products,” said Dr Mavely informing the faculty to spend time at Lausanne University in Switzerland to conduct advanced experiments.

Explaining what the newly constructed instrument will do, Nano project coordinator Dr Sunandan Baruah says, “in layman’s terms, what the machine does is test the water resistant capacity of any material.”

The first instrument to be completed was a 'Dip Coating Machine' for growing thin films through a layer by layer process.

Another two instruments are near completion, a "Nanotemplate making machine' and a "Controlled Reactor' for hydrothermal growth of ZnO nanostructures."

The ADBU (/taxonomy/term/268) Electronics and Communication Engineering Department of the School of Technology (/taxonomy/term/16) has been designing and fabricating instruments for its two Nanotechnology labs since last year.

“As commercially available instruments for scientific experimentation need to be imported and are extremely expensive (Rs. (/taxonomy/term/1898)7 (/taxonomy/term/1898)-8 lakhs, ie. USD 15-16,000), the ADBU (/taxonomy/term/268) Nano Technology (/taxonomy/term/16) Team decided to build these in-house,” says Dr Baruah.

Nanoscience and nanotechnology are the study and application of extremely small things and can be used across all the other science fields, such as chemistry, biology, physics, materials science, and engineering.

Today's scientists and engineers are finding a wide variety of ways to deliberately make materials at the nanoscale to take advantage of their enhanced properties such as higher strength, lighter weight, increased control of light spectrum, and greater chemical reactivity than their larger-scale counterparts.

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