नागालैण्ड विश्वविद्यालय
NAGALAND UNIVERSITY
(संसद द्वारा पारित अधिनियम 1989, क्रमांक 35 के अंतर्गत स्थापित केंद्रीय विश्वविद्यालय)
(A Central University established by an Act of Parliament No.35 of 1989)
मुख्यालय : लुमामी, जिला : जुन्हेबोटो (नागालैण्ड), पिनकोड – 798627
Hqrs : Lumami, Dist. Zunheboto (Nagaland), Pin Code – 798627
वेबसाइट / Website : www.nagalanduniversity.ac.in

No. NUL/RDC/PF-125/2023 -

Date: 14.06.2023

NOTICE INVITING TENDER

In continuation of Notice Inviting Tender No. NUL/RDC/PF-125/2023- 249 dated: 21.04.2023, the invitation for sealed tenders from reputed Original Equipment Manufacturers/Authorized Dealers/Bidders is extended till 5th July, 2023 upto 4:30 P.M. for supply and installation of equipments under the SERB research project entitled "Fabrication of High Voltage MXene based flexible Solid-State Supercapacitor using Ionogel Electrolytes" of Dr. Vijeth, Principal Investigator and Assistant Professor, Department of Physics, Nagaland University, Lumami. Interested firms may download the tender documents and Terms and Conditions from the University website: nagalanduniversity.ac.in and submit their quotations along with tender fees of ₹ 1,000/- (non-refundable) in the form of DD in favour of Nagaland University, Lumami in sealed envelope superscript on the cover "Tender for supply of Equipments under SERB research project of Dr. Vijeth, Principal Investigator and Assistant Professor, Department of Physics, Nagaland University, Lumami" and addressed to the undersigned. No tenders will be accepted beyond the given date and time.

14-06-23

(Dr. ABEMO)
Registrar

No. NUL/RDC/PF-125/2023 - 1344

Date: 14.06.2023

Copy to:-

1. The Secretary to VC, Nagaland University, Lumami for kind information of Vice Chancellor.
2. The Finance Officer, Nagaland University, Lumami for kind information.
3. The Head, Department of Physics, Nagaland University, Lumami for kind information
4. Dr. Vijeth, Principal Investigator and Assistant Professor, Department of Physics, Nagaland University, Lumami for kind information
5. The System Administrator, Nagaland University, Lumami, with a request to upload the NIT in the University website
6. The Editor, Nagaland Post, Dimapur, with a request for publication in the next daily issue (size 6cm x 8cm). Bills in triplicate should be submitted for payment. It's a one time publication
7. The Editor, Arihant Advertising Agency, S.R.C.B. Road, Fancy Bazar, Guwahati – 781001 with a request to publish in the Times of India, North East Edition (size 6 cm x 8 cm). Bills in triplicate should be submitted for payment. It's a one time publication
8. Office copy

Registrar 14-06-23

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No. NUL/RDC/PF-125/2023 - Date: 21.04.2023

NOTICE INVITING TENDER

Nagaland University invites sealed tenders from reputed Original Equipment Manufacturers/Authorized Dealers/Bidders for supply and installation of equipments under the SERB research project entitled "Fabrication of High Voltage MXene based flexible Solid-State Supercapacitor using Ionogel Electrolytes" of Dr. Vijeth, Principal Investigator and Assistant Professor, Department of Physics, Nagaland University, Lumami. Interested firms may download the tender documents and Terms and Conditions from the University website: nagalanduniversity.ac.in and submit their quotations along with tender fees of ₹ 1,000/- (non-refundable) in the form of DD in favour of Nagaland University, Lumami in sealed envelope superscript on the cover "Tender for supply of Equipments under SERB research project of Dr. Vijeth, Principal Investigator and Assistant Professor, Department of Physics, Nagaland University, Lumami" and addressed to the undersigned on or before 22nd May, 2023 up to 4:30 P.M. No tenders will be accepted beyond this date and time.

(YANRENTHUNG EZUNG)
Registrar I/C

No. NUL/RDC/PF-125/2023 - 249 Date: 21.04.2023

Copy to:-

1. The Secretary to VC, Nagaland University, Lumami for kind information of Vice Chancellor.
2. The Finance Officer, Nagaland University, Lumami for kind information.
3. The Head, Department of Physics, Nagaland University, Lumami for kind information
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21/04/23
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No. NUL/RDC/PF-125/2023 -

Date: 21.04.2023

TERMS AND CONDITIONS:

1. Dealership certificate/Authorization certificate from the Manufacturer should be enclosed.
2. Tax should be clearly indicated.
3. The Rates are FOR Nagaland University, Lumami.
4. Delivery of the items should be within 30 days from issue of supply order.
5. EMD of 2% of the total quoted prize in the form of DD should be deposited in favour of the Nagaland University, Lumami.
6. The University reserves the right to accept or reject the tenders without assigning any reasons thereof and no representation will be accepted.

TERM OF PAYMENT

100% Payment after the receipt, inspection, acceptance of materials and successful installation of all the materials.

WARRANTY

The items should be warranted against defects for a minimum of 1 (one) year from the date of installation and commissioning +2 year AMC free or 3 years manufacturer's warranty certificate. Defective items should be replaced at the cost of supplier.

NOTE: Offers not agreeing with the above terms are liable for rejection.

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No. NUL/RDC/PF-125/2023 -

Date: 21.04.2023

TENDER FOR SUPPLY OF EQUIPMENTS
UNDER SERB RESEARCH PROJECT OF DR. VIJETH, PRINCIPAL INVESTIGATOR AND ASSISTANT PROFESSOR, DEPARTMENT OF PHYSICS, NAGALAND UNIVERSITY, LUMAMI

Name of the Firm : _____

Address : _____

_____

Phone No : _____

Email ID : _____

Sign & Seal

Programmable Spin Coating System

Technical Specification:

- Programmable Model ideal for Scientific Research Works
- PTFE coated SS Working Chamber of 200 mm Diameter
- Programmable Speed Range of 100-10,000 R.P.M [based on a Glass Substrate of Dimension 38 mm (L) X 25 mm (W) & Thickness 1 mm]
- Programmable Acceleration Period of 1-250 Seconds [based on a Glass Substrate of Dimension 38 mm (L) X 25 mm (W) & Thickness 1 mm]
- Programmable Acceleration Range of 40-5,000 R.P.M/sec [based on a Glass Substrate of Dimension 38 mm (L) X 25 mm (W) & Thickness 1 mm]
- Programmable Controlling Duration Range of 1-9,999 sec/step
- Real-time Display of R.P.M vs. Time in 4 Line LCD Display
- 2 User Programs available
- 10 Steps/Program available
- Warm-up Option available
- Calibration Option available
- Spill Drainage Facility available
- High-speed DC Motor for Fast Speed Reaching
- Non-volatile Program Memory
- User-friendly Firmware Interface
- N2 & other Inert Gas Purging Port available
- Integrated Power On/Off Switch available
- Integrated Vacuum Release Switch available
- Transparent Photo-resist Acrylic Safety Lid available
- Input & Controlling through Key-pad
- Indian Standard Power Input

Standard Oil-free Vacuum Pump

Technical Specification:

- Power: Indian Standard
- Vacuum: -560 mm/Hg. (Maximum)
- Flow Rate: 15 l/min
- Maximum Operating Pressure: 25 psi
- Horse Power: 1/20 HP
- Dimension: 150 mm x 110 mm x 140 mm
- No Lubrication required
- Noiseless
- Absolutely Portable
- Totally Oil-free Construction
- Practically Maintenance-free
- All Parts made from Special Graded Aluminium die-cast Material for Light Weight & Good Strength
- Diaphragms are made of Special Type Polynylon & Reinforced Neoprene Rubber
- Built-in Micro-suction Filter
- Extra-large Bearings for Trouble-free & Smooth Running

ELECTROCHEMICAL WORKSTATIONS SPECIFICATION

Configuration Design	Multichannel Electrochemical Workstation with 1 channels expandable up to 2 or more channels.
General Description	• Multi-channel Electrochemical work station for testing and evaluating Corrosion, super capacitor, solar cell , Fuel cell and All Battery components in single/multiple unit cells simultaneously with high accuracy and precision • Chassis: Multichannel Single Chassis • High Precision Columbic Efficiency Determination upto 10PPM • one channel should have Electrochemical Impedance Spectroscopy (EIS) measurements with Equivalent Circuit Modelling • Internal Resistance Determination • Software Controlled Data Acquisition with Minimum Sampling rate. •Floating mode and Ground mode both should be available. • EIS quality Indicator for measuring Total harmonic distortion and Noise to Signal ratio will be added advantage. • Options for measuring Ewe Vs ref and Ece Vs Ref both simultaneously • CE to Ground and WE to Ground both modes should be available • Onsite hardware calibration should be available
Specification for Channels	• Cell Connection: 2, 3, 4, 5 electrodes (+ ground) or more and atleast 1.5m Cell cable • Compliance voltage: 12 V or better per channel • Applied Voltage: ±10 V or better per channel • Maximum Output Current: ± 500 mA or better at ± 10 V per channel • Current Ranges: 10nA to 1A , • Accuracy of applied and measured current: 0,1% of FSR • Current resolutions: 10 pA on 10 nA range • Resolution of applied potential: 1μV on 60mV range • Voltage accuracy: 0.1 % of Full scale range • Potentiostat Rise/fall Time: <500nS • Frequency range: 10μHz to 7 MHz • Impedance accuracy of 1% & 1° at 1Hz • Input Impedance: 1TΩ • Gain bandwidth range of amplifier: 1 MHz • Bandwidth of Potentiostat: 8 MHz • Input bias current: 20pA • Acquisition rate: 100000 samples/second • Cyclic Voltammetry with scan rates 10 mV/Sec to 200V/Sec or better • Ac Amplitude: 0.5mV – 2.5 V

	• Interface for connection with PC: Ethernet LAN and USB • Local Area Network to access Multiple Computers • Possibility to upgrade to high current up to 30 A using booster
Complete software with following specification	•Galvanostatic Charge / Discharge (Including C rate control) with voltage vs. time Graph plots •Multigraph window capable of displaying up to 10 graphs within a single window •Customize variables graph plot for each axis •Voltage vs. Capacity plot during Charge/Discharge Cycles •Atleast 3 limits and 3 recording conditions per sequence/cycle (ability to limit a cycle or changeover to next sequence with Time, Voltage/Current, Charge/Power all simultaneously) Multiple recording conditions · Industrial CC-CV Method (Constant Current – Constant Voltage) •Cyclic Voltammetry, Current Scan (Current/Galvano Dynamic), Voltage Scan (Potentio Dynamic) Constant Power / Constant Resistance •GITT and PITT Techniques •Columbic Efficiency Determination with fitting tool •Current Interrupt •Rest Time •Multiple loops •Provision to connect and control External devices like Furnace, Thermal chambers •Monitoring status of each Channel using Global Table/Summary Table •Option to update the experimental setting parameters on current running experiment without pausing /stopping the channel/experiment •Profile Importation to study Urban Life Cycle Tests •Modify of the parameter while running experiment is possible •Analysis tools like Integral, Circular or linear fit and Electro chemical EIS -Z fit is available
Electrochemical Impedance Spectroscopy (EIS)	At least one channel should have EIS measurement facility with frequency range 10μHz to 7 MHz Real-time fit and simulation analysis as well as live data plotting option for simulation plot must be available as default software protocol. Real time needed for Lissajous curve, Nyquist, Bode, Admittance and Dielectric & Mott-Schottky. The fit and simulation software should include basic options such as find circle, element subtraction and an equivalent circuit library with all the modern EIS equivalent circuit models. Minimum visible plots in real time should be 8 or more. EIS Modelling with Equivalent Circuit Fits. Simultaneous impedance measurement at counter electrode and working electrode.
Accessories:	Glassy Carbon Working Electrode

	Pt. Working Electrode Ag/Agcl Reference Electrode(Aqueous) Ag/Agcl Reference Electrode(Non-Aqueous) Pt. Counter Electrode Teflon Cell Stand with glass cell
Computer	Latest computer with present configuration compatible with Instrument: i7 Intel Processor, 8-16GB RAM, 500 GB SSD, 19'' LED Monitor, Keyboard & Mouse.
Warranty	One Years Standard Warranty after installation and commissioning + 2 Year AMC free or 3 years manufacturer's warranty certificate.
Maintenance	The channels are plug & play type and easy to install or to be removed
Dummy Cell	Dummy cell to be provided for internal validation.