



# NAGALAND UNIVERSITY

(A Central University Estd. By the Act of Parliament No.35 of 1989)

Headquarters : Lumami - 798627

NO.NUL/RDC/PF-83/2018 -

Dated : 22<sup>nd</sup> February, 2019

## NOTICE INVITING TENDER

Nagaland University invites sealed tenders for Supply of Electrochemical Workstation to the Department of Chemistry, Nagaland University, Lumami under DST - SERB project. Interested parties may download the tender documents from the University website: [nagalanduniversity.ac.in](http://nagalanduniversity.ac.in) and submit their quotations along with tender fees of Rs. 1,000/- (non-refundable) in the form of DD in favour of Registrar, Nagaland University, Lumami in sealed envelop superscript on the cover "Tender for supply of Electrochemical Workstation to the Department of Chemistry, Nagaland University, Lumami under DST - SERB project" and addressed to the undersigned on or before 15<sup>th</sup> March, 2019 up to 4:00. P.M.. No tenders will be accepted beyond this date and time.


( Dr. Abemo )  
Registrar

NO.NUL/RDC/PF-83/2018 - 7291

Dated : 22<sup>nd</sup> February, 2019

Copy to:-

1. The P.A to Registrar for information of the Registrar.
2. The Finance Officer, Nagaland University, Lumami.
3. The System Administrator, NU, Lumami, with a request to upload the NIT in the University website.
4. 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.
5. Office copy.

  
( Dr. Abemo ) 22-02-19  
Registrar



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₹ 1,000/- (Non refundable)

TENDER DOCUMENT FOR SUPPLY OF ELECTROCHEMICAL WORKSTATION  
(MULTICHANNEL POTENTIOSTAT GALVANOSTAT) TO THE DEPARTMENT OF  
CHEMISTRY, NAGALAND UNIVERSITY, LUMAMI UNDER DST – SERB PROJECT

Name of the Firm : \_\_\_\_\_

Address : \_\_\_\_\_

\_\_\_\_\_

Phone No : \_\_\_\_\_

Email ID : \_\_\_\_\_

Sign & Seal



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## SUPPLY OF ELECTROCHEMICAL WORKSTATION (MULTICHANNEL POTENTIOSTAT GALVANOSTAT) TO THE DEPARTMENT OF CHEMISTRY, NAGALAND UNIVERSITY, LUMAMI UNDER DST – SERB PROJECT

Sl. No	Items	Manufacture/Make	Qty	Total
1	Electrochemical Workstation (Multichannel Potentiostat Galvanostat)		1 no	
2	GST rate			
3	Any other charges			

## Invitation of Tenders for Electrochemical Workstation (Multichannel Potentiostat Galvanostat)

### Technical Specifications

Multichannel System for upto 8 potentiostat-galvanostat in one single chassis. It should be possible to control all the channels through one PC or upto two PCs. System should have provision to perform EIS on each channel independently. Each channel should be capable to control hyphenated technique by external triggering such as RRDE, EQCM etc. through single software. Each channel should have following specifications. Price for each should be quoted separately.

**No. of Channels: 1 No.**

#### **Potentiostat Galvanostat Specifications:**

Compliance voltage:  $\pm 18$  V or better at  $\pm 350$  mA

Maximum Output Current:  $\pm 350$  mA or better at  $\pm 18$  V

Output Voltage Range:  $\pm 10$  V

Applied potential resolution:  $200\mu\text{V}$

Measured potential resolution:  $5\mu\text{V}$

Current Ranges: smallest current range:  $\pm 100\text{nA}$  to current range  $100$  mA in multiple ranges

Applied Current resolution:  $0.03\%$  of current range

Measured current resolution:  $0.003\%$  of current range

Potentiostat Rise/fall Time:  $500$  ns or lower

Interface: USB interface for connection with PC

Input bias current:  $< 1$  pA

Input Impedance of electrometer:  $>90\text{G}\Omega$

Analog integrator with time constants  $0.01\text{s}$ ,  $0.1\text{s}$ ,  $1\text{s}$  and  $10\text{s}$

iR compensation: current interrupt and positive feedback

Bandwidth of electrometer:  $>4$  MHz or better

#### **EIS module: Qty 1**

Signal generator frequency range should be  $10\ \mu\text{Hz}$  -  $10$  MHz, in combination with potentiostat-galvanostat should be  $10\ \mu\text{Hz}$  -  $1$  MHz. Frequency resolution  $0.003\%$ , Input range  $\pm 10$  V. Hardware and software for EIS measurements in potentiostatic and galvanostatic control, over frequency range of  $10\ \mu\text{Hz}$  to  $1$  MHz upto  $350$  mA current. Data presentation: Nyquist, Bode, Admittance, Dielectric, Mott-Schottky, Data analysis: Fit and Simulation, Find circle, Element subtraction.

#### **Current Booster:**

Current booster to enhance the maximum current of the system. Specifications: Max Compliance Voltage:  $\pm 18$  Volts, Maximum Output Potential:  $\pm 10$  Volts, Maximum Current:  $\pm 10$  Amp, Accuracy:  $\pm 0.5\%$  & resolution of  $0.003\%$ . Operation Mode: Potentiostatic and Galvanostatic.

#### **Electrochemistry Cell:**

It should consist of the following:

$50$  mL Glass cell with suitable lid 1 No., GC disc working electrode 1 No., Pt wire Counter electrode  $1$  mm dia  $40$  mm length 1 No., Ag/AgCl reference electrode.

#### **Electrochemical Software:**

Software should have facility to record additional signal viz. bi-potentiostat, pH, temperature etc. Import/export ASCII. Ready-to-use Vis & Generic interface for Net applications should be included. It should have facility to display up to 4 plots simultaneously. The software should support following basic electrochemical measurements: Cyclic Voltammetry, Sampled DC Voltammetry. Tafel Plots, Differential Pulse Voltammetry, Square Wave Voltammetry. Electrochemical methods like Chrono-Amperometry, Chrono-Coulometry & Chrono-Potentiometry.





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## 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. Bidder should have adequate After Sales Support Infrastructure.
5. EMD of 2% of the total quoted price in the form of DD should be deposited in favour of the Registrar, Nagaland University, Lumami.
6. A self addressed envelop should be enclosed along with the EMD.
7. 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 year from the date of installation. Defective items should be replaced at the cost of supplier.

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

  
22-02-19