



# तेजपुर विश्वविद्यालय / TEZPUR UNIVERSITY

(केंद्रीय विश्वविद्यालय / A Central University)

- कुलाध्यक्ष का सर्वोत्तम विश्वविद्यालय पुरस्कार, 2016 और एनआईआरएफ भारत रैंकिंग 2016: नं. 05
- Visitor's Best University Award, 2016 and NIRF India Ranking 2016: No. 05

कुल सचिव का कार्यालय / OFFICE OF THE REGISTRAR

तेजपुर-784028 :: असम / TEZPUR-784028 :: ASSAM

## SHORT QUOTATION NOTICE

TU/11-24/PUR/QTN/2016-17/1518. Date: 25.07.2016

Sealed quotations are invited from reputed manufacturers/authorized dealers/vendors for supply, installation & commissioning of following equipment required for a SERB-DST sponsored project of Dr. BK Kakati, Department of Energy, Tezpur University. Those who have participated against our earlier notice no. TU/11-24/Pur/Qtn/2016-17/1200 dated 28.06.2016 may submit their fresh offer/quotation without payment of EMD/Tender Fee

### Major technical specification of the equipment to be procured:

#### Electrochemical Bi-Potentiostat Galvanostat with integrated impedance analyser:

- Electrode configuration: 2,3,4 electrode system, excluding ground and sense (one RE, one CE, and two WEs for RRDE studies)
- Maximum compliance voltage:  $\pm 10$  V
- Input impedance:  $\geq 1$  T $\Omega$
- Input bias current:  $\leq 10$  pA
- Input bandwidth:  $> 10$  MHz
- ADC/DAC: 16 bit or more
- Data sampling speed: 100 kSamples/s or more
  
- Output potential:  $\pm 10$  V
- Potential resolution:  $\pm 50$  nV or less
- Potential accuracy:  $\pm 0.2\%$
  
- Current range:  $\pm 1$  pA to  $\pm 5$  A
- Current resolution:  $\leq 1$  pA
- Current accuracy:  $\pm 0.2\%$
  
- Galvanostat potential range:  $\pm 1$  mV to  $\pm 10$  V
- Scan rate (low limit):  $\pm 10$   $\mu$ V/s or less
- Scan rate (high limit):  $\pm 10$  kV/s or more
  
- Frequency range of EIS: 10  $\mu$ Hz to 5 MHz or more
- AC voltage amplitude: 1 mV or less to 1V or more (potentiostatic mode)
- AC current amplitude: 0.05% or less to 100% of current (galvanostatic mode)
  
- WE2 configuration: fixed potential vs RE as standard mode  
fixed potential vs WE1 in scanning mode
- WE2 maximum current: 25 mA or more
- WE2 current ranges: 1 pA to 10 mA
- WE2 current resolution: 1 fA or less



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- Peripheral connections: minimum 2 analog and 2 digital inputs  
minimum 2 analog and 2 digital outputs
- Calibration: factory calibrated, should have dummy cell for recalibration
- Interfacing: USB interfacing with GUI based control software
- Measurement techniques: Cyclic voltammetry  
Linear sweep voltammetry  
Pulse voltammetry

Chrono methods ( $\Delta t$  100 ns to 1ms)

Amperometry, Coulometry, Corrosion analysis, Tafel analysis  
iR compensation  
Electrochemical impedance at controlled voltage or current  
Nyquist and Bode analyses  
User defined techniques with sequential measurements

- Accessories: The equipment must come with all the required accessories.
- Warranty: The equipment should carry warranty for minimum 2 years.
- Installation: Installation, demonstration and user training at user's laboratory without any additional cost.
- Delivery: within 8-10 weeks from the date of receipt of order
- Price: The rate should be preferably quoted in Indian Rupee and F.O.R. Tezpur University, Napaam basis. For foreign companies currency conversion rate must be indicated in the quotation.

## **GENERAL TERMS & CONDITIONS:**

1. No separate tender paper will be issued from the office; one should only download the specifications/List from the website.
2. **The rates should be preferably quoted in Indian Rupee and FOR Tezpur University, Napaam basis. Charges for clearing and transportation should be incurred by the supplier.**
3. *Quotations should be accompanied by i) An EMD (in the form of Demand Draft/Call Deposit/TDR) of ₹. 5000/- (Rupees Five Thousand) only drawn/pledged in favor of Registrar, Tezpur University, payable at Tezpur. **No request for consideration of earlier deposited EMD will be considered.** ii) A non refundable application (quotation) fee of ₹.1000.00 (Rupees One Thousand) only have to be paid only by Demand Draft drawn in favour of Registrar, Tezpur University payable at Tezpur.*
4. The rates should be exclusive of taxes and applicable tax % should be clearly indicated.
5. Quoted rates should be valid at least for a period of 01 year.
6. The rates should be quoted along with supporting documents of specifications and technical features and list of users.
7. The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
8. All the quotations must be accompanied with supporting documents and / or literature.
9. Demonstration may be sought from the vendors for authentication of quoted specification.



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10. Details of availability of after sales support will have to be furnished. After sales support directly from manufacturer and from Assam (Guwahati / Tezpur) will be preferred.
11. The University is exempted from paying Custom and Excise duty.
12. Proprietary items should be quoted with sole Manufacturer/Distributorship certificate.
13. Warranty/Gurantee period should be specifically mentioned in the quotation.
14. No Advance payment will be made. However, for foreign supplier, advance payment will be made either by FDD/Wire Transfer/LC. In such cases 10% Performance Bank Guarantee should be submitted before issuing FDD/Wire Transfer/LC, covering the warranty period.
15. Performance Bank Guarantee also has to be submitted for Major equipments of Indian origin, covering the warranty period.
16. Items of Foreign origin should have Insurance up to installation on site.
17. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
18. Quoted price should be inclusive of essential accessories and should be CIF Tezpur University, Tezpur
19. Applications for release of EMD should be submitted to the Registrar/ Deputy Registrar.
20. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.
21. **Quotation should be submitted in the DROP BOX placed in the reception of the Administrative Building of the University within 10 days from the issue of the notice. If posted/couriered, should be reached within 10 days from the issue of this notice addressed to "The Joint Registrar (GA), Tezpur University". The Quotation Notice No. and date should be clearly superscribed in the the envelope/packet containing the quotation.**

Sd/- Joint Registrar

Tezpur University