

INDIAN INSTITUTE OF TECHNOLOGY GOA

At Goa Engineering College Campus

Farmagudi, Ponda, Goa 403401

E-mail: purchase@iitgoa.ac.in

Enquiry No: IITGOA/2018-19/036

Date: 11/12/2018

IIT Goa invites sealed quotations in two bid format for the supply of below mentioned items.

Sl. No.	Description of Item	Qty
1.	Potentiostat (Detailed specifications attached)	01 No.

Terms and conditions:

1. Quotation must be valid for at least 90 days.
2. The GSTIN should invariably be mentioned in your offer.
3. Price justification documents should be supplied along with the quote.
4. Kindly attach a compliance certificate along with the technical quote.
5. Supplier should provide one-year warranty and one-year AMC.
6. Supplier should quote AMC for 1 more year as option.
7. Prices should be quoted in Indian Rupees inclusive of taxes and any shipping charges.
8. Customs clearance has to be borne by the supplier and the instrument has to be delivered to IIT Goa. All the necessary documents for clearance shall be provided to you by the institute.
9. Hardware upgradation to any RDE, RRDE, CGME
10. Integration and operation to use as a Spectro-electrochemistry mode should be possible.
11. Software up gradation should be free for the life time and also for the additional techniques stated above.
12. Delivery and installation should be made within 4 weeks of getting a confirmed order.
13. Payment: 100% payment through wire transfer within 30 days after the delivery and installation of item at IIT GOA.
14. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.
15. IIT Goa reserves the right to accept and/or reject any/all bids without assigning any reason.
16. Quotations shall be submitted in two parts;
 - 1) **Part – I (Technical)** should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, proprietary certificates if applicable, any other certificates/details etc. This envelope should be marked as “Technical Bid”

- 2) **Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as “Financial Bid” and should contain financial terms and conditions.
17. For any clarification, you may kindly contact Dr. Bidhan Pramanick (e-mail: bidhan@iitgoa.ac.in) and Stores & Purchase Department (purchase@iitgoa.ac.in) till 21/12/2018.
18. All sealed quotations must reach to the Assistant Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa by 17.00 Hrs on or before 31st December, 2018”.

Sd/-
Asst. Registrar (S&P)

Specifications for Electrochemical Workstation:

Electrochemical Workstation Requirements:

Latest Windows 10-based Electrochemical instrument to perform the Bi-Potentiostat, Galvanostat, Impedance and Corrosion measurements and should have following techniques,

Following are the Techniques to be Included:

Bi-Potentiostat Techniques -

Cyclic Voltammetry with CV Simulation and Fitting Program,
Linear Sweep Voltammetry, Chrono Amperometry, Staricase Voltammetry, Differential & Normal Pulse and Square Wave Voltammetry along with Amperometric i-t Curve.

Galvanostat Techniques -

Chrono Potentiometry, Chronopotentiometry with Current Ramp,
Multi-Current Steps , Potentiometric Stripping Analysis.

Corrosion Technques -

Tafel Plot, Linear Polarisation, Cyclic Polarization, Pitting Corrosion, Corrosion current
Potentiodynamic deactivation/Polarization etc

Impedance Techniques -

AC Impedance with frequency Range of 10 μ Hz to 1 MHz,
Impedance – Time, Impedance – Potential, Impedance Simulation and Fitting program
Impedance Techniques should have capability to plot Interactive 3D Plots and various plots like
Bode, Nyquist, Admittance, Warburg, Mott-Schottky Plots Etc.,

Solar Plots

Current – E, Linear Pol Res, Solar Plot (Isc, Voc, Pwr Max (W), FF, Voltage max (V))

Other Techniques to be Included -

Open Circuit Potential – Time, Bulk Electrolysis with Coulometry, Chrono Coulometry, AC Voltametry,
Electrochemical Noise measurements and other Amperometric Techniques.

Accessories to be quoted in the main offer:

3 mm dia. Glassy Carbon Working Electrode
2 mm dia. Platinum Working Electrode
Calomel Reference Electrode
Ag/AgCl Reference Electrode (Aq/Non-Aq) – 1 Each
Platinum Wire Counter Electrode
Electrode Polishing Kit
1 Cell Stand with 5 Glass Cells

DAQ System :

Latest Windows 10 Branded Desktop Computer.

Software should also have the provision to perform all the above mentioned techniques along with data representations of Solar Plots, Corrosion, Impedance etc

Electrochemical Workstation Hardware Specification:

- Potential range: -10 to 10V
- Potentiostat rise time: < 1 μ s
- Compliance Voltage: \pm 12V
- Current range: upto 250mA or better at \pm 10 V
- Reference electrode input impedance: $1e12$ ohm
- Current Ranges smallest current range: \pm 10 pA (without gain amplifier) to current range 250 mA in Twelve ranges
- Current measurement resolution: 0.3 fA or 0.0015%
- Resolution of applied potential: 150nV or 0.0015%
- Minimum potential increment in CV: 100 μ V
- IMP frequency: 0.00001 Hz to 1 MHz
- IMP amplitude: 0.00001 V to 0.7 V rms
- CV and LSV scan rate: 0.000001 to 10,000 V/s
- CA and CC minimum sample interval and Pulse width : 1 μ s and 0.0001 to 1000Sec respectively
- Automatic and manual iR compensation
- Flash memory for quick software update
- Serial port or USB port selectable for data communication

General:

- 100% Payment through Wiretransfer will be done against successful Installation.
- Customs Clearance has to be borne by the supplier and the Instrument has to be delivered to IIT-Goa. We will provide you all the required documents for its clearance.
- Warranty – 1 Years and 1 Yr AMC should be provided

Others:

- Hardware upgradation to any RDE, RRDE, CGME
- Integration and operation to use as a Spectro-electrochemistry modes should be possible.
- Software up gradation should be free for the life time and also for the additional techniques stated above.
- Separately quote 1 more year AMC
- IIT Goa staffs should be trained at Factory.
- Atleast 20 similar units should be supplied in India.
- Provide Users list with contact numbers & e-mail id.