

DEPARTMENT OF CHEMICAL ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY DELHI
HAUZ KHAS, NEW DELHI – 110016

Ref No: IITD/ChemEng/RP02501

Dated: 21/3/2012

NOTICE INVITING QUOTATION

Sub: Purchase of an Electrochemical Characterization system

Sealed quotations in separate envelopes of technical and commercial bid kept in a one sealed outer envelope are invited for purchase of a '**Electrochemical measurement system**' as per specifications given below. Your sealed quotation should reach latest by 5.30 PM on 5/04/2012 to **Dr. A. K. Saroha, Department of Chemical Eng., Indian Institute of Technology Delhi (IIT Delhi), Hauz Khas, New Delhi - 110016**. Your quotation should be superscribed 'Quotation for **Electrochemical measurement system**' dated 21.3.12.

Specifications:

Electrochemical System (Potentiostat/Galvanostat) with FRA, PC interface and all necessary electrochemical softwares for data acquisition and analysis. The system should have the ability to perform conventional electrochemical experiments such as Cyclic Voltammetry, Potentiostatic, Galvanostatic, Square wave, open circuit, controlled potential electrolysis, chronoamperometry, chronocoulometry, chronopotentiometry, battery, fuel cell i-V characteristics, frequency response analyses etc.

All necessary information (data, standards, and reference material) for calibration of the instrument must be provided. PC along with necessary software, provision for data transfer to computer is preferred.

Essential Accessories:

Counter Electrode: Pt wire (1 nos)

Reference Electrode: Ag/AgCl Electrode and other ref electrode

Working Electrode: Glassy Carbon electrode (GC), Au, Pt

Glass cells (voltammetry) with cell stand and other necessary attachments;

Electrode Polishing Kit for GC etc.

Specs:

Applied Voltage Range: $\pm 10V$

Compliance Voltage: $\pm 20V$

Current range: $\pm 10\mu A$ - $\pm 800mA$

Current Resolution: 760pA

Voltage Resolution: 5 μV

Frequency range: 10 μHz -1MHz

Electrode configuration: 2, 3, 4&5 terminals

Auxiliary voltage inputs/output for connecting external devices to the Instruments like RDE, QCM, and Phmeter etc.

Interface: Ethernet.

Software techniques required.

Voltammetry techniques: OCP, Cyclic Voltammetry, Advanced cyclic Voltammetry, Chrono Amperometry, Chrono potentiometry linear sweep Voltammetry, Large amplitude sinusoidal Voltammetry, Galvano dynamic, Potentio dynamic, AC Voltammetry

Pulse Techniques: Differential pulse Voltammetry, Normal Pulse Voltammetry, square wave Voltammetry, Reverse normal pulse Voltammetry, Differential Normal pulse Voltammetry, Differential Pulse Amperometry,

Corrosion: Linear/Cyclic polarization, Generalized corrosion, Pitting, Tafel, ZRA (Noise), LPR, Rp. vs. Time, De-passivation potential. 2D 3D Views should be available.

Technique Builder: Modular potentio, Modular Galvano, Loop, Trigger in, Trigger out, Wait.

Impedance: Potentio EIS, Galvano EIS, Staircase Potentio EIS, Staircase Galvano EIS, Mott-Schottky, I R Compensation.

Battery testing/Photo voltaic Measurements/Fuel Cell measurements: Galvanostat cycling, Potentio dynamic cycling, Constant Load Discharge, Constant Power Discharge, Alternate pulse Galvano cycling, IV Measurement

Terms & Conditions:

1. The quotations must have validity of at least three months.
2. Quotation must include insurance and air-freight charges, delivery period of the items addresses to The Indian Institute of Technology, Delhi, India (both FOB and CIF, New Delhi).
3. The products will be used for educational purposes. Any applicable academic institution discounts should be offered and stated.
4. Detailed Brochures should accompany the offer.
5. If the bidder is an authorized dealer then the authorized Indian dealership certificate from the principles should be enclosed.
6. Warranty details must be given.
7. Payment will be through irrevocable letter of Credit.
8. In case the items are proprietary products of the company, a proprietary item certificate stating the same must be provided.
9. Installation and Training should be provided free of cost.
10. Institute reserves the right to accept or reject any or all the quotations without assigning reasons thereof.

Chairman, PFC