



INDIAN INSTITUTE OF INFORMATION TECHNOLOGY DESIGN AND MANUFACTURING KURNOOL

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(An Institute of National Importance under Ministry of Education, Govt. of India)

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INVITATION FOR QUOTATIONS

Ref No: IIITDMKLN/2021-22/ECE/Electrochemical Workstation/11; Dated: 23/07/2021

Dear Sir,

Sub: Supply of **ELECTROCHEMICAL WORKSTATION** - quotation invited -Reg.

Please send your lowest quotation to supply the following item(s). The quotation is to be sent (by Speed post or Registered post only) in a sealed envelope addressed to "Director, IIITDM Kurnool, Jagannathagattu, Dinnidevarapadu, Kurnool-518007, Andhra Pradesh" superscribing the above reference number clearly on the envelope.

The last date to receive the sealed quotation is **23 August.2021**.

SI. No.	Description of the material/Item	Approx. Quantity
1	<p style="text-align: center;">Specifications for Electrochemical workstation and Accessories</p> <p>A. Electrochemical Workstation:</p> <p>Should Include potentiostat / galvanostat/FRA, cell setup & power supply unit FPGA and DSP control with high speed capability.</p> <p>High performance impedance measurements over the frequency range 10uHz to 1MHz. Zero resistance ammeter to measure max. 1Amp</p> <p>Data Safety: When communication failure between PC and instrument occurs, running channel should continue the experiments and save the data into instrument memory at least 200,000 data point set. Once the communication is recovered instrument should transfer saved data to PC. This function is essential for our long time experiment.</p> <p>Specification: PC communication USB or LAN Power supply 230VAC, 50 as per Indian standard conditions. Cell cable: 1meter shielded type, Working, reference, counter, working sense, AuxV Scan rate: 0-5000V/sec or above Power amplifier Power 12Watts or more Compliance voltage ±12V Slew rate 10V/usec Applied voltage range ±10V, ±1V, ±100mV Applied Voltage resolution 16 bit Applied Voltage accuracy ±1mV Current measurement Current ranges: 11 ranges, 1nA ~ 100pA Auto/Manual Measured Current resolution 16 bit; 3fA min</p>	01

Control current range Max. $\pm 1A$
Applied Current resolution 16 bit; 3fA min
Measured Voltage ranges 10V, 1V, 100mV
Measured Voltage resolution 16 bit; 12uV min
Input impedance $2 \times 10^{13} \Omega$
Bandwidth $> 22MHz$
FRA Frequency range 10uHz ~ 1000KHz or more
Frequency resolution 5000/decade
Amplitude 0.1mV ~ 5V rms (Potentiostatic) 0.1 ~ 60%
f.s(Galvanostatic) or more
Auxiliary voltage inputs : 1 analog Inputs: $\pm 10V$
One external dummy cell should be provided

Software Techniques:

- Potentiostatic
- Galvanostatic
- Double step potentiostatic
- Double step galvanostatic
- OCP measurement
- Potential sweep
- Current sweep
- Cyclic voltammetry
- CA(Chronoamperometry)
- CC(Chronocoulometry)
- CP(Chronopotentiometry)
- LSV(Linear sweep voltammetry)
- SDV(Sampled DC voltammetry)
- Fast CV
- Fast LSV
- Tafel(Tafel experiment)
- Rp(Polarization resistance)
- Potentiodynamic
- Galvanodynamic
- Cyclic polarization
- Ecorr vs. time
- Variable scan rate CV
- Potentiostatic IV curve
- Galvanostatic IV curve
- Steadystate CV
- GITT
- PITT
- Potentiostatic EIS
- Galvanostatic EIS
- Pseudo galvanostatic EIS
- OCP EIS
- Potentiodynamic PEIS
- Galvanodynamic GEIS
- Potentiodynamic HFR
- Galvanodynamic HFR
- Potentiostatic HFR monitor
- Galvanostatic HFR monitor
- Multisine potentiostatic EIS
- Multisine galvanostatic EIS
- Intermittent potentiostatic EIS
- Intermittent galvanostatic EIS
- Sequential Editor for pulse generation: uni polar , bipolar , etc

DC Data Analysis software & EIS data Analysis is essential

	<p style="text-align: center;">B. Accessories :</p> <p>1 Faraday Cage With stirrer, Purge facility. 20ml Glass vial 4 Nos ,</p> <p>2. Glassy carbon working electrode e- 3/Pack 3mm dia , Teflon cover</p> <p>3. Ag/Agcl reference electrode e 3/pack</p> <p>4. Pt disc working electrode e 3/Pack 2mm dia , Teflon cover</p> <p>5. Pt wire counter electrode 3/Pack</p> <p>6. Universal cell holder</p> <p>7. Calomel reference Electrode 3/pack</p> <p>8. Photoelectrochemical cell Glass Reservoir- 1 No. Volume ~50ml Silicon cap for all 3 ports Quartz window 20mm dia MOC: Glass , Silicon , Teflon , Quartz , SS Pt wire Coil Electrode 25Cm Length pt wire with gold plated contact pin Mounted in PEEK- 1 No. Sample Size max 25 x 25mm Sample Shape: any shape Black box</p> <p>10. Copper Alligator Electrode holder</p>	
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Note: The supplier should deliver & install the instrument setup in out lab. Installation should be carried out by the experienced engineer, so that the application of corrosion & EIS for Bare & coated samples with EIS fitting should be demonstrated. One year warranty is essential.

While sending your lowest quotation, please specify the following:			
1.	GST (Inclusive/Exclusive) Indicate prevailing tax on percentage basis.	:	
2.	Customs Duty	:	

3.	Rates: a) F.O.R. Destination/ Ex-works. b) Estimated Packing, Forwarding and Freight Charges in case of Ex-works only, may be mentioned on percentage basis.	:	
4.	Insurance (Inclusive/Exclusive) Indicate prevailing rate on percentage basis.	:	
5.	Preferred terms of payment (As per the institute norms, Full payment within 30 days from the date of receipt of the material, inspected/commissioned and found satisfactory with regard to quality, quantity and specifications ordered.)	:	
6.	Recommended mode of transport	:	
7.	Discount offered, if any	:	
8.	Validity of the offer	:	
9.	Warranty Period	:	
10.	Indicate whether any AMC support is given after completion of warranty period. If so, the AMC charges may be mentioned on percentage basis	:	
11.	Firm schedule of delivery	:	
12.	Detailed drawings/ catalogues / Leaflets/ literature/samples may be furnished wherever feasible/ required.	:	
13.	Please mention the Reference number and name of the item(s) (in brief) on your envelope when submitting your quotation to the Institute.		
14.	Please note that the Institute reserves the right to modify or alter the specifications and also to reject any or all the Quotations without assigning any reasons thereto.		
15.	The Institute is not responsible for delays / loss in postal transit or due to any other reasons.		
16.	Earnest Money Deposit (EMD) details (if any)	:	17,600/-

Sd/-

FIC (S&P)