

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE

2A & 2B, Raja S.C.Mullick Road, Jadavpur, Kolkata-700032

Tender Notice No: IACS / Mat. Sc. / Prof. Pradhan / 2016-17 /04 Date: 12/05/2016

Sealed tender in two bids system (technical bid and price bid) is invited from bonafied, resourceful, and eligible manufacturer/exclusive distributor/vendors for Photoelectrochemical Work Station

Part-I (Technical Bid) of the tender should contain technical specifications in detail as well as commercial terms and conditions. Part-II (Price Bid) should clearly indicate group-wise price as mentioned in the technical bid. The Technical Bid and Price Bid are to be submitted in separately sealed envelopes, distinctly marked accordingly and both to be put inside another envelop, that should be sealed and superscribed with tender notice no. and due date. The bidders may submit bids duly signed in their own letterheads.

Completed tender bids should reach the office of **Department of Materials Science, Indian Association for the Cultivation of Science (IACS), 2A & 2B Raja S. C. Mullick Road, Jadavpur, Kolkata-700032** on or before the scheduled date and time specified below:

Tender Notice No.	Tender Notice No: IACS / Mat. Sc. / Prof. N. Pradhan / 2016-17 / 04 Date: 12/05/2016
Last date and time of submitting tender	17/06/16, 12 noon
Pre-bid meeting to discuss technical specification	8/06/16, 4:00 PM (Room no 123A, IACS)
Date and time of opening tender	17/06/16 3:00 PM
Place of opening tender	Room no 123 A, IACS
Contact	Email: camnp@iacs.res.in Tel.+91 33 2473 4971 [Ext. 1733]

The technical bids will be opened first to judge/evaluate the technical specifications of the said instrument thereafter the price bids of only technically qualified bidders will be opened.

Technical Bid Evaluation: The Technical Bids will be evaluated in the presence of the representatives of intending bidders who will be able to clarify technical aspects of their bids, if any, required by the Technical Evaluation Team.

Opening of price-bid: The Price Bids of the bidders qualifying the technical bid will only be opened, the date of which will be intimated to the short-listed bidders at their email addresses. The rest of the bids will be rejected.

Please note that IACS will not provide any accommodation or reimburse any expenses to any of the bidders for attending opening of technical bid.

1. TECHNICAL BID

The technical bid should contain technical specifications and should be kept in a separate sealed envelope duly super scribed as 'TECHNICAL BID' on the outer cover of the envelop as already detailed above. This has two parts and quotation can be submitted with single or both parts. This should be clearly mentioned on the envelope.

Technical Specification for Photoelectrochemical Work Station

Part A: Electrochemical Workstation

Specification for Electrochemical Workstation (Bi-potentiostat) with RRDE Controller & Accessories

System Specification

- 2- or 3 or 4 electrode configuration
- Maximum potential: ± 10 V
- Maximum current: ± 250 mA continuous (sum of two current channels) or better
- Compliance Voltage: ± 12 V or better
- Voltage Resolution : 1 μ V or better
- Current Resolution : 760 fA or better
- IMP frequency: 10uHz to 1 MHz
- Scan rate: 1 μ V/s to 10,000 V/s, two channels simultaneously or better

Techniques

- Cyclic Voltammetry (CV)
- Linear Sweep Voltammetry (LSV)
- ChronoAmperometry (CA)
- ChronoCoulometry (CC)
- Bulk Electrolysis with Coulometry (BE)
- AC Impedance (IMP)
- Impedance – Time (IMPT)
- Impedance – Potential (IMPE)
- Open Circuit Potential – Time (OCPT)
- RDE control (0-10V output)
- Limited version of CV simulator
- IR Compensation
- External Potential Input
- Auxiliary Signal Measurement Channel

Photovoltaic studies

Software provision for measurement of I-V measurements, I max, Pmax, Fill factor etc

Electrode:

- 2 glass cell(50ml)-2Nos
- one cell top
- Pt Working Electrode-1Nos
- Ag/AgCl reference (aq)-1Nos
- Pt wire counter electrode-1Nos

- RDE GCE GlassycarbonDisk Electrode – 1Nos
- RRDE Pt Ring/GC Disk Electrode – 1pcs

RDE/RRDE Set up

System should be Operable as RDE and RRDE when required. Remote- and manual-controlled rotation and gas purge. Small sample volume (up to 10 - 15 mL). Gas line connector should available. Cell lead connects to all Potentiostat should available. Open architecture for easy access to cell, Compact design & easy operation

Specifications

- Rotational range: 100 to 8,000 rpm
- Setting resolution: 1 rpm
- Accuracy: <0.1%
- Rotation control type: PLL (Phase-locked loop)
- Band width: 60 Hz at 3,500 rpm base and 1,000 rpm peak-to-peak modulation
- Power: 100-240 VAC, 50/60 Hz
- Operating temperature: 10 to 50°C

Accessories

- Sample vial (100 mL)
- Spin coating adaptor
- Male connector for gas purge (PP)
- TYGON tubing, OD1/4 x ID1/8
- RRDE-Sillicon sheet 100 x 180 mm
- O-ring for RRDE-3A shaft assembly - 3pcs
- O-ring for RRDE-3A Bearing assembly - 3pcs
- Power supply cable
- Instruction manual

Computer

System configuration: Core- i3 Processor, 4GB RAM, 500GB Hard Drive, 19" LED Monitor, DVD Writer, Keyboard, Mouse & Speaker.

Warranty: 3 year

Service Facility: Supplier should mention their details of service setup and man powers in Kolkata, Response time should be within 24 hrs

Part B: Light Source

450 Watt Xenon Arc lamp source, Ozone Free

Light Source

-Should include necessary lamp housing, Power Supply etc.

-Output should be collimated.

- Preferably Lamp housing should accommodate different lamps or different wattage of lamps.
- Should have necessary safety interlocks and heat removal accessories.
- CE certified and should comply with RoHS.
- Power Supply should be variable and should have constant Power & Constant intensity modes.

Output Beam Size	50 +/-5 mm
Output Voltage Ripple	< 0.2 % rms
Line Regulation	0.05 %
Light Ripple	<2 % rms
Transmittance Range of Lens Material/Light Source	250 - 2500 nm
Condenser Type	F/1 or better
Approximate output Flux	28000 Lumens
Desirable Output intensity at 3 inch distance	1000 Watt/cm ²
Average lifetime of Xenon lamp	1000 hours min.

Warranty: 3 year

Service Facility: Supplier should mention their details of service setup and man powers in Kolkata, Response time should be within 24 hrs

Technical compliance chart should be provided following format

Sr. No	Tender specification	Your offered instrument specification	Extent of compliance

Tender will not be accepted if the technical compliance chart is not provided following the above format.

2. PRICE BID The financial bid indicating (item-wise) price for the item(s) mentioned in the technical bid should be kept in a separate sealed envelope duly super scribed as 'PRICE BID' on the outer cover of the envelop as already detailed above. Price bids of only technically qualified bidders will be opened and they will be intimated the date and time of the opening of price bid at their e-mail ids. Rest of the bidders will stand rejected.

PRICE: Price to be quoted on CIF Kolkata and also FOB basis.

3. BID SECURITY:

a. An Account payee Demand Draft/Pay Order for Rs. 40000(fifty thousand only) (Rs 20000/- for Part A and Rs 20000/- for Part B) drawn in favour of "Indian Association for the Cultivation of Science" is to be furnished by the bidders except those who are registered with the Central Purchase Organizations, National Small Industries Corporation or the concerned Ministry or Department, as Bid Security money or Earnest Money Deposit (EMD).

b. The Demand Draft for the Bid-Security should have at least 90 (ninety) days validity period of opening of the bids.

c. In case of non-award of the work the Bid Security money would be returned to the unsuccessful Bidders.

4. PERFORMANCE SECURITY: An Account Payee Demand Draft of 10% of the order value in the name of "Indian Association for the Cultivation of Science" is to be furnished by the successful bidder as Performance security. Performance security money should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the supplier including warranty obligations. Bid security money will be refunded to successful bidder on receipt of the Performance security money.

GENERAL INSTRUCTIONS

1. Validity of tender: Tender submitted should remain valid for at least six months from the date of opening the tender. Validity beyond six months from the date of opening the tender shall be by mutual consent.
2. The tender should accompany a compliance chart.
3. Incomplete and conditional tenders as well as tenders received after the due date will be summarily rejected without assigning any reasons thereof.
4. At any time prior to the bid due date, IACS may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder during pre-bid meeting, modify the bidding documents. The amendment(s) will be notified on the institute website. Prospective bidders are advised to occasionally to visit the website (www.iacs.res.in/tender) for any amendment.
5. Payments: 100% against delivery and successful installation or in advance subject to submission of performance guarantee.
6. Installation/Demonstration/Application training at site: Installation & user training at IACS, free of cost by the supplier.
7. Service facility: In Kolkata, supplier should mention their details of service setup and man powers who are responsible for after sales support. Response time should be within 24 hrs.
8. The model number, make and a printed literature of the product shall submit positively.
9. Proposed delivery schedule should be mentioned clearly.
10. Manufacturers / exclusive distributors / vendors should have history of supplying this type of instruments to this or other scientific organizations.
11. Authorised dealership certificate should be provided in case of principal manufacturing company is not quoting directly.
12. Guarantee certificate, users manuals etc. are to be handed over to the user after successful commissioning of the system.
13. In the event of date being declared a closed holiday for purchaser's office, the due date for submission of bids and opening of the technical bids will be the following working day at the appointed time.
14. In case of any dispute, the decision of IACS authority shall be final and bidding on the bidders.
15. For any clarification regarding technical specifications, information etc., please send your queries to Narayan Pradhan (camnp@iacs.res.in)

16. . The authority of IACS reserves the right to reject any or all of the tenders received without assigning any reason thereof.

Registrar (Acting)