University of Mumbai - Department of Atomic Energy
CENTRE FOR EXCELLENCE IN BASIC SCIENCES
Nalanda, University of Mumbai, Vidyanagri Campus, Santacruz (E),
Mumbai 400098.
Web: www.cbs.ac.in email: purchase@cbs.ac.in

Tender No. CBS/CA025-014 **Date : February 6, 2026**

Dear Sir/Madam,

Please send us your lowest quotation for the following requirements:

Sr. No.	Description of Material	Qty.
1.	**Spectro electrochemistry work station** **Specifications mentioned below**	01

Note :

1. You are requested to submit the tender in two parts i.e. technical and financial bids in separate envelope.
2. Pre-bid meeting for the above requirement is arranged on 12th Feb at 11 AM in Nalanda Building, UM-DAE CEBS, University of Mumbai, Kalina Campus, Santacruz East, Mumbai.

Your quotation should indicate make, delivery period, exact taxes applicable and delivery charges, if any. CEBS is an educational institution hence, kindly give an educational discount. **Quotation to be submitted in a sealed envelope** duly superscripted with enquiry No. and date. Your GST Registration Number should be quoted in the quotation.

The due date for submitting your offer against this enquiry is February 23, 2026.

Specifications:

Spectro-electrochemical Measurement System (UV–Vis-NIR Region): Modular spectro-electrochemical system to monitor the absorbance of oxidized, reduced species during redox reactions, having provision for Fluorescence measurement of reduced or oxidized species.

1. Spectrometer with following specifications

- Cooled diode/CCD array 1024 X 58
- Grooves 300 lines/mm blazed at 500 nm;
- Wavelength Range 210-980 nm
- Grating grooves 300 lines/mm
- Blaze Wavelength 500 nm
- Entrance SLIT 25 (also 5µm slit)
- Optical Resolution: 2.1 nm FWHM or lesser
- USB interface and USB cable
- SMA connector
- Detector cooling: -25° C from ambient to improve S/N ratio
- Well capacity about 65,000 counts
- Measurement time: few ms to seconds

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- F-Number (configuration dependent) f/4
- Number of Pixels (effective) 1024
- Scan Rate (non-buffered) 98 Hz
- Dynamic Range (Single Scan) 85,000:1
- Signal-to-Noise (Single Scan @ 10 ms) 1000:1
- Dark noise (@ minimum integration time) 2.5 counts or lesser

2. Light source D2/W light source with @650 nm alpha line suppression should be supplied with Shutter, SMA 905, trigger for dark correction

Nominal Bulb Power	25 W (deuterium), 20 W (tungsten halogen) or more
Typical Output Power	175 µW (deuterium bulb) or more 600 µW or more (tungsten bulb)
Source Lifetime	1000 hours or more
Stability of Light Source Output	≤0.1%/hour @ 254 nm, ≤0.1%/hour @ 700 nm

3. Flexible Optical Fibers: 400 µm Silicone monocoil cladding Premium Fiber (2 No), UV/VIS, 2 meters and 200 µm Silicone monocoil cladding Premium Fiber, UV/VIS, 2 meters (2 Nos)

4. Cuvette holder with provision for absorbance 180° and 90° either illumination of 405 nm (or other wavelengths) for photochemical or luminescence applications, collimators as required, 10 mm path, filter holders, integrated cover 200-2000 nm, enclosure to block stray light.

5. 405 laser 3mW with power adapter for excitation of anions

6. (i) Spectro-electrochemical cell for absorbance/Transmission & fluorescence
(ii) Cell for fluorescence with electrodes: Spectro-electrochemical Cell with Teflon cap for 90 deg, with provision for counter, reference and working electrode

7. Fluorescence Cuvette: Made of quartz, 10 mm pathlength, 3,5 mL, with Teflon cap

8. Spectro electrochemical Pt Grid electrode:
a) Pt. Grid 3cm x 1.2cm square, total height 6 cm Pt. rod 1mm
b) Pt. Wire Counter for SPEL 1mm thickness x 6 cm height. Approx weight ~ 2.7 grams
Purity 99.95% minimum
c) Reference electrode with frit
Provision for inert gas purging

9. Excitation Lasers
a) Laser (780 ad 840 nm) with SMA connector of 3mW and power supply
b) LED 275 nm Power Dissipation 1 W, Forward Current: 100 mA, Maximum Current: 130 mA, Wavelength range: 265 -285 nm
c) Led 365 nm for excitation with SMA connector, Forward Current 800 mA, Pulse Forward Current 1200 mA, Power Dissipation 1-3 W, Wavelength range 355-375 nm

10. Software: Software should allow to design custom measurement procedures. This is to ensure experiments can be repeated with same parameters as per previous modules created. System should have below features: Absorption/Reference/Emission/PL software.

11. Potentiostat: Zero resistance ammeter, 3- or 4-electrode configuration, Maximum potential: ±10 V or more, Maximum current: ±250 mA continuous, Potentiostat rise time: < 1 µs, Applied potential ranges (volts): ±0.01 to ±10, Applied potential resolution: 0.0015% of potential range, Applied potential noise: < 10 µV rms, Measured current range: ±10 pA to ±0.25 A, Measured current resolution: 0.0015% of current range, etc. **Electrometer**: Reference electrode input impedance: $1x10^{12}$ ohm, Reference electrode input bandwidth: 10 MHz, Reference electrode input bias current: <= 10 pA @ 25°C

12. Software for cyclic, linear voltammetry, DPV and fixed potential and other experimental techniques.

13. Computer and accessories: Computer i7 with latest configuration should be provided with 22-inch monitor.

14. Any other item: Items such as chiller, UPS etc. should be quoted as optional.

15. Warranty: Comprehensive warranty for 3 years at no extra cost.

16. Supply of the instrument installation and commissioning of the equipment at the users' site, demonstration of the instrument at users' site, statement for service support after satisfactory installation and demonstration at the site.

17. Terms and Conditions

a) The entire system should be of single or multiple principle(s) (manufacturers), however, quotation should be provided by their authorized distributors only.

b) *Users list:* Should provide minimum 3 no's of Performance Certificates of similar systems from Premier government institutes, State/Central Universities, CSIR Labs, IITs, TIFR, BARC etc.

c) List of Users of the Quoted System with Phone no, Email id should also be enclosed

d) *On-site Training & Demonstration:* Operational training & demonstration programme should be provided onsite by the vendor as and when required by the user scientists

e) The offer should clearly mention the Part No and Model Quoted along with the technical specifications. Original brochures and specification sheets should be enclosed in the technical bid of the offer.

f) Compliance report to be submitted in a tabulated and point wise manner clearly mentioning the page number of original catalogue / data sheet.

g) Vendor to provide a copy of Site-Preparation checklist