

Kindly send a quote for the following item on CIP Bangalore basis. Your quotation should clearly indicate the terms of delivery, delivery schedule, payment terms etc. The tender should be submitted in two separate sealed envelopes - one containing technical bid and other containing commercial bid, both of which should reach us, duly signed on or before 17.00 hours, 15th December 2019. This is an amended specification for the XPS equipment.

Please enclose a compliance certificate along with the technical bid.

Chairman
Department of Inorganic and Physical Chemistry

Specification for X-ray photoelectron spectrometer (XPS) capable of analyzing angular resolved measurements (including tilt mechanism / module)

1. Analysis Chamber: Base pressure < 10^{-10} mbar; Differential pumping – Turbo / ion pump
2. Load lock (optional) / Sample preparation chamber:
 - a. Independently purged (< 10^{-9} mbar or better)
 - b. Manual / automatic gate valve – to access the analyzer chamber
 - c. 4 axis manipulator
 - d. Calibration samples – Ag, Au and Cu foils
 - e. Phosphorescent sample for X ray spot alignment
3. Ion source:
 - a. Ar ion source for depth profiling and cleaning – beam alignment and focus mechanism
4. Charge compensation for insulating samples – details to be given
5. Sample holder:
 - a. At least four samples (to be simultaneously introduced in the analysis chamber) – Manual / automatic sample transfer mechanism - X, Y and tilt
 - b. 4 axis sample stage
6. Sample transfer mechanism for air sensitive materials – vacuum transfer
7. Sample viewing option – details to be given – rapid imaging to help in alignment
8. Source:
 - a. Al K(alpha) Monochromatized
 - b. Spot size – minimum 1 mm (or lower)
9. He (I) and He (II) UV PES
10. Water chiller circulation unit – with regulator and flow control
11. Compressor / gas cylinders along with regulators
12. Analyzer and detector:
 - a. Hemispherical
 - b. Energy resolution < 10 meV (FWHM)
 - c. Detector CCD – MCP
 - d. Fixed and scan modes
 - e. Pass energy, 1eV onwards
 - f. High S/N ratio; Achievable S/N ratio to be mentioned

13. Electronics: Appropriate electronics with low noise and drift levels
14. Software:
 - a. Spectrometer control and analysis software
15. Bake out of the entire system -- 150 C
16. Spares:
 - a. Sample holder / gaskets etc.
17. Interface to connect to glove box
18. Warranty: Three years
19. Installation and Training by trained personnel on site

The following are the optional items that need to be quoted separately.

20. Kelvin probe measurement to be included (bias module) along with sample holder and calibration for work function measurements
21. Sample holder:
 - a. Heating – 1000 C
 - b. Cooling - Liquid N₂ temperature
 - c. Appropriate heating power supply and cooling control
22. Source:
 - Mg/Al twin anode
23. Options: Auger and EELS
24. Possibility of gas dosage – sample preparation chamber

Terms and conditions:

1. The vendor should have a track record of having previously supplied similar equipment in India (please furnish the details).
2. The vendor should have qualified technical service personnel for the equipment.
3. The payment will be through confirmed irrevocable Letter of Credit.
4. The lead time for the delivery of the equipment should not be more than three months from the date of receipt of our purchase order.
5. The price quoted should include must carry a comprehensive warranty of 3 years from the date of installation. Additional warranty for 2 years (total of 5 years) may be given as an option.