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PERIYAR UNIVERSITY

(Reaccredited with 'A' Grade by the NAAC)

PERIYAR PALKALAI NAGAR
SALEM – 636 011.

RE-TENDER NOTICE

Advt. No. PU/R/RUSA Fund/Equipment Purchase-2/139-2018 Date: 26-04-2018

Sealed tenders will be received by the Registrar, Periyar University, Periyar Palkalai Nagar, Salem – 636 011 up to 2.00 P.M. on **28-05-2018** for the **Purchase of Single Crystal X ray Diffractometer (SCXRD) Equipment for Periyar University** from reputed firms. The intended tenderers should show their credentials and get concurrence of the Registrar before purchase of tender schedules. Tender schedules can be had from the undersigned from **27-04-2018** to **25-05-2018** between 11.00 A.M. and 4.00 P.M. on payment of demand draft drawn in any nationalized bank in favour of **"The Registrar, Periyar University, payable at Salem"** as detailed below. Tender should reach this office on or before 2.00 P.M. on **28-05-2018**.

Tenders to be opened on **28-05-2018** at 3.00 P.M. in our office

The EMD in the form of demand draft should be drawn in any Nationalized bank in favour of the Registrar, Periyar University, payable at Salem.

Sl. No.	Description	Qty.	Cost of tender documents (Including GST 12%)	EMD Rs	Time of completion of supply
1.	Single Crystal X-ray Diffractometer (SCXRD)	01	Rs. 16,800/- (Cost-Rs. 15,000/- + GST 1,800/-)	EMD at 1% of the Instrument Value	3 Months

(Specifications are Overleaf)

REGISTRAR

Specifications and requirements for Single Crystal X-ray Diffractometer

Automated floor mounted Single Crystal X-ray Diffractometer system (SCXRD) with ergonomically design large enclosure for easy access of goniometer and crystal mounting and sufficient for small molecule single crystal data collection and structure determination of wide range of inorganic, organic and organometallic compounds. The specification and requirements for the SCXRD is as follows.

X-ray source	**Generator:** Computer controlled X-ray generator . Power rated output: 1.0 kW or better **Stability**: < 0.01% for current and voltage for 10% or more variation in line voltage. **X-ray tube** : Sealed Mo Kα radiation with fine focus. Possibility of SCXRD system use with Cu X-ray radiation tube should be an upgradable feature **Cooling :** Suitable cooling facility as per the SCXRD system design requirements. **Safety :** Radiation safety enclosure.
Optics	Monochromator: Graphite monochromator for Mo Kα radiation and Collimators of different diameter. All the necessary optic/accessories must be included.
Goniometer	Fully automated horizontal Goniometer with good positioning accuracy 0.01° or better and good slew speed (0.010°/min to 20000°/min) Accuracy: 0.005° or better Reproducibility: 0.0005° or better The goniometer must be built in such a way that the extended directions of the axes intersect at a point, with an error not greater than 10 microns.
Video microscope	The system must include a color video microscope to magnify the crystal, to capture screen frames and to measure and index crystal faces coupled with provided software for the required motion video. For numerical absorption correction, the software should allow the indexing of crystal faces by interactive use of video pictures or movies of the crystal investigated.
Detector	HPAD/CMOS large area air cooled maintenance free detector with an active area 45 cm^2 or more. Detector track should allow possibility of varying the sample to detector

	distance with minimum of 45 mm to maximum 150 mm or better. Pixel size : Should be in the range of 75-100 microns with Quantum gain (electrons) for Mo – 225 or more. Demagnification 1:1 (no taper) and shutterless operation.
Test sample	Mounted test crystal on separate goniometer head. Steel ball mounted on a pin for instrument alignment.
Computer	Latest Windows or Linux operating Desktop computer for Diffractometer control, Data integration, Storage and Structure solution.
Software	Essential software for diffractometer control, measurement and data analysis. The software should be able to perform complete data acquisition, data reduction, scaling, space group determination, structure determination and final report generation including Auto structure solution.
UPS	Suitable online UPS for un-interrupted data collection of up to one hour. The UPS should be CE certified and have a manufacturer's warranty for 3 years. Manufacturer warranty on batteries for 3 years or more.
Low temperature Attachment	For cooling the sample, a provision for low temperature attachment is required (for future addition).
Safety	Fully X-ray protected enclosure as per international safety norms. The system must display an up-to-date CE marking, accompanied by a correct CE Declaration of Conformity and all required documentation.
Other Items	(i) Capillaries of different dimensions (ii) XYZ Goniometer head (2 nos.)
Warranty	3 years comprehensive