#### REF: PPH/AGH/2017-18/010

## Tender Notification for the procurement of a Closed Cycle Optical Cryostat with compatible Electromagnet (Last Date for submission of tenders: 8 September 2017)

Kindly send your best quotation for the following item on C.I.P. Bangalore basis. Your quotation should clearly indicate the terms of delivery, delivery schedule, E.D., payment terms etc. The tender should be submitted in two separate sealed envelopes - one containing the technical bid and the other containing the commercial bid, both of which should reach us, duly signed on or before 1700 hours 8 September 2017.

Please enclose a compliance certificate along with the technical bid.

Yours Sincerely, Chairman Department of Physics

#### Separate labelled and sealed technical and commercial bids should be sent to:

Prof. Arindam Ghosh Professor Department of Physics Indian Institute of Science Bangalore - 560012, India

# Specifications of the product – Closed Cycle Optical Cryostat with compatible Electromagnet with the following components and minimum specification:

- 1. Air cooled closed-cycle Optical cryostat with magnet with temperature range from  $\leq 3.5$  K to  $\geq 350$  K.
- 2. Maximum peak-to-peak temperature variation allowed: +/- 10 mK. Provide sufficient supporting information.
- 3. Peak-to-peak sample stage vibration to be less than 10 nm. Provide sufficient supporting information. Vendor should provide the factory test report for the supplied system.
- 4. There must be at least 5 optical ports in the Cryostat. Option should be there to have Calcium Fluoride windows for these optical ports. The top optical windows should have a working distance of  $\leq 2$ mm.
- 5. Calibrated temperature sensors should be provided for measuring sample, sample plate temperature as well as Cryocooler temperature.
- 6. Minimum cooling power of 0.1 Watts at 4.2 K.
- 7. Expected cool down time from room temperature to 4.2 K: <2.5 hours
- 8. Provision for electrical feed through with at least 24 pins.
- 9. Extra-long Helium hoses of length approximately 30 ft.
- 10. Sample enclosure should have minimum sample space height of 80 mm
- 11. Dry Vacuum Pumping System.
- 12. Four SMA Connectors and at least two Semi-rigid cables with SMP connectors compatible up to 20GHz.
- 13. Wiring for connecting the sample to sample mount.
- 14. Vendors must provide the supporting data for temperature stability, vibrations, heat load and other critical parameters.
- 15. System compatible compact electromagnet with minimum field of 1 Tesla. Specify the field strength on the sample with the corresponding pole gap spacing. Calibration sensor for the magnet should be provided.
- 16. Provision for optical access through the poles of the electromagnet.
- 17. Magnet unit must include all the accessories including bipolar power supply, chiller for magnet coils, driver software etc.
- 18. Electrical Sample mount compatible with the Cryostat and electromagnet.

### Terms and conditions:

- 1. The vendor should have a track record of having previously supplied at least THREE similar equipment in India / USA / UK (please furnish the contact details of the customers).
- 2. The vendor should have qualified technical service personnel for the equipment based in India (preferably in Bangalore).
- 3. The quotation will be in foreign currency.
- 4. The payment will be through confirmed irrevocable Letter of Credit.
- 5. Alternate modes of payment can be suggested with suitable justification.
- 6. The lead time for the delivery of the equipment should not be more than four months from the date of receipt of our purchase order.
- 7. The instrument must carry a comprehensive warranty of 1 year from the date of installation.

Yours sincerely,

Prof. Arindam Ghosh Professor Department of Physics Indian Institute of Science Bangalore - 560012, India