

**Nanofabrication Research Facility
Indian Institute of Technology Delhi**

30 September 2011

The Nanofabrication Research Facility is planning to procure an Alternating Gradient Magnetometer System. Quotations for suitable systems matching the desired specifications and following IITD norms are hereby invited for the purchase.

Complete requirements for a suitable **Alternating Gradient Magnetometer** are listed below:

ESSENTIAL SPECIFICATIONS:

1. AGM Sensitivity: 10 nemu standard deviation achievable with 1 s averaging time at room temp. operation.
2. AGM Range: 1 μ emu to 5 emu Full Scale.
3. Accuracy: 2% vs calibration with a standard reference material material
4. Repeatability: 1% standard deviation (sample undisturbed) 2% standard deviation (sample removed and replaced).
5. Stability: $\leq 10^{-4}$ per hour at constant ambient temperature. $\leq 10^{-4}$ per deg C variation.
6. Cryostat: Cryostat based on Liquid Nitrogen for variable temperature operation. Cryostat must fit within existing AGM system supplied, and any change in system resolution/sensitivity or field range should be clearly mentioned.
7. Electromagnet: Maximum field produced must be +/- 1 Tesla or better. Electromagnet power supply must be capable of four-quadrant wideband operation. Field slew rate limitation 75 kOe/s or better.
8. Accessories: The system should come operationally complete in all respects. Any accessories essential for general operation (such as computer/ cables/ sample holders/etc.) must be clearly mentioned and included in the price of the basic system.
9. Software: The complete system must be fully compatible and integrated with measurement software. The software should include FORC measurements (First Order Reversal Curves). There should be no charge for any operating software upgrades for the life of the instrument.
10. Warranty: Full warranty for 1 year. Warranty for additional yearly charge must be mentioned separately.
11. System must be upgradeable with an option for Vibrating Sample Magnetometer (VSM) mode operation for enhancing measurement range.
12. System must be upgradeable with option for high temperature measurements, either as a stage, attachment or furnace.

ADDITIONAL OPTIONS:

These may be quoted separately as optional capabilities of the equipment. All options must be fully compatible with the above specified configuration.

1. Accessories: If any accessories (such as calibration samples/ cables/ sample holders/etc.) are optional and not essential for system operation, their prices must be mentioned separately.
2. Option for Vibrating Sample Magnetometer (VSM) mode operation for enhancing measurement range.
3. Option for a variable temperature cryostat, compatible fully with AGM and VSM

- modes of operation.
4. Option for high temperature measurements, either as a stage, attachment or furnace.

Interested suppliers/manufacturers are kindly requested to submit/send technical and financial bids (*FOB New Delhi, financial and technical bids in separate sealed covers*) for the above-mentioned equipment by 5pm, 21st October 2011.

I. ALL BIDS MUST HAVE THE FOLLOWING INFORMATION.

12. *Supplier must mention the following details about the warranty:* Number of years, Starting date (from the date of installation or date supply). Additional charges in case extended warranty is required. Also mention if different components have different periods of warranty.
13. Please indicate the warranty is at customer site or not.
14. Please indicate the critical spares and their expected life time.
15. Quote the prices of listed accessories separately.
16. Delivery period must be clearly mentioned.
17. Validity of the quotations should be at least for 90 days.
18. All quotations must be F.O.B. New Delhi.
19. Please provide user list of similar systems installed within India and abroad.

II. PLEASE NOTE THE FOLLOWING POINTS

10. Mode of payment will be through letter of credit in case of imported items. Any advance payments shall be approved only as per IIT Delhi norms.
11. The Institute has the right to accept or reject any or all quotations without assigning any reasons.
12. The bidder must submit quotation for at least for one full experiment. Quotations for individual parts will be rejected.
13. **Since the equipment is meant for teaching purpose in a reputed educational Institute in India, a special price discount may be offered.**

The sealed quotations must be submitted to:

Dr. Manish Sharma
Indian Institute of Technology Delhi
Nanofabrication Research Facility,
Block VI, Room 116,
Hauz Khas, New Delhi – 110 016
INDIA

DEADLINE for submitting the quotations: 5pm, 21st October 2011.
