

**DEPARTMENT OF CERAMIC ENGINEERING
INDIAN INSTITUTE OF TECHNOLOGY
(BANARAS HINDU UNIVERSITY)**

ENQUIRY

Ref: IIT (BHU)/CER/2016-17/ENQ/SD/SERB09/VPT/87

Due Date: 21/02/2017
(Last date of quotation receiving)

Date: 30/01/2017
(Date of Tender enquiry)

Dear Sir,

Please submit your lowest quotation for supplying the under mentioned items. Quotation in duplicate must reach us before the date marked above and should contain the following information:

1. Full specification and make of the item offered and its rate F.O.R. Varanasi/CIF New Delhi.
2. Sales tax at concessional rate as applicable to educational institution.
3. Your sales tax registration number and TAN number.
4. Conditions of supply and terms of payment.
5. If you are a manufacture of the item or if you have proprietary right over it, please mention it in the quotation and provide a certificate.
6. Please mention your agency commission in Indian Rs., if applicable (in case of imported items).
7. Please give undertaking as per annexure-I-B

Quotation must be sent in a **sealed envelope** with word "QUOTATION", our reference number, and due date as given above, clearly marked over it.

Sl. No.	ITEM	Approx. Qty.
<u>REQUIRED TECHNICAL SPECIFICATION FOR VAPOR PHASE EPITAXY SYSTEM</u>		

1.	<p><u>General requirement</u></p> <p>Three gases are required: H₂, CH₄, and Ar</p> <p>Vacuum ~ 10⁻³ Torr</p> <p>Temp: 1000 degree to 1100 max</p> <p>Sample in one run: 1</p>
2.	<p><u>Detailed requirements</u></p> <p>Tubular furnace for 2" quartz tube</p> <p>End fittings with water cooling, one end with fitting for vacuum gauge, pumping, etc and other end gas entry valve, arrangement for pull rod to remove sample etc</p> <p>Quartz tube 2" dia</p> <p>PID controller</p> <p>Quartz holder and pull rod</p> <p>Rotary pump FD12 from HHV</p> <p>Vacuum gauge (Pirani) from HHV</p> <p>Mass flow controller (Alicat, USA) with valve</p> <p>Packing shipping and installation</p> <p>frame to support everything</p> <p>Automation of MFC and PID controller along with PC</p>

The following features of the instruments will be preferred

- Split furnace with the feature that can open the top part of the furnace.

- Automated control of MFCs and valves such that instant gas flow is possible.
- Pressure of the reactor should go 1×10^{-3} Torr.
- Uniform heating Zone should be $\sim 4-6$ inch.
- The Mass Flow Controller Must be from Alicat or MKS
- PC controlled temperature, gas flow, and valve

N.B.: Other terms & conditions pertaining to item mentioned above, shall be mentioned below:

ACCEPTANCE CRITERIA:

- 1) Company must be an Original Equipment Manufacturer of said electronic systems (Preferable) / Dealers quoting must submit the OEM Authorization letter for submitting the tender
- 2) Must have supplied few numbers of CVD/VPT or equivalent Systems to various institutes including any one INDIAN INSTITUTE OF TECHNOLOGY.
- 3) List of Organization details to be submitted along with offer where VAPOR PHASE EPITAXY system supplied earlier.

The Sealed quotation will be opened on 24,02,17 at 3:00pm in the office of The Head, Department of Ceramic Engg., IIT (BHU) (this is mandatory in case of e-publishing).

(PI OF THE PROJECT)

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