

UNIVERSITY OF
MASSACHUSETTS AMHERST

REQUEST FOR BID

NANOFABRICATION PROCESSING TOOLS



RFB AA08-JM-2723

SUBMITTED BY THE AMHERST PROCUREMENT DEPARTMENT

University of Massachusetts Amherst
RFB AA08-JM-2723
Nanofabrication Processing Tools

Competitive bids for two nanofabrication processing tools are being solicited for delivery in June 2008 consisting of a reactive ion etch (RIE) system and a plasma enhanced chemical vapor deposition (PECVD) system with the following specifications and requirements:

GENERAL REQUIREMENTS OF EACH SYSTEM

- A small footprint of less than 36" by 36" and a total height of no more than 80"
- Wafer chuck size of approximately 8 inches or more in chamber with viewport.
- Computer controlled system with graphical user interface capable of storing and editing process recipes.
- Specify the number of mass flow controllers included with a base system and any additional cost for the specific gas configuration needed.
- Include a description of the vacuum pumping system controls and gaging and the brand, model and pumping rate of the vacuum pumps used. Specify the approximate chamber pump down time to a typical process vacuum level. More than one option with separate pricing may be included. Include a dry pumping option if available.
- An enclosed gas panel or manifold with MFC bypass valves on all toxic or corrosive gases. This may be separate or attached to the main console.
- If a load lock is available, please quote it as a separate option. It is understood this may exceed the footprint specification.
- A chiller/heat exchanger does not need to be included as the systems will be cooled via an in-house DI water loop to a heat exchanger to building chilled water supply.
- Systems should be configured for 208 VAC supply and include hookup cables and distribution boxes. EMO shutdown should be to a safe standby mode.
- A detailed description of each system as configured including major components and subsystems. Two copies of the system manuals should be included, at least one on clean room paper or in electronic format.
- Specify the period of the initial warranty and extent of process support for that period. Also quote the cost for warranty coverage or service contracts after warranty expiration. Please quote prices based on an annual basis.
- Specify the terms of payment, delivery, and commissioning. Please note that the University cannot pre-pay purchases. All payments will be after delivery of equipment. Terms are subject to review and approval by the UMASS Procurement Office. Also include the cost of system training for at least 2 operators.

RIE System

- Ability to etch silicon dioxide, silicon nitride, silicon, amorphous silicon, and indium tin oxide.
- RF source of at least 600W at 13.56 Mhz automatically controlled and having the ability to monitor forward and reflected bias and bias voltage.
- Chamber wall temperature control option, if available.
- Chamber port for possible future installation of an end point detector system, if available.

PECVD System

- System configured for the deposition of silicon dioxide, silicon nitride, and amorphous silicon.
- A 300W 13.56 Mhz electrode and automatic matching network with forward and reflected power monitoring.
- A 500 W or more low frequency generator for film stress control with matching network.
- A substrate chuck capable of controlled heating and cooling from approximately 50 to 400° C.

BID EVALUATION CRITERIA

The following factors will be used by the UNIVERSITY, in the evaluation and selection of the vendor, ranked in order of importance:

1. Quality of construction and components used in equipment specified in vendor bid response.
2. Equipment Cost to the UNIVERSITY
3. Bidder's ability to meet the UNIVERSITY's delivery schedule
4. Cost & period of the initial warranty and extent of process support for that period.
5. Cost of for warranty coverage or service contracts after warranty expiration.

A complete set of criteria is sealed and placed in the RFB folder for future use in case of any bid protests. The committee will read the bids and score them based on values assigned to each criteria. The points assigned to each criterion are not made public until after the bid is awarded to preserve the integrity of the bid process. Please note that some criteria may be assigned values equal to other criteria.

DELIVERY:

- a. Location: All delivery and handling costs are to be included in bid. Delivery will be made to the University of Massachusetts Amherst Campus, Amherst, MA 01003.
- b. Date: Delivery must be no later than June 30, 2008. By submitting a bid vendor agrees that this delivery date will be met.

BID DELIVERY AND OPENING LOCATION:

All bids must be delivered to the following location prior to the bid opening date specified below. Bidders shall deliver one (1) original and (1) copy of their bid to the following address by **2:00pm EDT on April 8, 2008** at which time the bids will be publicly opened and read:

University of Massachusetts Procurement Department 407 Goodell Building 140 Hicks Way Amherst, MA 01003-9334 Attn: RFB AA08-JM-2723

It is the sole responsibility of the bidder to ensure that its bid is delivered to the Procurement Department in its entirety by the due date and time. Late bids, or bids delivered to other than the location stated above will not be considered and will be placed, unopened, in the bid file.

ADDITIONAL INFORMATION:

1. Vendors should specify whether there are any additional discounts if both pieces of equipment are purchased together.
2. Vendors are to enclose full descriptive literature with itemized pricing when replying to this RFB.
3. Vendor should specify any additional discounts offered – ie: partnering agreements. The University is under no obligation to accept any agreements or discounts that are tied to additional services or purchases but may elect to do so at its option if deemed in the best interests of the University.

QUESTIONS/CONTACT PERSONS

All questions from prospective bidders concerning this RFB **must be submitted in writing by fax or e-mail by 2:00 p.m. by April 3, 2008** to the following:

John O. Martin
Director of Procurement
University of Massachusetts
Procurement Department
Attention: RFB AA08-JM-2723
FAX: (413) 545-1643
Email: jomartin@admin.umass.edu

- You must submit a reply email address with your question(s) to receive a response
- No telephone calls will be entertained. Inquiries received after the specified date and time will not be accepted.
- The UNIVERSITY will email its response to all questions to all bidders of record by formal addendum by **2:00 pm on April 4, 2008**.

The UNIVERSITY will extend the due date by written addendum if such information significantly amends this RFB or makes compliance with the original proposed due date impractical

Vendor Name: _____
Bid Submitted By: _____ Signature and Title
Print Name: _____
Bidder's Contact Person's Name Title for Questions or Points of Clarification: _____
Telephone No. (toll free number, if available)
Fax No.
E-Mail Address: