

REQUEST FOR QUOTATION NUMBER 8228-06

FROM: The Board of Governors of Missouri State University
 Procurement Services
 901 South National Avenue
 Springfield, Missouri 65897
 Telephone: (417) 836-4414
 Fax: (417) 836-6583

Date: August 23, 2023 Page 1 of 8

Bid Close Date and Time:
3:00 p.m. (CST) September 6, 2023

TO: (Provide company name and address below.)

**ALL BIDS MUST BE PREPARED
 TO INCLUDE FREIGHT COSTS
 TO SPRINGFIELD, MISSOURI**

Buyer: Tanya Smith for Missouri State University

Missouri State University, as a state supported educational institution, is exempt from the payment of sales/use taxes pursuant to RSMo 144.040 and 144.615

			DESCRIPTION/SPECIFICATIONS		
			<p>RFQ 8228-06 ATOMIC FORCE MICROSCOPE (AFM)</p> <p>Sealed bids are hereby requested for the following item(s). General specifications and requirements are provided as part of this RFQ. <u>When submitting sealed bid, mark in lower left corner of envelope: Sealed RFQ 8228-06.</u></p> <p>All quoted prices must be firm and fixed and must include all required components and shipping/delivery costs FOB Destination to Missouri State University in Springfield, Missouri. Where applicable, all quoted prices must be presented as Delivery Duty Paid (DDP) to include Customs Fees, Freight/Shipping, Import/Export Duties, and Taxes.</p> <p style="text-align: center;"><u>Faxed or e-mail bids will NOT be accepted.</u></p>		

<p>THE BIDDER MUST SIGN AND RETURN THIS DOCUMENT AS PART OF HIS/HER BID.</p> <p>Unless noted by the bidder, there shall be no restrictions on the number or quantity of an item that may be ordered.</p> <p>If the requested quantity is not a standard package quantity, the bidder should quote on both the requested quantity and the standard package quantity, clearly identifying each.</p> <p>If alternate items are offered, the bidder must provide descriptive literature and/or information for each alternate offered.</p> <p>Additional costs for packing, handling, etc., not shown on this quotation will not be paid by the University.</p> <p>See the "TERMS AND CONDITIONS OF REQUEST FOR PROPOSAL/QUOTATION (RFP/RFQ)" attached hereto for additional requirements.</p>	<p>DELIVERY _____ DAYS ARO OR STATE EARLIEST _____</p> <p>PRICES EFFECTIVE FOR _____ DAYS OR UNTIL _____</p> <p>THE BIDDER HEREBY AGREES TO FURNISH THE ITEMS AND/OR SERVICES SPECIFIED HEREIN, AT THE PRICES QUOTED, PURSUANT TO ALL REQUIREMENTS AND SPECIFICATIONS OF THIS REQUEST FOR QUOTATION.</p> <p>AUTHORIZED SIGNATURE: _____</p> <p>Please type or print name: _____</p> <p>TITLE _____ DATE _____ PHONE NUMBER _____</p> <p>EMAIL ADDRESS _____</p> <p>COMPANY NAME: _____</p>
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General Specifications and Requirements

ATOMIC FORCE MICROSCOPE (AFM)

SYSTEM REQUIREMENTS

1. Required AFM Modes

- Fast scan Imaging
- Non-contact / tapping modes and phase imaging
- Contact mode and lateral force microscopy (LFM)
- Force/distance (F/D) spectroscopy and force volume imaging
- Nano-mechanical property mapping (deformation, adhesion force, adhesion energy, energy dissipation, and approach and retract stiffness)
- Spring constant calibration
- Magnetic force microscopy (MFM)
- Electrostatic force microscopy (EFM)
- Kelvin probe force microscopy (KPFM)
- Scanning capacitance microscopy (SCM)
- Conductive AFM
- Nanoindentation
- Nanolithography

2. X/Y Scanner

- Must have up to 100 μ m x 100 μ m scan range
- Must be capable of being operated in open or closed loop
- Out-of-plane motion must be less than 4nm over 80 μ m x 80 μ m area
- X/Y position control must be less than 0.1nm
- XY scanner must have an orthogonality error of less than 0.3° at max scan range
- XY scanner must have linearity error of less than 0.1% on each axis regardless of scan range, scan direction, or scanner position
- Must have position encoders option for high precision X/Y movement and repeatability
 - Position encoders must have 0.5 μ m X/Y resolution
 - Position encoders must allow for stage repeatability of less than 2 μ m unidirectionally and less than 3 μ m bi-directionally

3. Z- Scanner

- Z-scanner must have range up to 15 μ m
- Z-scanner sensor detector noise must be less than 0.05nm at 1kHz bandwidth
- Z-scanner position control resolution must be better than 0.015nm
- Must have position encoders option for high precision Z movement and repeatability
 - Position encoders must have 0.05 μ m Z resolution
 - Position encoders must allow for stage position repeatability of 1 μ m

4. Sample Stage

- Must be able to accommodate samples up to 20 mm maximum sample height
- Must be able to accommodate samples sizes up to 200mm x 200mm
- Must include vacuum accommodation for 50mm, 100mm, 150mm, and 200mm wafers
- Must include magnetic mounting
- Must have motorized sample stage for samples up to 200mm x 200mm
- Must be able to address all areas of the 200mm x 200mm area

5. Optics and Optics Stage

- Must have camera
- Must have direct top/down view of tip and sample
- Must be motorized and software controlled

6. Control Electronics

- Must have integrated signal access ports for AFM signals
 - Minimum 4 inputs and 3 outputs
- Must allow bias voltage to cantilever with -10V – 10V range
- Must allow bias voltage to sample stage with -10V – 10V range

7. System Software

- Must include control and analysis software for data acquisition
 - Must have manual mode for user control of all the functions and settings of various AFM functions
 - Must have auto mode for tip and sample setup and imaging
 - Must have program mode for executing multiple measurements
 - Must have scripting option for advanced automation
- Must have image analysis software which includes the following
 - Off-line software for image processing, data analysis and data presentation
 - Stand-alone software that can be installed on unlimited number of offline computers

8. Automation Software

- Must have automated AFM scanning and analysis routine capability based on user recipe.
- Must have automated substrate alignment with pattern recognition using machine vision

9. Enclosure, Table and Computer

- Must have acoustic and vibration control enclosure
- Must include electronics, computer and monitor table
- Must include computer with monitor(s)
- Must be Microsoft Windows 10 or newer OS

10. Accessories

- Must include starter kit of cantilevers/holders
- Must include calibration sample (lateral/vertical)
- Must include sample substrates (disks)

11. Installation/Training

- Must include installation and training

Optional:

1. Photo Ionizer

- Electrostatic charge reduction installed in acoustic enclosure

Pricing

State a firm, fixed total price to provide an **Atomic Force Microscope (AFM)**:

\$_____ firm, fixed total price

Specify brand and model number of item bid: _____

Bid Submission Information and Requirements

1. The bidder must provide a detailed, itemized description of the proposed equipment to include all related components and accessories. Such description should also include a written narrative which identifies the relationship of each component or accessory to the specifications contained herein.
2. The bidder should provide any other relevant information that should be considered by Missouri State University in evaluating the proposed equipment. The bidder is advised that the University is under no obligation to seek out information regarding the proposed equipment if such information is not included as part of the bidder's response.
3. All quoted prices must be firm and fixed and must include all required components and shipping/delivery costs **FOB Destination to Missouri State University in Springfield, Missouri.**
4. Bid responses must be received in the Procurement Services Office of Missouri State University on or before 3:00 p.m. (CST) on **September 6, 2023**, in order to be considered for award. Responses received after the exact time on the date specified will not be opened and will not be evaluated regardless of the reason(s) or mitigating circumstances related to its lateness or degree of lateness.

Bidders are reminded that **SEALED BIDS** are required. *Bid responses may NOT be faxed or e-mailed.*

Please attach your formal quote to your sealed RFQ response.

Mail bid responses to:

**The Board of Governors of Missouri State University
Procurement Services
Attention: Tanya Smith
901 South National Avenue
Springfield, Missouri 65897**

Mark in lower left corner of envelope: Sealed RFQ 8828-06

TERMS AND CONDITIONS, REQUEST FOR PROPOSAL/QUOTATION (RFP/RFQ)**I. TERMINOLOGY/DEFINITIONS**

1. Bids and Bidders means the same as proposals and offerors.
2. Closing Date and Time or Date and Time Returnable means the deadline required for the physical receipt of bids by the Procurement Office.
3. Must and Shall mean that a certain feature, component, or action is mandatory. Failure to comply will result in rejection of the proposal.
4. Request for Proposal (RFP) or Request for Quotation (RFQ) means the procurement document issued by the Procurement Office to potential bidders for the purchase of equipment, supplies, and/or services as described in the RFP/RFQ document. The definition includes these Terms and Conditions as well as any other Attachments and Amendments to the RFP/RFQ.

II. OPEN COMPETITION/RFP/RFQ DOCUMENT

1. It is the offeror's responsibility to ask questions, request changes or clarification, or otherwise advise the Procurement Office if any language, specifications, or requirements of the RFP/RFQ appear to inadvertently restrict or limit the requirements of the RFP/RFQ to a single source. Any and all communication from bidders regarding the RFP/RFQ and the procurement process must be directed to the Buyer identified on the first page of the RFP/RFQ. Such communication should be received at least five calendar days prior to the official Proposal Close Date.
2. The Procurement Office reserves the right to officially modify or cancel the RFP/RFQ after issuance. Bidders will be notified of any such modification or cancellation by issuance of an addendum from the Procurement Office.

III. CONFLICT OF INTEREST

The contractor hereby covenants that at the time of the submission of the proposal the contractor has no other contractual relationships which would create any actual or perceived conflict of interest. The contractor further agrees that during the term of the contract neither the contractor nor any of its employees shall acquire any other contractual relationships which could create such a conflict.

IV. PREPARATION OF BIDS/PROPOSALS

1. Failure to carefully examine the RFP/RFQ and all terms and conditions related thereto will be at the Offeror's risk.
2. Unless otherwise specifically stated in the RFP/RFQ, all specifications and requirements constitute minimum requirements. All bids must meet or exceed the stated specifications and requirements.
3. Bids lacking any written indication of intent to offer an alternate brand or to take an exception shall be considered to be in full compliance with the specifications and requirements of the RFP/RFQ.
4. All equipment and supplies offered must be new and of current production and available for marketing by the manufacturer unless the RFP/RFQ clearly specifies that used, reconditioned, or remanufactured equipment and supplies may be offered.
5. Prices quoted by the offeror must remain valid for a minimum of ninety (90) days from the date of proposal opening. If the proposal is accepted, prices shall remain firm for the specified period.

V. SUBMISSION OF BIDS/PROPOSALS

1. Bids must be signed by a duly authorized representative of the offeror's organization and must contain all necessary information in the manner required by the RFP/RFQ.
2. A bid may only be modified or withdrawn (1) by signed, written notice received by the Procurement Office prior to the Proposal Close Date and Time or (2) in person by the offeror or its authorized representative, provided proper identification is presented before the Bid Close Date and Time. Telephone requests to withdraw or modify a proposal will not be honored.
3. Bidders must, as a minimum, sign and return the RFP/RFQ cover page or, if applicable, the cover page of the last amendment thereto in order to constitute acceptance by the offeror of all RFP/RFQ terms and conditions. Failure to do so will result in rejection of the proposal unless the offeror's full compliance with those documents is indicated elsewhere within the offeror's response.

VI. QUOTATION/PROPOSAL OPENING

1. All bids will be opened at 3:00 p.m. on the date indicated. Prices will not be made available at that time and will not be made public until the evaluation is complete and an award is made.
2. It is the offeror's sole responsibility to ensure that the proposal is delivered to the Procurement Office by the Proposal Close Date and Time. If the Procurement Office is officially closed on the Proposal Close Date, bids will be accepted until 3:00 p.m. the next official work day and will be opened at that time.
3. Bids which are not received by the Procurement Office prior to the Proposal Close Date and Time will be considered late, regardless of the degree of lateness or the reason related thereto. Late bids will not be opened.

VII. EVALUATION/AWARD

1. An award will be made to the offeror whose proposal (1) complies with all mandatory specifications and requirements of the RFP/RFQ and (2) is the best proposal, price and other factors considered.
2. The right is reserved, as the interests of the University may require, to reject any or all bids and to waive any minor informality or irregularity in bids received. The Procurement Office reserves the right to request written clarification of any portion of the offeror's response if deemed necessary in order to verify the intent of the offeror.
3. The University reserves the right to make awards on an item by item basis, or on an all or none basis, as applicable, if deemed in the best interests of the University.
4. Any award shall be made only by written notification from the Procurement Office. For protest procedures see <http://www.missouristate.edu/procurement/65870.htm>, *Protests*.
5. All bids and associated documentation received on or before the Proposal Close Date and Time will be considered open records pursuant to Section 610.021 RSMo.

VIII. REMEDIES AND RIGHTS

1. No provision in the contract shall be construed, expressly or impliedly, as a waiver by the University of any existing or future right and/or remedy available by law in the event of any claim by the University of the contractor's default or breach of contract.
2. The contractor understands and agrees that the contract shall constitute an assignment by the contractor to the University of all rights, title, and interest in and to all causes of action that the contractor may have under the antitrust laws of the United States or the State of Missouri for which causes of action have accrued or will accrue as the result of, or in relation to, the particular equipment, supplies, and/or services purchased or procured by the contractor in the fulfillment of the contract with the University.

IX. DELIVERY, INSPECTION, AND ACCEPTANCE

1. Delivery of equipment, supplies, and/or services must be made no later than the time stated in the contract, or within a reasonable period of time if a specific time is not stated.
2. No equipment, supplies, and/or services received pursuant to the contract shall be deemed accepted until the University has had reasonable opportunity to inspect the same.
3. All equipment, supplies, and/or services which do not comply with the RFP/RFQ specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
4. The University reserves the right to return any such rejected shipment at the contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received. Signing the Bill of Lading shall not constitute acceptance of the shipment.
5. The University's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the University may have.

X. CANCELLATION OF CONTRACT

1. In the event of material breach of contractual obligations by the contractor, the University may cancel the contract. If the contractor fails to cure the breach within an acceptable time frame, or if circumstances demand immediate action, the University will issue a notice of cancellation terminating the contract immediately.
2. If the University cancels the contract for breach, the University reserves the right to obtain such equipment, supplies, and/or services from other sources and charge the contractor for any additional costs incurred as a result thereof, including attorney fees and court costs.
3. The contractor understands and agrees that funds required to fund the contract must be appropriated by the General Assembly of the State of Missouri for each fiscal year included within the contract period. The contract shall not be binding upon the University for any period in which funds have not been appropriated, and the University shall not be liable for any costs associated with termination caused by lack of appropriations.

XI. WARRANTY

1. The contractor expressly warrants that all equipment, supplies, and/or services provided will (1) conform to each and every specification, drawing, sample or other description provided as part of the RFP/RFQ, (2) be fit and sufficient for the purpose expressed in the RFP/RFQ, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
2. Such warranty shall survive delivery and shall not be deemed waived either by reason of the University's acceptance of, or payment for, said equipment, supplies, and/or services.

XII. APPLICABLE LAWS AND REGULATIONS

1. The contract shall be construed according to the laws of the State of Missouri. In the event of any litigation arising hereunder, the parties agree that venue shall be proper only in the State Circuit Court for Greene County, Missouri. The contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract to the extent that the same may be applicable.

2. To the extent that a provision of the contract is contrary to the Constitution or laws of the State of Missouri or of the United States, the provision shall be void and unenforceable. The balance of the contract shall remain in force between the parties unless terminated by consent of both the contractor and the University.
3. The contractor must be registered with and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies as may be required by law or regulation.
4. The contractor must file and pay in a timely manner all Missouri sales, withholding, corporate and any other required Missouri taxes.

XIII. INVOICING AND PAYMENT

1. Payment for all equipment, supplies, and/or services required herein will be made in arrears.
2. Invoices must be directed to the Procurement Office and must include the contract number or purchase order number, item number, contract description of supplies or services, sizes, quantities, unit prices, and extended totals.
3. Invoices shall be subject to late payment charges as provided for in Section 34.055 RSMo.
4. The University does not pay state or federal taxes unless otherwise required by law or regulation.
5. The University assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any unauthorized quantity is subject to rejection by the University and shall be returned at the contractor's expense.
6. The contractor shall not transfer any interest in the contract, whether by assignment or otherwise, without the prior written consent of the University.

XIV. NON-DISCRIMINATION AND AFFIRMATIVE ACTION

1. In connection with the furnishing of equipment, supplies, and/or services under the contract, the contractor and all subcontractors shall agree not to discriminate against recipients of services or employees or applicants for employment on the basis of race, color, religion, national origin, sex, age, disability, or veteran status. If the contractor or subcontractor employs at least 50 persons, they shall have and maintain an affirmative action program which shall include:
 - a.) A written policy statement committing the organization to affirmative action and assigning management responsibilities and procedures for evaluation and dissemination;
 - b.) The identification of a person designated to handle affirmative action;
 - c.) The establishment of non-discriminatory selection standards, objective measures to analyze recruitment, an upward mobility system, a wage and salary structure, and standards applicable to layoff, recall, discharge, demotion, and discipline;
 - d.) The exclusion of discrimination from all collective bargaining agreements; and
 - e.) Performance of an internal audit of the reporting system to monitor execution and to provide for future planning.
2. **Vietnam Era Veterans' Readjustment Assistance Act of 1974 (VEVRAA) for Contracts of \$100,000.00 or More**

This contractor and subcontractor shall abide by the requirements of 41 CFR 60-300.5(a). This regulation prohibits Discrimination against qualified protected veterans, and requires affirmative action by covered prime contractors and Subcontractors to employ and advance in employment qualified protected veterans.

3. **Disability Rehabilitation Act of 1973 Section 503 for Contracts in Excess of \$10,000.00**

This contractor and subcontractor shall abide by the requirements of 41 CFR 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability, and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

XV. AMERICANS WITH DISABILITIES ACT

In connection with the furnishing of equipment, supplies, and/or services under the contract, the contractor and all subcontractors must comply with and be responsible for all applicable requirements and provisions of the Americans with Disabilities Act (ADA).

XVI. REQUIREMENTS FOR PRIME CONTRACTORS AND SUBCONTRACTORS

1. Each prime contractor and subcontractor shall file annually, on or before the 31st day of March, complete and accurate reports on Standard Form 100 (EEO-1) promulgated jointly by the Office of Federal Contract Compliance Programs, the Equal Employment Opportunity Commission and Plans for Progress, or such form as may hereafter be promulgated in its place, if such prime contractor or subcontractor (i) is not exempt from the provisions of these regulations in accordance with 60-1.5; (ii) has 50 or more employees; (iii) is a prime contractor or first tier subcontractor; and (iv) has a contract, subcontract or purchase order amounting to \$50,000 or more or serves as a depository of government funds in any amount, or is a financial institution which is an issuing and paying agent for U.S. savings bonds and savings notes: *Provided*, that any subcontractor below the first tier which performs construction work at the site of construction shall be required to file such a report if it meets the requirements of paragraphs (i), (ii), and (iv) of this section.
2. Facilities provided for employees must be provided in such a manner that segregation on the basis of race, color, religion, or national origin cannot result.

XVII. ACCESSIBILITY OF DIGITAL MATERIALS

Any contract database delivered under this Request for Proposal will be fully compliant with i) Section 508 of the Rehabilitation Act, the Americans with Disabilities Act, as amended ("Acts"), and ii) the Web Content Accessibility Guidelines (WCAG) 2.0 AA. Should any portion of a contract database not conform to the aforementioned standards of digital accessibility, offeror agrees to defend, indemnify and hold harmless University, its officers, directors, successors, employees and agents harmless from and against any and all third-party claims, liabilities, obligations, judgment, causes of action, costs and expenses (including reasonable attorneys' fees) ("Claims") against University to the extent such claim(s) is/are based on allegations that the materials are not compliant with the above referenced standards of digital accessibility in i) and ii).