

COMPLETE THIS FORM TO INITIATE SUPPLIER SCOUTING

MEPNN Supplier Scouting Opportunity Synopsis

- *The submitting entity agrees to notify NIST MEP of the status of actions taken as a result of this scouting instance within 30 days after receiving a results report. For instances where the submitting entity is an MEP Center submitting on behalf of a client, the MEP Center agrees to notify NIST MEP on behalf of their client. For instances where the submission is direct from federal/state agencies or is a private company, the submitting federal/state agency or private company entity agrees to notify NIST MEP. Notification should be via email to scouting@nist.gov, indicating the following:
 - Contact with matches identified in report complete and supply contract awarded, process complete
 - Contact with matches identified in report complete and no supply contract awarded, process complete
 - Contact with matches identified in report complete and supply negotiations underway, process in progress
 - Contact with matches identified in report underway: supply negotiations not yet hegun: process in progress

		ntact with matches identifie	d in report underway, supply negotiations not yet began, process in progress d in report will not occur within the next 6-months, process complete		
Electrical Static Chuck Based Single Wafer Deep Silicon Etcher			days Opportunities will be postedfor 30 days unless specified		
Please d	lescribe t	he item application/ the end use of i	tem.* Provide the item number if applicable: (N95 Mask vs Protective Mask).		
support n academia	anofabricat a, NIST, and	ion in the Center for Nanoscale Science and ^a d other government agencies in the CNST Nar	information on commercial vendors that can provide an electrical static chuck based single wafer deep silicon etching system to fechnology (CNST) user facility. The system will be sited and used as a shared resource accessible to researchers from industry, noFab. The electrical static chuck based single wafer deep silicon etching system is a pattern transfer tool that uses fluorocarbon scale structures in silicon materials. Applications include fabricating nano-semiconductor and nano-photonic devices.		
2022 Supplier		र Number (NIST MEP use)			
333242					
Scouting	custome	er/product <u>NAICS Code</u> , if known			
TECI	1. Supplier Information	a. Type of supplier being Manufacturer	sought* Contract Manufacturer Distributor		
HNICA		☐ Other			
Ę		b. Reason for scouting su			
ÖR		• •	Price Re-shore Past supplier no longer available		
TECHNICAL INFORMATION:		□ New Product Startup			
		Other			
ļ	ar 2	a. Describe the manufacturing processes (elaborate to provide as much detail as possible).*			
	2. Sum and Pei	Item to he nu	ırchased as a standalone unit		

purchaseu as a stanualune unit

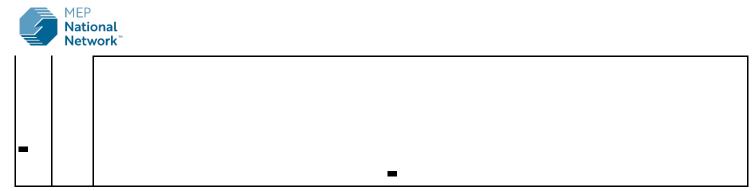
b. Provide dimensions / size / tolerances / performance specifications for the item.*

this electrical static chuck based single wafer deep silicon etching system is a pattern transfer tool that uses multiple RF sources and Bosch process to fabricate micron- and nano-scale structures in silicon with vertical sidewall of high aspect ratio, primarily using fluorocarbon and other etching gases. This new electric static chuck based single wafer deep silicon etching system will be used to minimize the system down time, improve the process repeatability and add new NanoFab's etching process capabilities. 2. Tool configuration: The system must be equipped with following components: 1) A load-lock that transfers the samples in and out of the process chamber. 2) A process chamber that is compatible with reactive chemicals such as SF6, C4F8. 3) A process chamber that is capable to handle 8 different gases or more. 4) Dual source inductive coupled power (ICP) that operates from 0 to 3000 W or higher. 5) A reactive ion etching (RIE) electrode that operates from 0 to 300 W or higher. 6) Optical emission spectroscope endpoint can detect 1% or less exposed area. 7) Software that supports both manual and automatic operations. 8) Safety interlocks to keep users safe. 3. Wafer compatibility and cooling: 1) The system shall be able to process substrates with various sizes including 75 mm, 100 mm, 150 mm, and 200 mm substrate.

2) The system shall be able to process substrates from -15 °C to +40 °C or broader. 3) The system shall have electrical static chuck clamping and backside helium cooling. 2. Established process library: 1) The system shall have established processes for etching silicon.



		2) Established process documentation shall include process parameters such as etch rate, selectivity, and profile with scanning electron microscope images.
		c. List required materials needed to make the product, including materials of product components.*
-		Item to be purchased as a standalone unit
	2. Summary of T	d. Are there applicable certification requirements?* Yes Please explain
	echn	e. Are there applicable regulations?* Yes No Please explain
	Summary of Technical Specifications and Performs cont:	
		f. Are there any other standards, requirements, etc.?* Yes Please explain
	ormance	g. Additional Comments: Is there other information that would impact the item's performance or usefulness? Please explain.
	Performance Requirements	
BUSINESS INFORMATION:	3. Volume and Pricing	3a. Estimated potential business volume (i.e., # Units Per Day, Month, Year) *:
		One unit
		b. Estimated target price / unit cost information (flexible and negotiable not accepted) *:
		\$1,000,000.00
ON:	4. D	a. When is it needed by? (Immediate, 30 Days, 6 months, etc.)*
	Delivery Requirements:	ASAP
		b. Describe packaging requirements (i.e., individually/group packaging)*
		Flexible
		c. Where will this item be shipped?*
	S.	NIST, 100 bureau Drive, Gaithersburg, MD 20899
	5. Ad dit	Is there other information you would like to include?



Photos or diagrams of the item (helpful but not required).