

Note: This Sole Source Certification will become a public document, open to public inspection; therefore, you should be certain all material facts are true, relevant and clearly understandable.

SOLE SOURCE CERTIFICATION

Under the requirement of University of Florida Rule No. 6C1-3.020(5)(e)(2), the following is submitted in support of this request for authority to purchase, without bidding, the items available from only one source.

Note: Sole Source means that the item/service is unique and that the vendor is the only one from whom the item/service can be provided. Best Price alone cannot be used for sole source. If the item/service is available from more than one source of supply, best price must be determined through the competitive bid process.

A. Sole Source Vendor Company Name: Taiyo Nippon Sanso thru MITSUI KNOWLEDGEINDUSTRY COE,LTD.

Contact Person: Kunihiko Narita

Address: Atago Green Hills MORI Tower 2-5-I Atago, Minato ku, Tokyo 105-6215 Japan

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Fax: 1-3- 3437-5378

Email: narita-kunihiko@mki.co.jp

B. Describe in lay language, what the item/service is and how it is to be used in your area of research. (cont. P2)

The item is an metal organic chemical vapor deposition (MOCVD) tool for epitaxial growth of III-nitride materials, including a high temperature delivery system for low vapor pressure metal organic precursors. The reactor will be used to grow III-nitride films to support research in III-nitrides for rf applications, power electronics, optoelectronics, ferroelectrics, piezoelectrics and non-linear optics. The materials of interest are GaN, AlGaN, BN, and (very importantly) AlScN along with other transition metal nitrides. For these last two materials systems, all precursors have very low vapor pressures and CANNOT be grown in a conventional MOCVD. These last two areas are NEW areas for MOCVD and will be a large portion of my research thrusts.

C. What feature or special condition of this commodity/service is unique and cannot be obtained from any other source? Why are these features or special conditions important to the research? (cont. P2)

This is the first and only commercially available MOCVD system that includes a high temperature delivery system for low pressure metal organic precursors, including delivery, controlled heating, and re-design of the flow flange. This is REQUIRED for any research in AlScN and transition metal nitrides, and is unique. This will be the first tool to enable this growth in the US (there is one other research group globally that can do this). The reactor itself is also rated for growth up to 1350C, which is necessary for high quality AlN and BN, for power electronic and extreme environment applications (and would support the DARPA proposal we submitted on AlN growth). The quote also includes in situ strain and temperature monitoring of the films, from a trusted manufacturer. It is also a horizontal geometry reactor, with improved flow dynamics and reduced gas phase nucleation. It has a total of 8 Metal organic lines, which enables multi-stacks of different materials and compositions.

D. Is this product being purchased directly from the manufacturer? Yes No

If No, is it available from more than one dealer? Yes No

If Yes, it is available from more than one dealer, why can this item not be bid? (cont. P2)

E. Prior to submitting this requisition, did you investigate other possible sources? Yes No

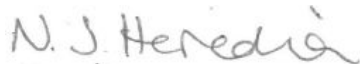
If Yes: 1) Did you obtain quotes from the other sources? Yes No If Yes, attach copies.

2) Is this Vendor's price lower than the other sources? Yes No If No, justify the additional cost below.

F. What efforts have been made to obtain the best price possible? Why do you feel this price is fair and reasonable? (cont. P2)

I have haggled over the pricing of this tool with the company for over six months, and they have brought the price down as they would like to place it in the US with a well-known researcher who is willing to collaborate with them and publish all results with the tool. The original price estimate was ~\$2 M. The <\$1.2 price is below the price for any other standard systems, not to mention that it includes in situ monitoring for stress and strain (normally \$250K), AND a new, novel high temperature delivery system which will allow us to move into materials that have been impossible by MOCVD.

I / We, the undersigned, certify the above to be true and correct to the best of my / our knowledge and belief and the user and / or undersigned does not have a financial interest in the above named vendor.

DEPARTMENT APPROVAL	PURCHASING APPROVAL
I hereby certify the validity of the information and feel confident the Sole Source Certification will meet University criteria and would withstand any audit or vendor protest.	This acquisition is approved as a non-competitive purchase.
Digitally signed by Jennifer Hite Date: 2024.11.19 07:20:47 -05'00' 11/19/2024 _____ Principal Investigator's Signature Date	Digitally signed by Vincent Anderson Date: 2024.11.19 07:45:28 -05'00' _____ _____ Purchasing Coordinator Signature Date
FAILURE TO FILE A PROTEST IN ACCORDANCE WITH BOARD OF GOVERNORS (BOG) REGULATION 18.002 OR FAILURE TO POST THE BOND OR OTHER SECURITY AS REQUIRED IN THE BOG REGULATION 18.002 AND 18.003(3) SHALL CONSTITUTE A WAIVER OF PROTEST PROCEEDING.	 _____ 11/19/2024 Purchasing Authorized Signature Date

Sole Source Certification (Continued)

Please use the following sections to continue documentation if needed.

B. continued

C. continued

D. continued

E. continued

F. continued