



**INDIAN INSTITUTE OF SCIENCE EDUCATION AND  
RESEARCH THIRUVANANTHAPURAM [IISERTVM]**

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KERALA, INDIA  
GST No.32AAAJI0299R1ZS

IISER/PUR/2478/VK-P/SP/22-23

22.06.2023

**RE-TENDER CORRIGENDUM**

Sub: Supply, Installation and commissioning of Atomic Layer Deposition  
System: reg

Ref: Tender ID No. 2023\_IISRT\_755115\_1

The above mentioned tender is re-tendered, with revised technical  
specifications as per Annexure 1.

Due date: 1 July 2023, 1500 Hrs.  
Date of opening: 3 July 2023, 1530 hrs

All other Terms and Conditions remains same.

Thanking You,

Yours Faithfully,

Deputy Registrar (Purchase & Stores)

## ALD SPECIFICATION LIST

<b>ACTIVATION MODE</b>	Thermal ALD
<b>ALD reactor</b>	<ul style="list-style-type: none"> <li>• SS 316 chamber of minimum volume,</li> <li>• quick access door for loading &amp; unloading of the substrate.</li> <li>• Ports for gas inlet</li> <li>• Port of pumping</li> <li>• o-ring sealed design.</li> </ul>
<b>SUBSTRATE SIZE</b>	Diameter about 100 mm or bigger
<b>SUBSTRATE TEMPERATURE</b>	Max 350°C or more Accuracy of $\pm 1^\circ\text{C}$ or better.
<b>precursor lines.</b>	<ul style="list-style-type: none"> <li>• At least 1 precursor lines to be supplied.</li> <li>• Should be upgradable to have additional lines upto a maximum of 5 lines.</li> <li>• Metal gasket face seal fittings, preferably swagelok</li> </ul>
<b>Deposition uniformity</b>	$\pm 1\%$ over 100 mm or better. 100% conformal step coverage.
<b>Substrate type</b>	planner substrates example Si wafer, glass, PET, etc.
<b>PUMPING OPTIONS</b>	<ul style="list-style-type: none"> <li>• Heated pumping lines with isolation valve.</li> <li>• with vapour trap and gas purging,</li> <li>• Has vent valve, SS below, clamps etc.</li> <li>• Should be compatible with dual stage Rotary/Dry pump with 20 m<sup>3</sup>/hr or higher pumping speed. (pump not included)</li> <li>• upgradable to Turbo pump in future if necessary</li> </ul>
<b>Electronic Control</b>	Automated temperature control for each zone, precursor vaporizer, gas manifold, reactor, pumping lines etc. Automated control of all valves. Automated control of Mass flow controllers (specify the MFC make, model and range)
<b>VALVES</b>	Specify the ALD valves types, number, make, model etc. High speed valves with actuating time of 5 ms or lower and heat-resistant upto 200 °C
<b>Gas Line</b>	heating upto 150°C with temperature uniformity of $\pm 2^\circ\text{C}$ or better
<b>Process control</b>	PLC based. NI LabVIEW or equivalent platform based automation software Should supply a personal computer or laptop with control software installed. User friendly software with full control, including saving user recipes, graphical display of parameters, Data logging, preferably remote troubleshooting.
<b>Dimensions</b>	Specify the dimensions. Should have small footprint.
<b>Safety features</b>	Vacuum interlock Overheating preventions Overheat software interlock Emergency shut-down The valves to be normally closed. Specify if any additional safety features.
<b>Optional items to be quoted.</b>	<ul style="list-style-type: none"> <li>• dual stage Rotary/Dry pump with 20 m<sup>3</sup>/hr or higher pumping speed.</li> <li>• Ozone Generator,</li> </ul>





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ALD SPECIFICATION LIST

	<ul style="list-style-type: none"><li>• Quartz Crystal Monitor</li><li>• Additional precursor lines</li><li>• Upgrade to plasma ALD</li><li>• Optional view port to ALD reactor</li><li>• Any other items.</li></ul>
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- All the supporting documents, catalogues, notes and any prior publications from the system must be attached.
- Should have trained service engineers, provide the contact as well as certificates, if any.
- The Equipment should have international standard of safety and compliance. Please attach CE or ISO certificates.
- User list to be provided with contact details. Supporting publications if any.
- A compliance report on all of the above with actual parameters specified wherever warranted.
- Should come with three years of warranty or one-year warranty plus AMC for two years to be quoted.

  
22/06/2023

