
Invitation For EOI

1. About IHFC

I-Hub Foundation for Cobotics (IHFC)

IHFC is the Technology Innovation Hub (TIH) of IIT Delhi incorporated as a Section 8 company, registered under The Companies Act, 2013 having registered office at MZ-122 IIT Room No. Hauz Khas, Delhi, India-110016, established under the mandate of the Govt. of India through the Department of Science and Technology (Ministry of Science and Technology), under its NM-ICPS (National Mission on Interdisciplinary Cyber-Physical Systems) mission for promoting research and development, incubating/promoting individuals/start-ups, entrepreneurs, organizations and corporations individually or in collaboration with faculty and other parties for harnessing the new wave of technological innovation in India.

2. About EOI

IHFC is issuing this online EOI (Expression of Interest) for inviting commercial rate submission for **“Supply and Installation of Magnetron Sputtering System”** at IIT Delhi, Hauz Khas, New Delhi from Eligible Supplier.

Pls refer the Technical Specification below for Eligibility to apply.

Technical details for Magnetron Sputtering System

SI.No.	Description	Qty
1.	Process Chamber: Appropriate size Stainless Steel 304, electro-polished with ports for pump, gauges, gas inlet, air-inlet, sample holder, targets, load lock, viewing, etc. Appropriate material and design should be used to have the capability of being pumped down to a pressure of $\leq 1 \times 10^{-8}$ torr. Mounted on powder coated frame.	01 no
2.	Substrate heater/holder Substrate holder to handle 2-inch diameter substrate with suitable shutter. Substrate holder shall have provision for controlled substrate rotation 0-10 RPM. Up down movement by 25mm. Provision for substrate heating before and during the deposition up to 800°C with accuracy +/- 2 C with PID Controller. The Substrate holder shall be easily detachable/ replaceable.	01 no
3.	Sputtering sources Sputtering sources of 2-inch diameter with height adjustment (ex-situ), Magnetrons Source of 2-inch diameter for Sputter up, Sputter sources to support both RF and DC Pulsed, Reactive sputtering Modes. All Sources should be water cooled with shutters, and gas chimney. Power rating should be ≥ 300 W. Targets to be easily mountable and replaceable.	06 nos
4.	Power supplies: RF supply with auto matching network (300W or higher) with manual switch for connecting supply to 3 sputter sources one by one. DC supply (500 W or	01 each

	higher capable of interfacing and having constant current, constant voltage, and constant power modes of operation) with mechanical switch to connect to 3 sputter sources one by one	
5.	Vacuum pumping and Measurement High Vacuum <i>Turbo Molecular Pump</i> and <i>Roughing Dry Scroll Pump</i> should be provided. <i>The pumping speed should be commensurate with the base pressure as specified in Sl. No. 1. The speed of turbo molecular pump should not be less than 650 Liter/ Sec..</i> Ultimate vacuum: at last 3 x 10⁻⁸ mbar or better in process chamber (to be demonstrated). Suitable Stainless-Steel bellow, sealed motorised Gate valve for throttling and isolation, roughing and vent valve must be provided. Vacuum Gauging for Pirani & Penning for measuring Vacuum inside chamber from atmosphere to 1 x 10 ⁻⁹ torr	01 Set
6.	Shutter Motorised Shutter for all sputter sources and substrate	07 nos
7.	Gas Inlet System MFC with valve (0-100 SCCM) Ar, O ₂ , N ₂ and H ₂ S Gas with valves on each line after MFC's. Nitrogen venting options should be available.	04 nos
8.	Load-lock SS load-lock comprising of gate valve to isolate main chamber, gate valve to isolate turbo pump of load-lock, full range gauge, 60 Liter/ Sec turbo pumping system, magnetic transfer arm, quick access door for sample removal/insertion	01 no
9.	Water Chiller PID programmable 1.5 kW water chiller with water manifold, flow switches /meters etc for cooling sputter sources as well as substrate heater connections	01 no
10.	Instrumentation rack Rack to mount all electronics displays etc	01 no
11.	Baking arrangement Baking takes with power supply, temperature readout, thermocouple etc	01 set

3. Eligibility:

This Expression of Interest (EOI) is open for Manufacturers, Retailers, Whole sellers, distributors, who are in the business of “**Supply and Installation of Magnetron Sputtering System**”.

4. Selection Process:

The Selection of Proposals shall be done based on IHFC policies, rules, procedures, and statutes, and in conformity with the best practices through an objective selection procedure in line with vision of IHFC.

EOI Opening Date : 3 July 2023 .

Last date for submission: 25 July, 2023.

Extended date for submission: 15 Aug, 2023.

Interested parties can submit their technical cum commercial proposal with

kind attention – VP- Operations - IHFC

Sub: Proposal for “**Magnetron Sputtering System**” and email it to contact@ihfc.co.in

5. Terms and Conditions

Vendor should submit original AWB/Invoices for the imported items (e.g., power supplies, pumps, and gauges etc)

1 Year to 3 years Warranty from the date of acceptance Pre despatch inspection will be performed at vendor premises at no extra cost

Vendor must demonstrate the deposition with user provided targets or copper target as well as demonstrate leak tightness as well as base vacuum.

Operation of heater at 800°C.

The User will provide following:

- 1) Process gases near the system.
- 2) All materials and substrate required for demonstration of acceptance test
- 3) Dedicated RF ground near the system

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