Department of Electronics and Communication Engineering, NIT Calicut

RF Sputtering System

Photo of Instrument:

Instrument Name	RF Sputtering system
Instrument Model & Serial No.	Model: Custom built system
Instrument Make	VR Technologies, Bangalore
Category of Instrument	Thin Film Deposition
Description of Instrument	RF sputter deposition is a widely used technique to deposit thin films on substrates and that allows the deposition of many types of materials, including metals and ceramics, onto as many types of substrate materials.
Instrument Technical Description and Major Specifications (This Specifications Limited to Major 5)	• Sputtering Targets: 2- and 3-inch Diameter • Vacuum: $5x10^{-7}$Torr and Pressure-0.050mbar • Mass Flow Controller: Nitrogen Argon, Nitrogen flow rate 0 – 50 scum • Substrate heater: Radiation heating with IR lamp
Application of Instrument (Limited to Major 4 or 5)	The RF sputtering is one of the most widely used deposition techniques in many industries to prepare

	transparent and conductive thin films such as ZnO, ZnON. tantalum oxide.
Type of Sample Required for Analysis / Testing (Quantity, Pre-Preparation, State etc.) Guidelines for Sample Submission – User Instructions	5 samples (1cm x 1cm) or appropriate, in one process run.
Types of Analysis / Testing	Thin film depositions studies
Faculty In-Charge Name / Email / Contact	Dr C. Periasamy e-mail: cperiasamy@nitc.ac.in Phone: 04952286720
Technical Staff Name / Email / Contact	Mr. Vishnu P. S e-mail: vishnups@nitc.ac.in Mobile: 7034782362
Location of Instrument	Project Lab, ECED Block II, NIT Calicut
Other Details	

User Charges:

S.NO.	Type of Analysis/Testing	Internal - within Department of NITC	Internal - Other Departments NITC	External Academic Educational Institutes	National Labs	Industry
1	Use of the RF Magnetron Sputtering system	NIL	Rs. 500 per run	Rs. 1000 per run	Rs.1000 per run	Rs.1500 per run

Slot Booking and Payment Work Flow: