FBBEAR system control software is a multifunctional software to control the whole SPUTTER system, i.e. Manipulator rotation speed, heating program, process automation, etc.

FBBEAR’s Deposition wizard make it hassle free to save your experimental recipe, and fully automatize the deposition processes. In addition, it also allow data logging in order to review past deposition parameters. FBBear also allows data processing and analysis.

Established in USA since 2007, AdNaNoTek Corporation is the rising leader in ultrahigh vacuum (UHV) technologies and solutions provider. We specialize in the design and manufacture of state-of-the-art and fully customizable UHV systems.

Our UHV deposition systems are guaranteed to deposit extremely high quality thin films in terms of uniformity and purity. With our vast experience in UHV deposition technology, and consistent interaction with our customers: we are sure that we will continue to improve and optimize our products, and be the leading UHV deposition systems provider around the globe.

We excel in manufacturing fully customizable UHV systems, such as:

- Pulsed Laser Deposition System (PLD)
- Molecular Beam Epitaxy System (MBE)
- Atomic Layer Deposition (ALD)
- E-Beam Evaporator
- Ion Beam Deposition (IBD)
- Integrated UHV Systems
- Laser Heating System

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AdNaNoTek’s Magnetron Sputtering Deposition (SPUTTER - 24) can deposit small- to large-size thin-film with extremely high quality and a great repeatability. This system is installed with mask system with fully digital control software which can provide specific mask movement recipe and allows formation of unique deposition pattern.

Precise control and high stability of thin-layer deposition is achieved by making the process automated with the use of FBBear control software. In addition, FBBEAR control software, provides complete data logging, and precise parameter tuning which allows user to have easy operation and reliable experimental repeatability.

**UHV SYSTEM**

Even in vacuum conditions (10⁻⁶ torr), there would still be possibility for impurities to be adsorbed on the samples in a given period of time (around 1 ML every second). Hence, if we can keep the instrument in an ultrahigh vacuum (UHV) environment (10⁻⁹ torr), the contamination will be greatly reduced.

AdNaNotek provides a ultra clean system to help researchers run the experiments in a UHV and low contamination environment.

**FEATURE**

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**SPUTTER - 24 SPECIFICATION**

- 24-inch cylindrical SUS316L chamber
- Base pressure: 5E⁻⁹torr (5E⁻¹⁰ upon request)
- 2-in sample (different size upon request)
- 4-axis XYZR manipulator with SiC heating element
- Heating temperature up to 950°C
- 6 2-in magnetron sputter sources (confocal/parallel)
- Thickness monitor
- Turbo pump with rough pump
- Full range vacuum gauge
- Pressure control system: upstream and downstream
- Computer with full system control software
- Load-lock with vacuum pumps and gauges
- Large space and additional ports for versatile extensions

**OPTIONAL UNITS**

Due to the large space and available multi ports, SPUTTER - 24 can be easily extended with many different kind of equipment.

- Direct sputtering system
- DC/RF substrate bias
- Pre-annealing heating system in load lock
- Ion beam assisted deposition
- Single/dual mask system with z-motion
- Substrate storage mechanism in load lock
- RHEED system (real-time epitaxy monitoring)

Any specific parts that you need in your experiment can be integrated to SPUTTER-24

**ION BEAM SOURCES**

AdNaNotek’s IBSD system is a multi functional system combined four magnetron sputtering source, ion beam sputtering deposition system, assisted ion beam, which can provide researchers a powerful surface science platform.