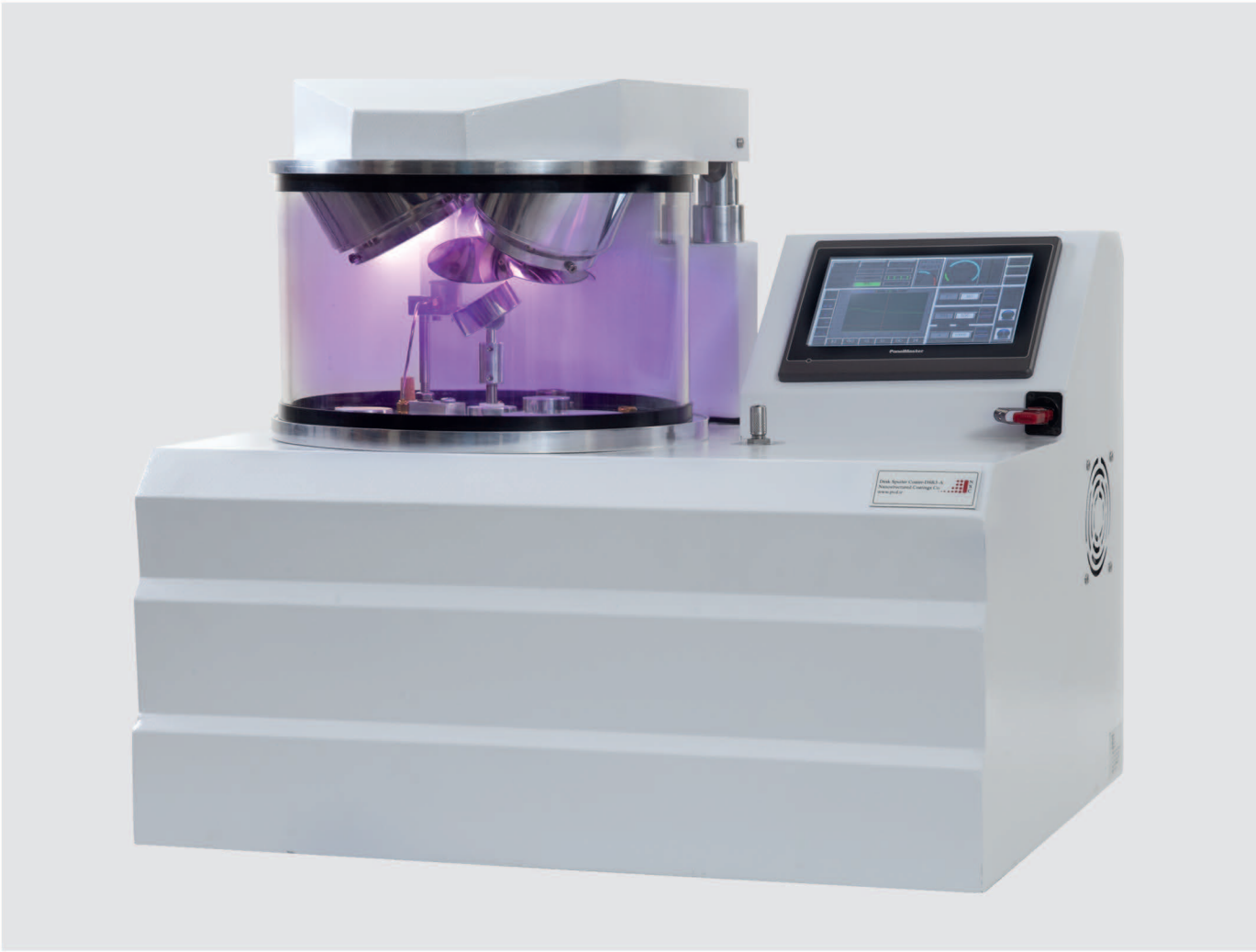


NANO-STRUCTURED COATINGS

About the company

Nano-structured Coatings is a company with years of experience in Middle East and providing the widest range of vacuum coating equipments.

2005	2006	2008	2010	2011	2012
Foundation	PLD systems	VCS series	Spacing simulation systems	Desktop sputtering systems	ISO9001-2008 CE certificate for Desktop sputtering

Our Mission, goal and values

Providing our customers and partners with most efficient and comprehensive solutions on vacuum processing equipments.

Achieve incomparable situation in the Middle East market and access to key international market of HV and UHV equipment through continuous improvement of our products performance, providing advanced technological support and improving Customer service.

We value our reputation and guarantee to our customers and partners high level of quality and service.

R&D policy

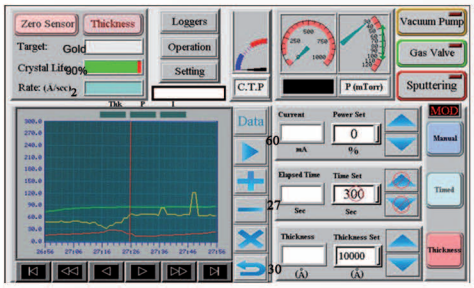
Nano-structured Coatings Co. works daily on developing new products that will contribute to creating a richer society. Seek to create products of established quality that will meet the requirements expected of products that go into production. Protect the environment and seeks means of utilizing resources more effectively.

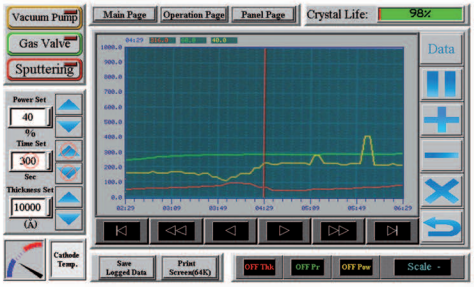
NANO-STRUCTURED COATINGS

Products

1) Desktop sputtering system.
2) VCS series deposition instruments.
3) RF&DC magnetron sputtering systems.
4) High Vacuum Thermal Evaporation systems.
5) Pulsed Laser Deposition (PLD).

Desk Sputter Coater
Model DST3

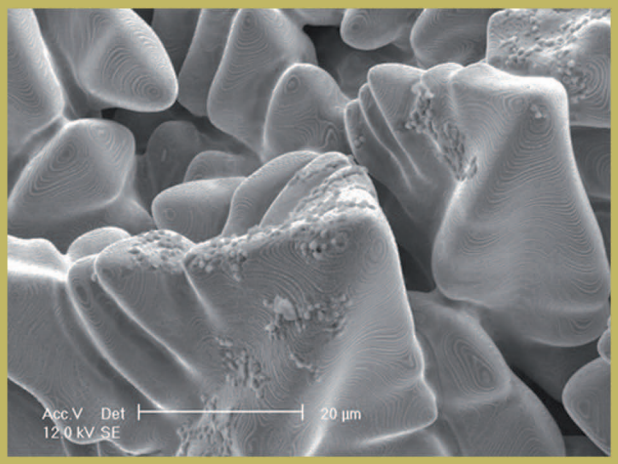


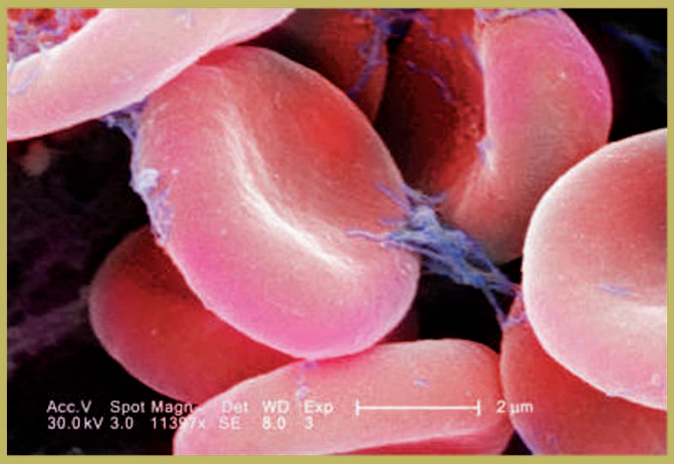


The DST3 is available in two options:

*DST3 S – Linear (or Straight) cathodes.
The DST3 is a coating system with a large chamber and turbo molecular-pump. It is suitable to sputter large single sample with specimen diameter up to 20 cm. Smaller multiple specimens can be sputtered over a similar diameter.
To ensure an even deposition ratio over a large diameter, the DST3 is equipped with three sputtering heads. The system is capable to sputter both oxidizing metals and non-oxidizing noble metals.

*DST3 A- 30 degree angled cathodes.
DST3A model is a desk sputter coater equipped with turbo molecular pump. It can sputter metals, semiconductors and dielectric targets. It is also capable to co-sputter two or three cathodes simultaneously by using three angular cathode via a common focal point.





Features

- Two-stage, direct drive 170 lpm, rotary vane pump.
- High vacuum turbo pump 60 l/s.
- 3 water cooled 2" cathodes.
- Deposition continuously without need to rest.
- 300 mm OD x 180 mm Pyrex cylinder chamber.
- 0-100 mA DC power supply.
- 7" touch screen control panel; includes features such as a log of the last 200 coatings carried out
- Ultimate Vacuum: Less than 4×10-5 millitorr.
- Dimensions: 50 Cm H x 60 Cm W x 47 Cm D.
- Utilities: 220V-50Hz - 6A.
- Gas: Argon - 99.999% (regulated to 2 - 5 psig); recommended but not required.
- Manual or automatic Timed and Thickness sputtering.
- Control the rate of sputtering for any cathode independently, to achieve finer grain structure.
- High precision quartz crystal thickness monitor.
- Protection of samples against heating during sputtering process.
- System automatically vents when turned off.
- Automatically controlled the power of sputtering independent of pressure.
- Automatically controlled the temperature of cathodes in order to protect the life time of the magnets.
- Equipped with rotary sample holder with ability of tilting in direction of cathode.
- Data is rapidly entered using fully automatic touch screen control.
- Precision Mass Flow meter (MFC) in order to fine control of the vacuum pressure.
- Drawing the pressure, thickness and current curves.
- Transfer the curves and sputtering process data by USB port to PC.
- Shipping Weight: ~ 27 Kg (without vacuum pump). ~ 43 Kg with pump
- ISO9001, CE conformity.

Options:

- 300 w RF power supply and matching box.
- 500 mA DC power supply.
- Nitrogen venting gas.
- Substrate bias voltage.
- Rotatable sample stage.
- Angled sample stage.

Desk Sputter Coater
Model DSR1

The Desk Sputter Coater model DSR1 is able to coat noble metals – such as Gold (Au) , Silver(Ag), Palladium (Pa) and platinum (Pt) thin films on non-conductive or poorly conductive specimens uniformly and fine-grain size in fast cycle time. The good design of the system able the user easily to load and unloading of samples and quickly change the target.

FEATURES

- Two-stage, direct drive 170 L/m, rotary vane pump.
- 150 mm OD x 150 mm Pyrex cylinder chamber.
- 0-100 mA switching power supply.
- Ultimate Vacuum: Less than 30 millitorr.
- Dimensions: 45 Cm H x 50 Cm W x 37 Cm D.
- Utilities: 220V-50Hz - 6A.
- Touch screen and colorful display; includes features such as a log of the last 200 coatings carried out
- Gas: Argon – 99.999% (regulated to 2 – 5 psig); recommended but not required.
- Manual or automatic Timed and Thickness sputtering.
- Control the rate of sputtering to achieve finer grain structure.
- High precision quartz crystal thickness monitor.
- Protection of samples against heating during sputtering process.
- System automatically vents when turned off. Nitrogen venting gas (optional).
- Automatically controlled the power of sputtering independent of pressure.
- Automatically controlled the temperature of cathode in order to protect the life time of the magnets.
- Data is rapidly entered using fully automatic touch screen control.
- Precision metering valve in order to control the vacuum pressure.
- Drawing the pressure, thickness and current curves.
- Transfer the curves and sputtering process data by USB port to PC.
- Shipping Weight: ~ 18 Kg (without vacuum pump). ~ 34 Kg with pump.
- ISO9001, CE conformity.

Pulsed Laser Deposition system (PLD)

This low-cost Pulsed laser deposition System (PLD) is for many reasons a versatile technique. Since with this system the energy source is located outside the chamber, the use of ultrahigh vacuum (UHV) as well as ambient gas is possible. Combined with a stoichiometry transfer between target and substrate this allows depositing all kinds of different materials.
Pulses with a rise time of only a few nanoseconds allow not only efficient non-thermal ablation, but also precise preservation of the stoichiometry of the target material. It is important e.g. for the production of complex ceramic materials such as high-temperature superconductors or magnetic materials. This technique is simple but very Complicated to operate and can damage materials if not used properly.

Features:

- A developed target manipulator to address the issue of uniform target evaporation. This specially designed target manipulator is capable of carrying 3 to 6 targets at the same time.
- Conceptually simple
- Versatile
- Cost-effective
- Fast: high quality samples can be grown reliably in 10 or 15 minutes

Thin Film Deposition Systems (VCST-Series):

Nano-structured Coating, VCST-Series Thin Film Deposition Systems are versatile coating tools that can be built in a wide variety of configurations to satisfy almost any requirement.
VCST100 is a vacuum deposition system and is one of the most advanced hybrid deposition systems.

Features:

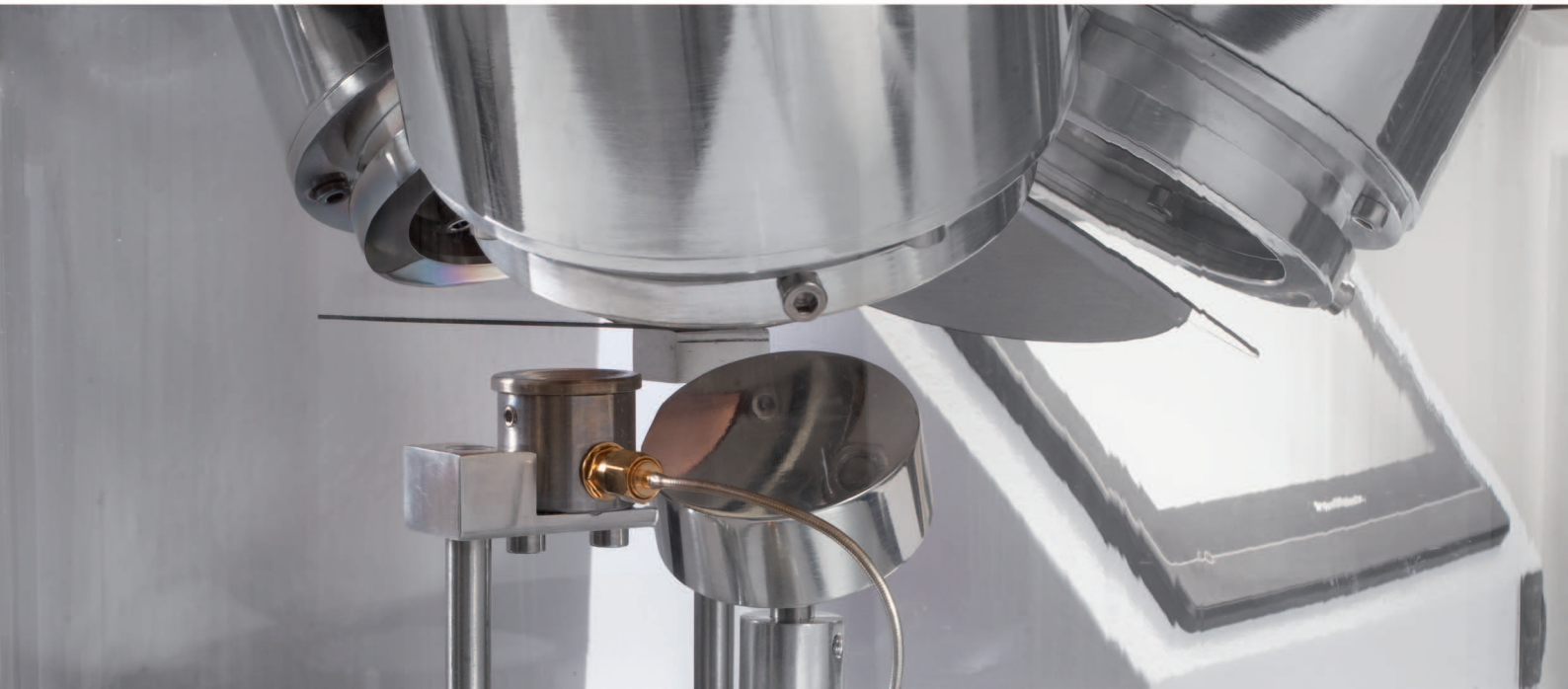
- Two magnetron cathode with 3 degree of freedom
- DC power supply with automatic matching box
- Thermal evaporation platform
- Boat holder and current display
- Double layers water cooled vacuum chamber
- Turbo molecular pump
- Smart valve for turbo pump with touch screen monitor
- Electro pneumatic valves
- Substrate holder with electronic shutter and electronic feed-through
- Two stage backup rotary pump
- Touch screen interface
- Quartz crystal thickness monitor with 1 nm resolution and 4 sensor holder

Product Models

MODEL	Rotary pump	Turbo pump	One cathode	Two cathodes	Three cathodes	Carbon coat	Water cooled	Thermal evaporation	Applications
DSR1	●		●						Ideal for SEM sputtering with noble metals - e.g. Gold (Au), gold/palladium (Au/Pd) and platinum (Pt)
DCR	●					●			Ideal for SEM carbon coating applications (EDS and WDS)
DSCR1	●		●			●			Combined sputter coater and SEM carbon coater
DSRW1	●		●				●		Ideal for sputtering thick films of noble metals.
DSCRW1	●		●				●	●	Combined continuous sputter coater and SEM carbon coater
DST1	●	●	●						Suitable for SEM, TEM and other thin film applications. A high performance sputter coater, used for a wide range of metals, including oxidizing metals.
DCT	●	●				●			A high vacuum carbon coater for SEM and TEM applications.
DSCT	●	●	●			●			A high performance sputter coater and high vacuum carbon coater
DSTW1	●	●	●				●		Ideal for sputter coating of thick films of a wide range of metals, including oxidizable metals.
DSCTW1	●	●	●			●	●		A high performance sputter coated for thick films and high vacuum carbon coater.
DSR2*	●			●			●		Sputter coated of noble metals, including gold (Au), gold/palladium (Au/Pd) and platinum (Pt).
DST2*	●	●		●			●		Sputtering metals, insulators and semiconductors. Appropriate for multi-layer deposition with 2 targets.
DSR3*	●				●		●		Designed to sputter noble metals - e.g. gold (Au), gold/palladium (Au/Pd) and platinum (Pt). Suited for sputtering a single large diameter specimen or multiple smaller specimens over a large area. Suited for multi-layer deposition with 3 targets.
DST3*	●	●			●		●		Sputtering metals, insulators and semiconductors. Suited for sputtering a single large diameter specimen or multiple smaller specimens over a large area. Suited for multilayer deposition with 3 targets.
DTT	●	●						●	Designed to deposit films by heat resistance evaporation method. Possible to deposit multilayers.

*It is available in two models: S & A, in S the cathodes are straight and A the cathodes are 30 degrees angled.

◯ = Equiped with



CONTACT US

Nano-structured Coatings Co.

Tel: +98 21 66067785

+98 21 66033555

Fax: +98 21 66033450

website: www.pvd.ir

email: info@pvd.ir

INDEPENDENT IEC EUROPEAN CERTIFICATION

ISO 9001 REGISTERED FIRM

CE

Local Distributer: