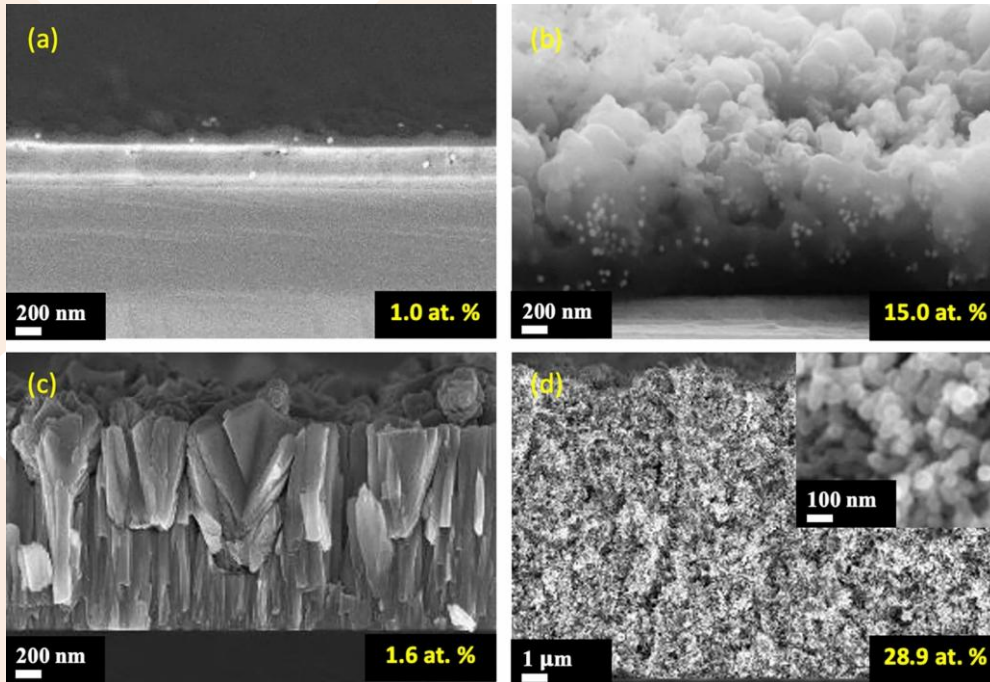


NACRE : NANoparticle Composite Ready-to-use Equipment

Are you looking to develop the materials of the future? Are you looking to create the best thin-film nanocomposites? Then we have the machine you need!

This system uses a combination of nanoparticles divergent jet with magnetron sputtering. The goal is to be able to deposit a wide variety of nanocomposite materials. This technology was developed by the CEA in France. SOCRATE Industrie now holds the licenses to use the patents, enabling it to offer this technology to its customers. This machine proposed by SOCRATE Industrie can operate in either manual or automatic mode thanks to its PLC and computer. (<https://www.nature.com/articles/s41598-023-31933-w>)



Metallic nanoparticles in a ceramic matrix (Au-np in SiO₂ matrix) with 1 at.% np (a) and 15 at.% np (b); ceramic nanoparticles in a metallic matrix (Si-np in Cr matrix) with 1.6 at.% np (c) and 28.9 at.% np (d).

Main Features:

Sputtering magnetron: 1, 2 or 3. Shutter included.
Size of target: 2" (Ø50,8), 3 or 6mm.
Power Supply: DC 500W or RF 300W or other on demand.
Aerodynamic jet: 1, 2 or 3. Shutter included.
Volume of liquid (Din55): 250ml or 500ml or other.
Homogeneous area: >Ø50 mm (with planetary motion).
Substrate holder: 1 rotation or planetary motion.
Substrate heater: 200°C – 800°C.
Substrate polarization: DC -500V or RF-300W
Gaz : N₂, Ar, O₂ or other.
Options : Dry pumps, Pyrometer.

For further information, please contact us:

SOCRATE Industrie

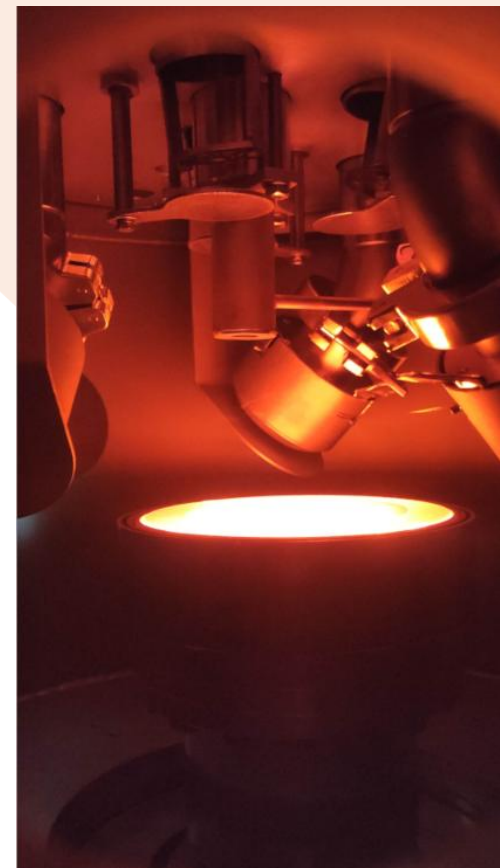
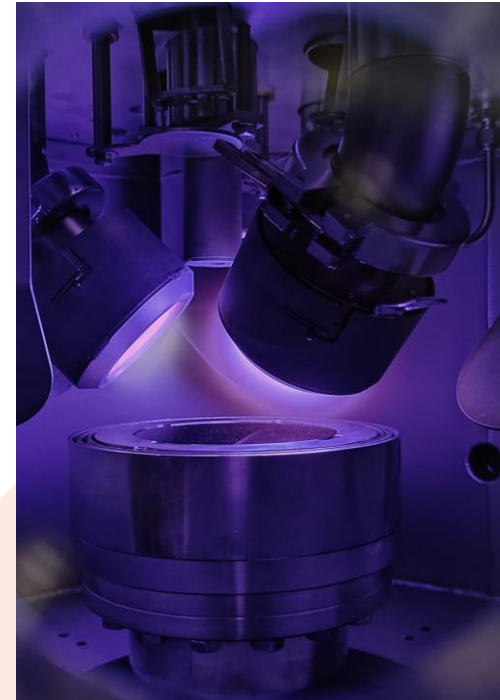
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NACRE
Nanoparticle Composite Research Equipment



Σi SOCRATE
industrie

NACRE : NANOparticle Composite Ready-to-use Equipment



Serie	Nb Magnetron	Power supply	Nb Jet	Volume of liquide	Substrate holder	Substrate heater	Substrate polarisation	Pumping	Options
NACRE Ø50	1	DC - 500W	1	250 ml	1 - Simple rotation	No	DC - 500V	Standard	1 - Pyrometer
	2	RF - 300W	2	500 ml	2 - Planetary motion	Yes - 800°C	RF - 300W	Dry pumps	
	3	SP	3	SP			No		

Example of reference: NACRE Ø50-3-DC/DC/RF-3-500/500/500-2-Yes-RF-2

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