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R&D in surface engineering

## Tomorrow is already here,

Innovation is one of the principal factors of growth and competition for businesses. With around 50 employees; IREIS is able to innovate and to take on the challenges of the worlds of both today and tomorrow, in the fields of surface engineering.

IREIS is committed to contributing to technological progress in response to the challenges faced by our society.

## Our fields of expertise in Material & Process R&D



Testing and coverings in tribology

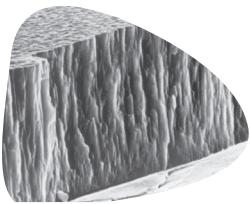


Materials in thin layers for photonics

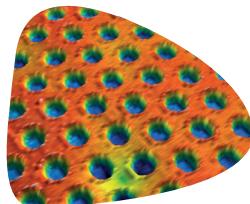


Coverings for hydrogen technologies

## Our technologies



Vacuum deposit processes



Texturing with femtosecond laser



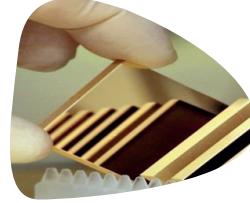
Powders with functionalizing covering



Liquid Nitriding treatments



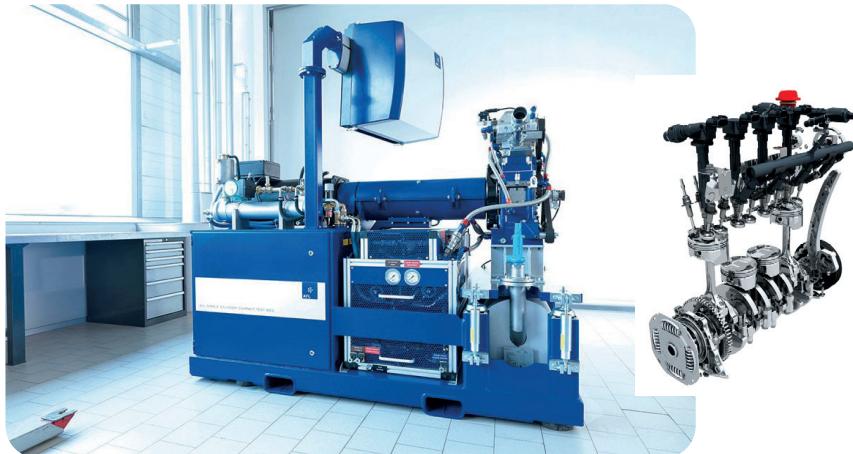
New friction components



High-precision optical components

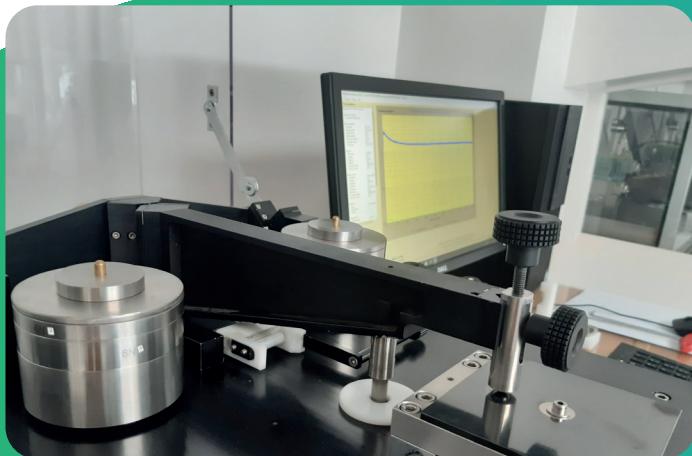
## Research and testing platforms for tribology

### ENGINE PLATFORM



The engine platform focuses on improving the energy efficiency of engines, through tribology, from models on a laboratory and sub-system scale up to the mono-cylinder bench.

### INDUSTRIAL STUDIES



The industrial testing platform brings together a fleet of test benches, ranging from simple standardized testing to conditions closer to the industrial domain:

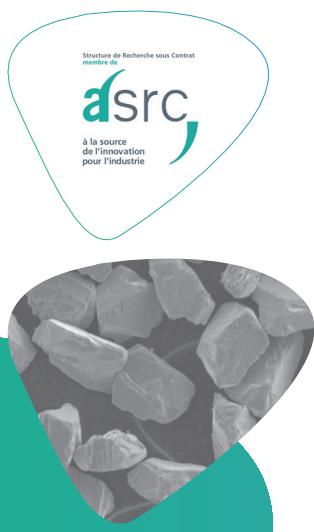
- With specific testing environments, comprising elements such as extreme temperatures (up to 700 °C), cryogenics, vacuums, particles, and various fluids
- By simulating particle wear, such as fretting, fretting corrosion, erosion, cantilever joints, and fatigue.

## Research & Development in Tribology and Surface Material Engineering

Through studies and tests conducted with its clients and partners, IREIS is improving surface properties and giving them new functions, developing new covering technologies and processes to tackle the challenges we face:

- Decarbonizing the industry, sustainable development, and circular economy processes
- Mobility: Improving energy efficiency with a view to achieving zero-emission vehicles
- Developing advanced manufacturing processes, new multi-functional materials, and structuring complex surfaces.

With the status of **SRC** (*Structure de Recherche sous Contrat* - Contracted Research Structure), IREIS conducts a significant proportion of its business by working for external companies, always in the aim of providing its expertise in surface material engineering. **As a research provider, IREIS has also been approved by the French Ministry of Research for the R&D tax credit in France.**



### Contact

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