

# PECVD, PRECURSORS AND SURCOTEC KNOW-HOW

Surcotec has built its reputation in the vacuum metallization industry and since 2006, SURCOTEC is a leader in PECVD technology.

Thanks to our know-how and innovations we produce high quality films.

Plasma Enhanced Chemical Vapor Deposition (PECVD) is a process by which thin films of various materials can be deposited on substrates at **lower temperature** than the standard Chemical Vapor Deposition (CVD).

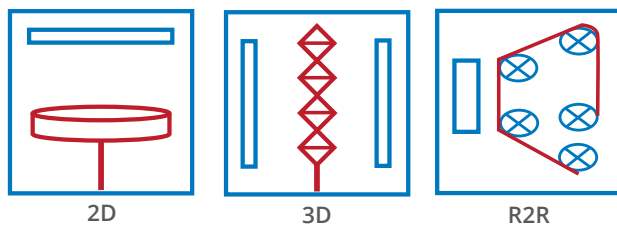
In PECVD processes, deposition is achieved by introducing reactant gases between two electrodes, a grounded electrode and an RF-energized electrode. The capacitive coupling between the electrodes excites the reactant gases into a plasma, which induces a chemical reaction and results in the reaction product being deposited on the substrate. The lower deposition temperatures are critical in many applications where CVD temperatures could damage the devices being manufactured.

## APPLICATIONS

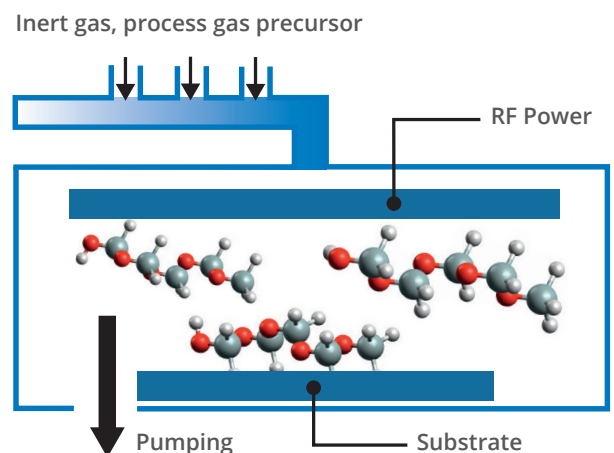
Carbon (C)	Barrier coating ; Black coating
Silicon Oxide (SiOx)	Barrier coating, Optical filter, anti-finger print
Silicon nitride (SixNy)	Barrier coating, Optical filter, anti-finger print
Silicon oxy carbide (SiOxCy)	Low friction
Titanium Oxide (TiO2)	Antimicrobial, Optical filter

These films are also used for encapsulation to protect devices from corrosion by atmospheric elements such as moisture and oxygen.

## PECVD GEOMETRY VARIANTS



## TYPICAL FORMULATION AND APPLICATION USED AT SURCOTEC



## OTHER APPLICATION

### ALD (Al2O3)

Barrier coating for watch industry



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**SURCOTEC**   
SURFACE COATING TECHNOLOGY