



Plasma Enhanced Atomic Layer Deposition System

Technical Specification



The SYSKEY Technology of vacuum system is designed for research, development and pre-production application in all branches of science and industry. Our company offers many years of experience and expertise in vacuum technology, so that we can provide you with a fully tailored system for your specific requirements



Atomic Layer Deposition (ALD) System

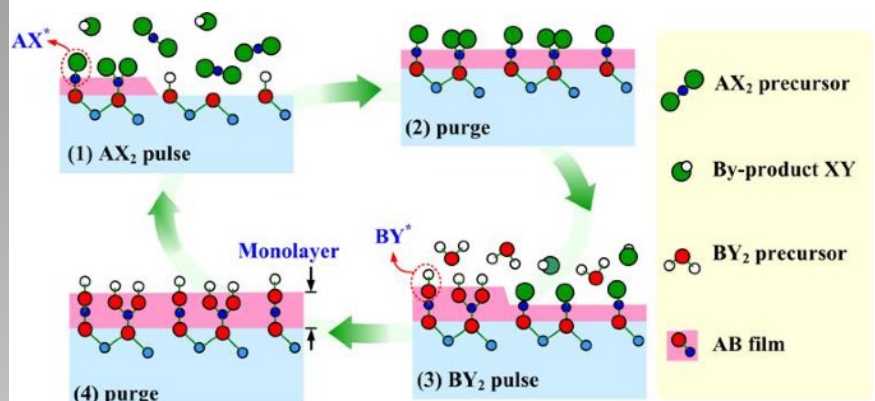
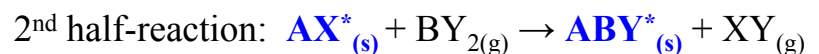
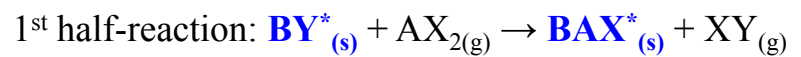
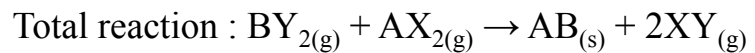
APPLICATIONS

Basic ALD technology concept is to deposit one atomic layer per cycle during deposition. ALD is a surface controlled layer-by-layer process for the deposition of thin films with atomic layer accuracy which is basic fundamentals of nano-technology.

Applications:

- Grow films on a non-flat surface
- Barrier/seed layer for interconnect
- High-k transistor gate insulator
- Flat panel displays
- MEMS(micro-electro-mechanical-systems)

ALD PROCESS

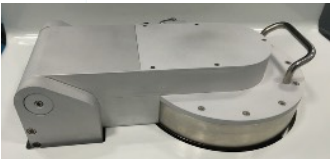
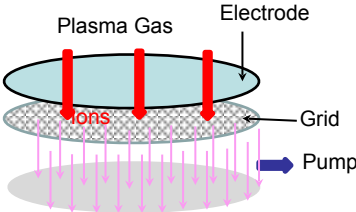




Atomic Layer Deposition (ALD) System

Plasma
ALD

- Thermal and plasma enhanced ALD compatible
- Plasma pre-treatment
- Several gas flow(N₂, O₂, H₂, Ar...)
- RF plasma(13.56MHz)
- Max 6 precursor line





Atomic Layer Deposition (ALD) System

System Features

We are not only effort to provide accurate and reliable reproducibility equipments but also make inexpensive equipments

Features:

Stainless deposition chamber

N₂ or Ar flow for carrier and venting

high speed ALD diaphragm valves

Precursor line can up to 6 lines

All precursor line connections metal seal

Precursor line is backing(RT~150°C)

Substrate size up to 12"

Substrate heating available 400°C





Atomic Layer Deposition (ALD) System

Control System

The Control System is easy-to-use graphical system and provides plenty of functionality for building customer applications. The vacuum system software provides authority manage, process control, data base link, auto service, remote monitor with "soft" valve interlocks. Also software includes chart and graph control for you to display the waveforms acquired from data acquisition device.

Available options include:

- Authority manage
- Automatic process control
- Data logging and history search
- Multi-layer & co-deposition
- Real time trend graphing
- Safety interlocks and alerts

