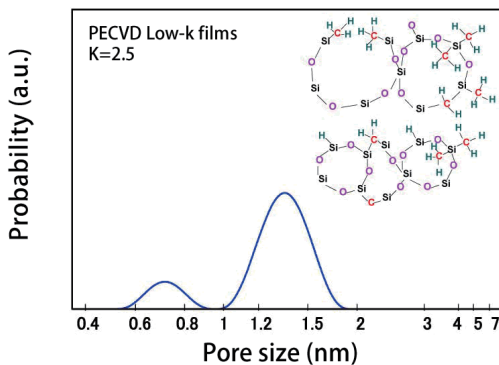
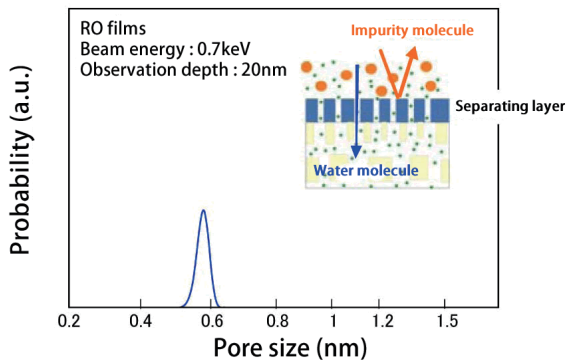


Positron Annihilation Lifetime Spectroscopy System PALS-200A

Feature

- Up to 5 samples, which can be measured automatically
- Analysis software with easy operation
- The control freely depth observation
- Measured pore size is atomic-vacancy from 10nm
- Low-damage, non-destructive



Specification and Performance

- Space occupied by the equipment : 4.7m \times 3.2m \times 2.2m(H)
- Positron source : Na-22 (max. activity 1GBq)
- Positron beam energy : 0.5~15keV (variable)
- Time resolution : < 300ps
- γ -ray counting rate : > 500cps@1GBq
- Measurement time : < 1h/spectrum

Application

- VLSI materials:
Low-k dielectrics, High-k gate dielectrics, Cu barrier films, Electroplated Cu films, SiO₂, Strained Si, Ion-implanted Si
- III-V, II-VI semiconductors:
GaN, InN, ZnO, SiC, GaAs
- Porous materials, Zeolite, Membranes,
- Polymer coating films (free volume)
RO films, Gas barrier films, Mesoporous materials

PALS
Positron Annihilation Lifetime Spectroscopy

Designed and developed by

Advanced Defect-Characterization Research Group,
Research Institute of Instrumentation Frontier,
National Institute of Advanced Industrial Science and
Technology (AIST)

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