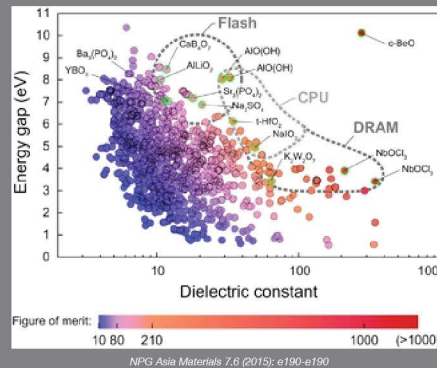


Dielectric Material Landscape



Materials Analysis



Dielectric materials are an essential part of modern technologies as industry progresses. The conventional thermal and CVD SiO_2 are being replaced with high K dielectrics such as HfO_2 , ZrO_2 , and Al_2O_3 . These thinner dielectrics require more advanced characterization which is why you should consider using our services listed below.

Why Work with Us?

-  **Expertise in Dielectric Analysis**
Highly experienced with advanced technology
-  **Affordable Price**
Up to 40% lower than industry pricing
-  **Free Consultation**
Before and after service
-  **In-Depth Data Interpretation**
As a second opinion to yours
-  **Quality Assurance Program**
Free remeasurement if not satisfied

Advanced Dielectric Measurements



Objective

- Atomic Level Feature
- Hydrogen Measurement
- Atomic Composition
- 3D Reconstruction of Elements



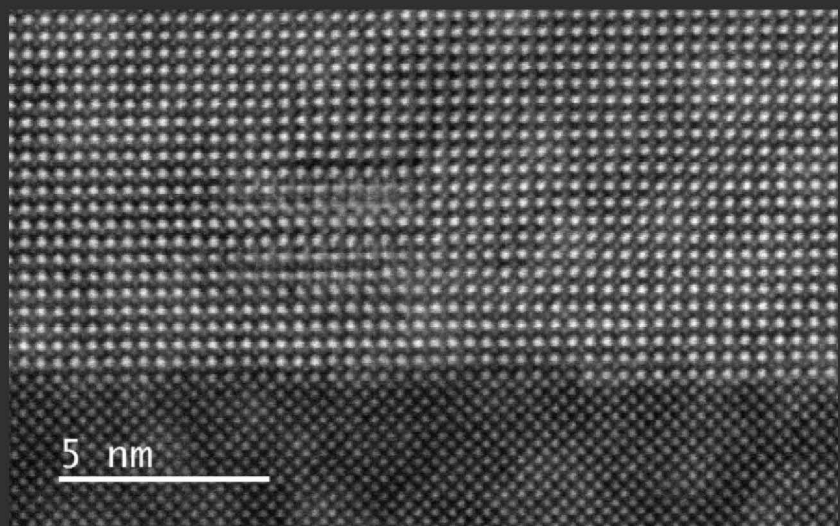
Solution

- TEM/STEM/EDS/EELS
- SIMS and HFS
- Depth Profile XPS
- ToF-SIMS

Key Highlighted Technologies

TEM/STEM/EDS/EELS

- Atomic resolution imaging
- Nanometer resolution elements mapping
- Crystal defects check
- III-V super lattice



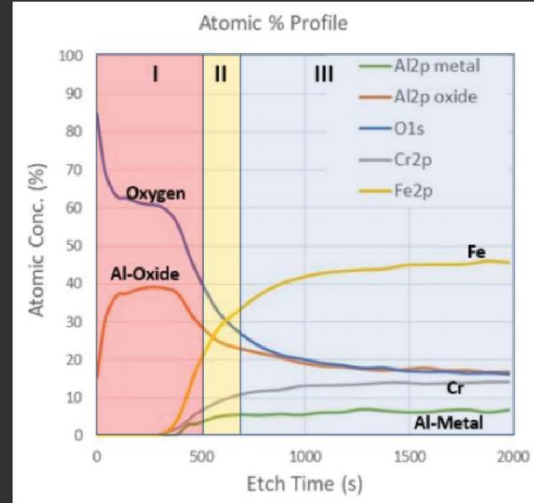
TEM prep and measurements starting from \$600 per sample



XPS/D-XPS/XRD/XRR

- Composition and chemical state check (XPS)
- Crystalline phase, orientation, strain check (XRD)
- Film thickness, density, roughness measurement (XRR)

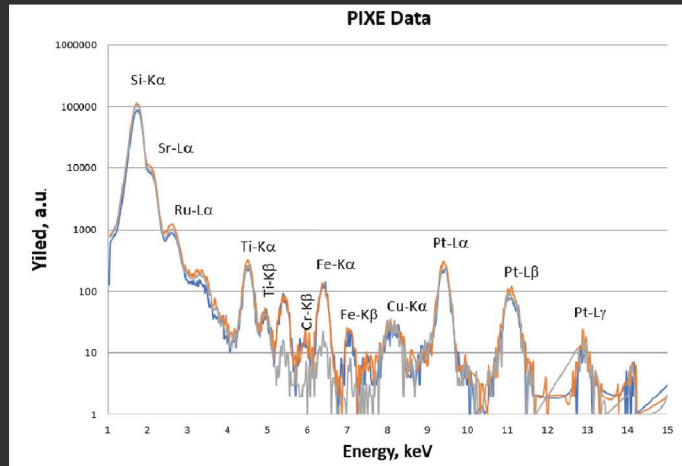
X-ray techniques starting at \$250 per sample



RBS/HFS/PIXE/NRA

- HFS: Hydrogen Forward Scattering Spectrometer (Measure H element)
- PIXE: Particle-induced X-ray Emission (Identify heavy element on RBS instrument)
- NRA: Nuclear Reaction Analysis (Measure low-Z elements)

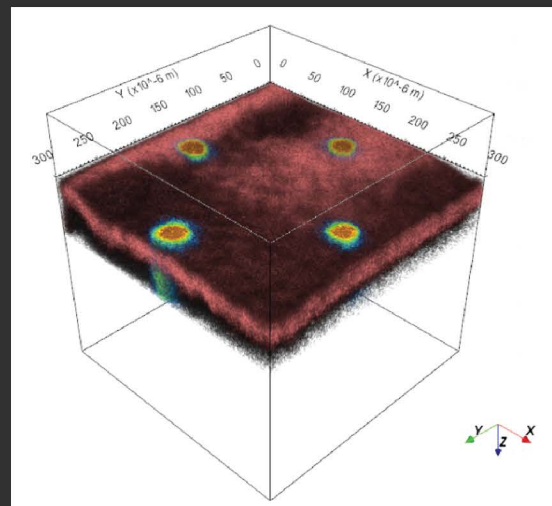
RBS Techniques starting at \$500 per sample



M-SIMS/ToF SIMS

- Surface/Depth element profiling analysis
- Trace element Analysis in ppb level
- Ability to reconstruct objects in 3D based on composition

SIMS Measurements starting at \$300 per sample



GET IN TOUCH

COLL-Dielectric-Q322/PDF

+1-408-889-1019

contact@outermost-tech.com

2975 Scott Boulevard, Suite 115, Santa Clara, CA 95054

Copyright © 2022 Outermost Technology, All rights reserved.