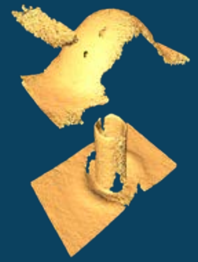
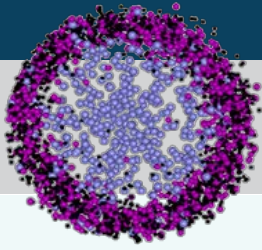
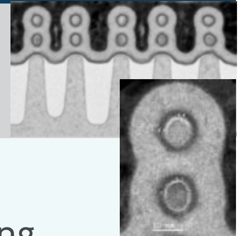
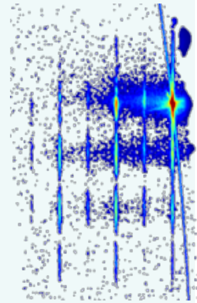
Characterization and Metrology for 3D CMOS





Workshop in the frame of the EU projects 3DAM and Metro4-3D



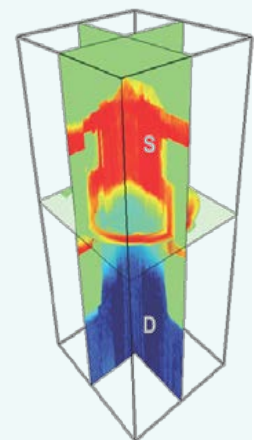


The continued CMOS scaling is challenging and pushing the limits of existing characterization and metrology techniques. 3DAM and METRO4-3D are EU-funded pathfinding and assessment projects focusing on innovations and progress in metrology related to the latest generation of 3D FEOL and BEOL structures (fins, nanowires, TSVs) as well as 2D materials:

- **Dimensional metrology**: 3D-AFM, CD-SEM, OCD
- **Structural analysis**: TEM tomography, CL, SHG, GHz-SAM, X-ray CT
- **Compositional/dopant analysis**: SIMS, Atom probe, STEM-EDX and EELS, IRR, Raman, HRXRD
- **Carrier distribution and mobility**: 3D-SSRM, micro-multi-point probes, THz spectroscopy
- **Strain and stress**: HRXRD, Raman, PED

The goal of this workshop is to disseminate the results of the projects to the public. The combination with the insights and learnings from experts will make this one-day workshop an up-to-date overview of the most recent advances in the analytical techniques and diagnostic capabilities essential for technology development.

Invited speakers:
Naoto Horiguchi (imec, Belgium): CMOS roadmap and metrology requirements
Bert Freitag (FEI, The Netherlands): TEM and related analysis techniques
Paul Ryan (Bruker, UK): In-line X-ray Diffraction
Sebastian Brand (Fraunhofer IMWS, Germany): GHz-Scanning Acoustic Microscopy
Adeline Grenier (LETI, France): Atom probe tomography
Janusz Bogdanowicz (imec, Belgium): Micro-multi-point probes
Thomas Nuytten (imec, Belgium): Raman spectroscopy



Date: Friday 21st April 2017 9am
Location: imec, Leuven (Belgium)
Committee Chair: Andreas.Schulze@imec.be
Information & Registration via www.3d-metrology-workshop.eu or

ECSEL JU 3DAM imec METRO4-3D