Call for extended abstracts

The **Symposium on Ultra Clean Processing of Semiconductor Surfaces (UCPSS)** is a biannual event. The next edition will be held from 2-5 September 2018 in the KULeuven Hallen (Leuven, Belgium).

It is the purpose of the UCPSS symposium to increase the level of understanding on ultra-clean processing and surface preparation technology in all steps of the fabrication of ICs, PV-modules and bioelectronics devices. The conference consists of invited presentations, as well as selected contributing presentations and posters.

The topics to be addressed include, but are not limited to:

- Fundamentals of contaminants on surfaces, e.g. particle-substrate interactions
- Removal of contaminants in all steps of micro-, nano-electronics applications and 3D-integration
- Surface chemistry, passivation, conditioning and characterization of group IV and III/V materials (Si, Ge, SiGe, SiC, InP, GaAs and InGaAs) for sensitive FEOL processes (high-k-metal gate stacks dielectrics, Ge surfaces, III-V, CVD and MBE- epitaxy, ALD, SAM deposition)
- Post-CMP clean for advanced Logic, Memory and 3D-applications
- Cleaning and advanced etching schemes in advanced RMG and work function tuning
- Cleaning and surface preparation for advanced memory applications (DRAM, Flash memory, PCM, RRAM, MRAM, STT, ...)
- Chemical and physical cleaning in liquid, gaseous, vapour, remote plasma and supercritical fluids
- Surface energy driven scaling limitations: wetting, sticking, collapse and drying
- BEOL strip and cleans, including corrosion issues of aggressively scaled interconnect schemes
- Trade-offs between cleaning performance, substrate damage and etching
- Contamination/particle control and its relation with process yield or performance
- Importance of ambient control during fabrication, transport or storage for wafer surface cleanliness
- Yield enhancement cleans: wafer backside, bevel
- Removal of (modified) photo resist, post etch residues and polymers
- Analytical methods, process and contamination diagnostics, in-situ monitoring and process control
- General issues in ultra-clean technology, ultra-pure materials and supply systems
- Safety, environmentally friendly technologies and mass balance equations
- Challenges of cleaning EUV-masks
- Surface preparation for 2D-materials (graphene, MoS_2, WSe_2, ...) and clean transfer
- Surface functionalization, e.g. based on SAMs or other methods
- Surface for integrated bio-electronic sensors
- Surface preparation and functionalization for integrated microfluidic bio-sensor devices: including immobilization of bio-molecules on sensor substrates
- Cleaning and surface preparation for photovoltaic applications, M- and N-EMS

Deadline for submission of extended abstract: 12 March 2018

Conference chairman: Paul Mertens (imec)

Programme committee responsible for paper selection:
Takeshi Hattori (Hattori Consulting International), Jerzy Ruzyllo (Penn State University), Anthony Muscat (University of Arizona), Ara Philipossian (University of Arizona), Lucile Broussous (ST France), Geun-min Choi (SK Hynix), Mauro Alessandri (ST Italia), Kuntack Lee (Samsung), Jef Poortmans (imec), Ralf Preu (ISE), Paul W. Mertens (imec)

Advisory committee:
Marc Heyns (imec), Bernd Kolbesen (J.-W. Goethe University), Allen Bowling (Texas Instruments)

Local organizing committee:
Marc Heyns (imec), Marc Meuris (imec), Rita Vos (imec), Guy Vereecke (imec), Kurt Wostyn (imec), Antoine Pacco (imec), Paul Mertens (imec)