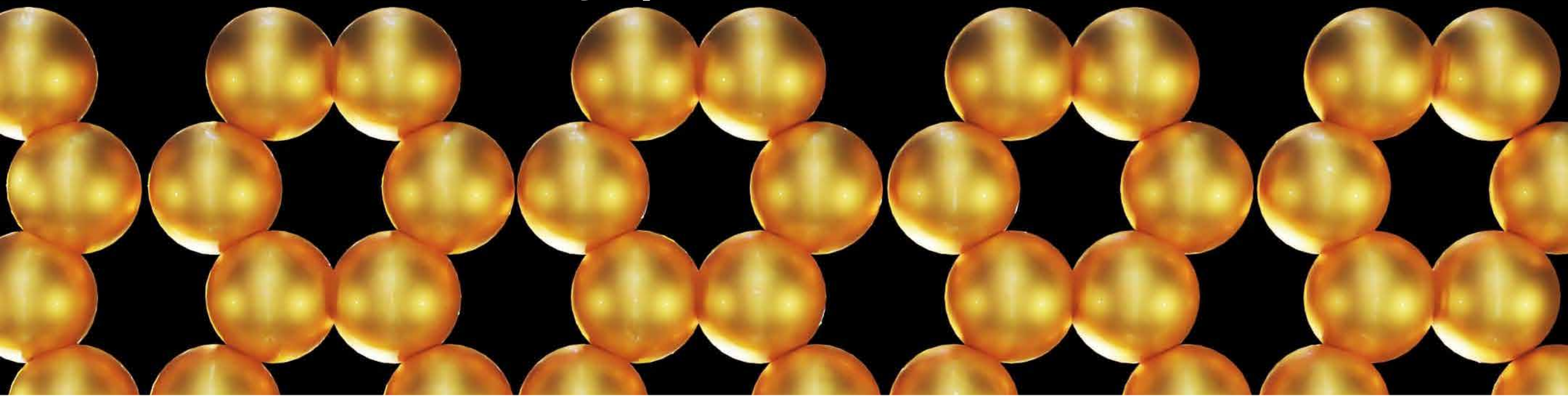
IEMN & Grinshield

Summer School on Nanocharacterization

01-04 July 2025 - IEMN/IRCICA



Oral sessions: IRCICA Amphitheater - Thursday Lunch + Lab Works: IEMN - Thursday Gala Dinner: Lille

iemn
Institut d'Electronique, de Microélectronique et de Nanotechnologie
UMR CNRS 8520

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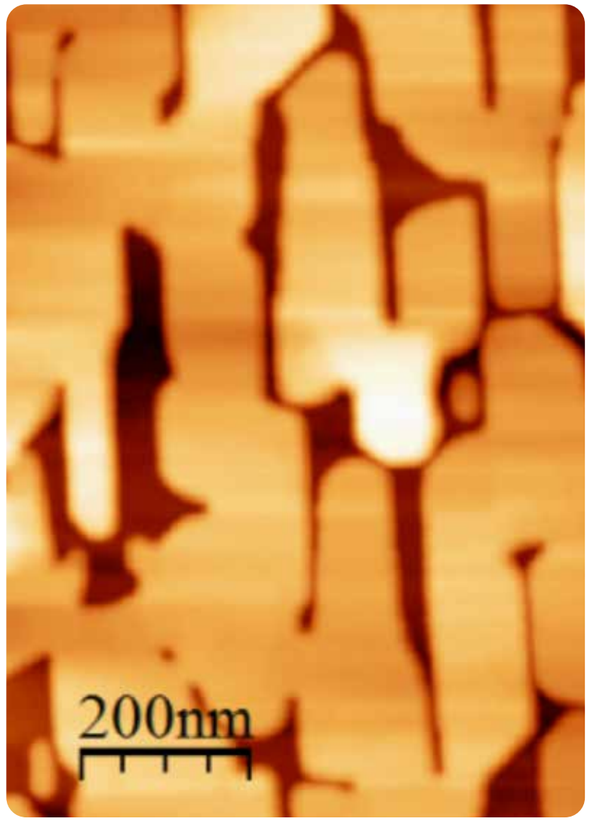


TUESDAY

Emerging Materials & Devices I
Chairmen: H. HAPPY & J. PREKODRAVAC

13h45-14h45:
- Thierry MÉLIN

« Nanocharacterization at IEMN »
- Jovana PREKODRAVAC

« The Grinshield Project »

14h45-15h45: Catherine GAUTIER (LMI)
« Beyond graphene: unlocking the potential of h-BN »

15h45-16h15: Break

16h15-17h15:
- Fabrice OEHLER (C2N)

« Synthesis of 2D materials and applications »
- Simon SKRZYPCZAK (IEMN)

« RF switches made with 2D materials »

WEDNESDAY

Advanced Characterization Techniques
Chairmen: T. MÉLIN & M. BERTHE

8h30-9h30: Benjamin GRÉVIN (Institut NÉEL)
« Heterodyne KPFM »

9h30-10h30:
- Alistair ROWE (PMC-Polytechnique)

« Nanoscale imaging of reduced forward bias and early-onset droop at V-pits in green emitting nitride LEDs »
- Arnaud DEVOS (IEMN)

« Nanoscale acoustics driven by femtosecond laser pulses »

10h30-11h: Break

11h-12h:
- Nemanja PERIC (IMEC, Be)

« Reverse Tip-Sample (RTS) SPM »
- Wan-Yu TSAI (IEMN)

« Advanced AFM for Energy Storage Applications »
- Yannick DUSCH (IEMN)

« NV center-based Quant. Sens. for Nanocharacterization »

12h-13h30: Lunch

Emerging Materials & Devices II
Chairmen: X.WALLART & P. DIENER

13h45-14h45: Jean-François LAMPIN
« THz s-SNOM »

14h45-15h45:
- Imen HNID (IEMN)

« Demonstration of THz molecular switches »
- Étienne BLANDRE (IEMN)

« Caractérisation thermique de matériaux à changement de phase pour applications mémoires non-volatiles »
- Victor VAILLANT (IEMN)

« RT & LT Study of Chloroaluminium Phtalocyanines Growth »

15h45-16h15: Break

16h15-17h15:
- Yevheniia CHERNUKHA (IEMN)

« Multiscale study of Mott Insulating 1T-TaSe2 monolayer on GaP(111)B »
- Louis BIADALA (IEMN)

« Insight on structural and electronic properties of colloidal nanomaterials with scanning tunneling microscopy »
- Ludovic DESPLANQUE (IEMN)

« Selective area epitaxy and electrical characterization of in-plane InAs and InSb nanowires »

THURSDAY

Modeling & Optics at the Nanoscale
Chairmen: D.THÉRON & C.DELERUE

8h30-9h30: Marc CHAIGNEAU (Horiba)
« History and fundamentals of Tip-Enhanced Raman Spectroscopy (TERS) »

9h30-10h30:
- Dejan KEPIC (Vinća Inst of Nucl.Sci., Ser.)

« Synthesis of graphene-based composites with noble metal nanoparticles by applying low-dose gamma irradiation »
- Svetlana JOVANOVIC (Vinća Inst of Nucl.Sci., Ser.)

« Emerging new biocompatible, sustainable carbon-based nanomaterials for EM interference shielding – biochar »
- Tahsin AKALIN (IEMN)

« THz probes for near-field microscopies: original planar and free space topologies »

10h30-11h: Break

11h-12h:
- Dusan SREDOJEVIC (Vinća Inst of Nucl.Sci., Ser.)

« DFT modeling of graphene oxide coated with metallic nanoparticles and nanowires as EM shielding materials »
- Stefano GIORDANO (IEMN)

« Exploring adhesion and fracture phenomena through statistical mechanics »
- Antoine HAGE (IEMN)

« Unusual optoelectronic and topological properties of HgTe QDs »

12h-13h30: Lunch

Lab Works

13h45-17h15: TP
- Maxime BERTHE - 4-probe-STM
- MB électronique
- Louis THOMAS - AFM
- Jean-François LAMPIN - S-SNOM
- Didier THÉRON - SMM
- C. LENOIR & M. SEBBACHE RF Imaging
- Yannick DUSCH - NV Center Quantum Sensing
- Sophie ÉLIET-BAROIS - THz Spectroscopy
- Keyence
- Henri HAPPY - 2D graphene/TMD elaboration

FRIDAY

RF/THZ/Optics
Chairman: J.F. LAMPIN

8h30-9h30: Raul de Oliveira FREITAS (LNLS, Bra)
« Introduction to IR-THz nanoscale spectral-imaging »

9h30-10h30:
- Djamel ALLAL (LNE)

« Derniers développements en Métrologie RF »
- MB Électronique
- Xin ZHOU (IEMN)

« Vacuum Secrets: How We Measure Quantum Fluctuations »

10h30-11h: Break

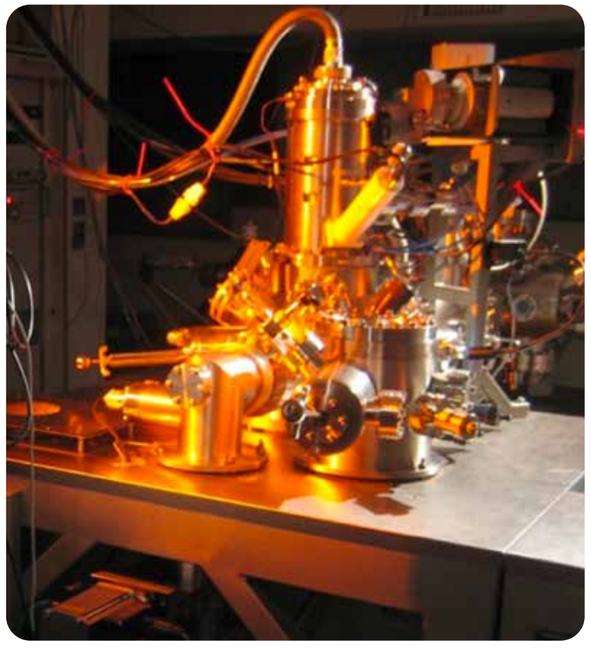
11h-12h:
- Louis THOMAS (IEMN)

« Imaging of THz Photonic Modes by Scattering Scanning Near-Field Optical Microscopy »
- Cristiane N. SANTOS (UC Louvain)

« Nanoscopy with s-SNOM »
- Clément LENOIR (IEMN)

« Multiscale microwave non destructive testing & evaluation »

12h-13h30: Lunch



IEMN & GRINSHIELD SUMMER SCHOOL ON NANOCARACTERIZATION / 01-04 JULY 2025 / IEMN - IRCICA