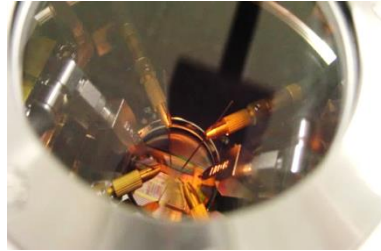


3 EXPERIMENTAL PLATFORMS

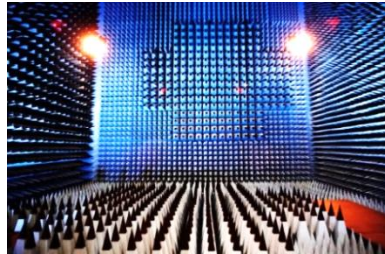
➤ CHARACTERIZATION PLATFORM

- Medium and low frequency electrical characterization
- Microwave range characterization
- Photonic characterization
- Cryogenic Electronics
- Near-field microscopy



➤ PLATERA PLATFORM

- THz characterization
- THz imaging
- THz optoelectronic
- Multimodal spectroscopy



➤ TECHNOLOGY PLATFORM

- Ion exchange technology on glass
- Microfluidics
- Prototyping



cro ma

**Centre for Radiofrequencies,
Optics and Micro-nanoelectronics
in the Alps**

at a glance...

2 Cities (Grenoble & Chambéry)

3 Research Groups

8 Research Axes

45 Professors, Researchers and Associates

10 Technicians and engineers

~ 40 PhD students, Post-Doc

Director

A. Kaminski-Cachopo

Deputy Directors

E. Ghibaudo (Grenoble)

F. Garet (Chambéry)



<https://croma.grenoble-inp.fr/>

CMNE group

(Micro/Nano Electronic Components)

Headed by: Q. Rafhay

I. Transistors and memories

Exploring the physics, the modelling of advanced CMOS transistors and new concepts of memory devices

II. Multi-physical transducers

Studying new concepts of electronic sensors and energy harvesters, through fabrication, modelling and characterization

III. Photo-electronic devices

Researching new approaches to understand and measure the performances and degradations of optoelectronic devices

PHOTO group

(PHotonics, Optics and THz Optoelectronics)

Headed by: J.-F. Roux

I. Integrated Photonic on Glass

Producing devices based on elementary building blocks: laser sources (CW and pulsed), integrated optical functions, hybridization of semiconductors LiNbO₃ and other materials with glass.

Applications to sensors, RF signal generation, telecommunications and quantum optics

II. Characterization of THz materials and devices

Developing optoelectronic components and systems for the THz domain and its applications to sensors, physics and quantum electronics. Developing advanced THz characterization methods: spectroscopy, imaging etc...

Transverse research axis: Sensors

Coordinated by: O. Lavastre

The transverse research axis Multimodal Sensors aims at applying the triple expertise of CROMA's research groups to develop new generations of sensors for health, environment and industry.

DHREAMS group

Headed by: P. Xavier

(Devices in High fRequencies for sustainable Electronics And for complex systeMS)

I. Microwave sustainable electronics

Supporting the worldwide growing movement in compact and conformable connected devices

- a. 2D/3D antennas, compact passive functions
- b. Flexible and biosourced RF devices
- c. RF Sensors for environment/biology
- d. Ultra low power digital transmission systems

II. Applications to microelectronics, life and the environment

Facing the problem of the complexity of RF environments and materials

- a. High frequency measurement methods and signal integrity
- b. Extraction of physical properties for integrated devices and very heterogeneous media