

Research group “*Power, Rf devices and passive components for high performance integrated power electronics*”

Institute for Microelectronics and Microsystems (IMM)
Consiglio Nazionale delle Ricerche (IMM)



The activity is on power devices with attention beyond the Si era. Engineers, chemists and physicists work all together with the final aim to achieve results from materials to devices within three sub-tasks:

- innovative semiconductors (SiC, GaN, AlN, diamond, Ge, SiGe, AlGaIn/GaN);
- advanced multi-functional materials (oxides and related materials, colossal dielectrics, graphene);
- innovative nanotechnologies (graphene electronics, nanosystems, nanocharacterisation);

Key Research Fields & Competence Areas:

- SiC processing and devices (MOSFET, JBS, power Diodes)
- GaN/AlGaIn growth on Si, AlN and SiC
- GaN/AlGaIn processing and Devices (HEMT, switches normally off, diodes)
- High capacitive density condensers (CCTO, colossal dielectrics, innovative oxides)
- Graphene electronics (on SiC, on SiO₂)

Institute Highlights:

IMM activity extends from basic research (investigation of innovative materials and processes) to technological concern (prototyping and/or technological transfer to enterprises).

- State of the art clean room facilities.
- Simulations (processing and devices).
- Microsystems (design and integration).
- Advanced Characterisation (materials and devices).



Contact Information:

Vito Raineri, PhD
Institute for Microelectronics and Microsystems (IMM)
Consiglio Nazionale delle Ricerche (CNR)
Strada VIII n.5 –Zona Industriale
95121 Catania, Italy
phone : +390955968219 **fax:** +390955968312
URL: <http://www.imm.cnr.it>

e-mail: vito.raineri@imm.cnr.it

