

Schilirò Emanuela

Born in Catania, 21/09/1988. Master's Degree in Chemistry of Material in 2013 at University of Catania. Ph.D. in "Material Science and Nanotechnology" in 2016 at University of Catania, with a thesis on "Dielectric materials by Atomic Layer Deposition for microelectronic applications". Currently research fellow at CNR-IMM of Catania. **Scientific activity:** atomic layer deposition (ALD) of high-k dielectrics (Al_2O_3 , HfO_2) on wide band gap semiconductors: SiC and AlGaIn/GaN heterostructure. ALD-growth and characterization of nano-laminated high-k ($\text{Al}_2\text{O}_3/\text{HfO}_2$) with potential properties as result of their combination. Plasma-ALD deposition of epitaxial AlN thin layer on GaN substrate for application in high channel mobility and normally-off GaN MOS-HEMTs. ALD-processes of high-k insulator on the chemically inert surface of 2D materials: Graphene and transition metal dichalcogenides. Study of surface activation and substrate influence on ALD-nucleation on Graphene.