

SiCE-2020 Technical Program

November 19th, 2020

10:30-12:30 Room II SiCE-2020, Session I, "Materials", Chair Fabrizio ROCCAFORTE, CNR-IMM, Italy

- Overview of Project "CHALLENGE" (3C-SiC Hetero-epitaxially grown on silicon compliant substrates and 3C-SiC substrates for sustainable wide-band-gap power devices), Francesco La Via CNR-IMM, Italy
- "Silicon Carbide Improvements from LPE S.p.A.", Danilo Crippa, LPE, Italy
- "Epitaxial Growth on Low Off-axis and On-axis SiC Substrates", Peder Bergman, Linköping University, Sweden
- "Hetero-epitaxy of 3C-SiC/Si on deeply patterned substrates", Roberto Bergamaschini, Università di Milano Bicocca, Italy
- "The process of hetero-epitaxy of 3C-SiC/Si: new developments" Marcin Zielinski, NOVASIC, France
- "The bulk growth of 3C-SiC: different approaches", Peter Wellmann, University of Erlangen, Germany
- "Interaction of APBs and SFs: experiments and simulations", Massimo Zimbone, CNR-IMM, Italy
- "Scanning probe microscopy for silicon carbide technology", Filippo Giannazzo, CNR-IMM, Italy

14:30-16:30 Room II SiCE-2020, Session II, "Devices and processing", Chair Susanna REGGIANI, University of Bologna - IUNET, Italy)

- Overview of Project "WInSiC4AP" (Wide Bandgap Innovative SiC for Advanced Power), Leoluca Liggio, Distretto Tecnologico Micro e Nano Sistemi, Catania, Italy, Antonio Imbruglia, STMicroelectronics, Italy
- "Processing and first results of 3C-SiC devices", Mike Jennings, University of Swansea (UK)
- "Laser annealing for Ohmic contact in 4H-SiC devices", Clément Berger, University of Tours - GREMAN, France
- "Study of annealing processes for electrical activation of p and n-type doping implantation on 4H-SiC", Monia Spera, CNR-IMM, Italy
- "Estimation of Activation and Compensation Ratios in Al⁺ Ion Implanted 4H-SiC Layers: comparison of two methodologies", Roberta Nipoti, CNR-IMM, Italy
- "Current conduction mechanism in forward and reverse biased WC Schottky contact on 4H-SiC", Marilena Vivona, CNR-IMM, Italy
- "Preliminary Evaluation of V_{TH} and R_{ON} Drifts in SiC devices", Marcello Cioni, University of Modena and Reggio Emilia, Italy
- "3C-SiC MOSFET structure and oxide reliability", Fan Li, University of Warwick, UK

16:30-18:30 Room II SiCE-2020, Session III, "Reliability and Applications", Chairs Antonio IMBRUGLIA, Angelo MESSINA, STMicroelectronics, Italy)

- Overview of Project "REACTION" (first and euRoPEan SiC eight Inches pilot line", Angelo Messina, STMicroelectronics, Italy
- "Reliability issues in 4H-SiC MOSFETs: impact of oxide traps and threading dislocations", Patrick Fiorenza, CNR-IMM, Italy
- "Reliability assessment through mathematical model of SiC MOSFET", Salvatore Patanè, University of Messina, Italy
- "Simulation of thermal effects in 4H-SiC MOSFETs", Daniela Cavallaro, STMicroelectronics, Italy
- "Experimental tests and EMI characterization on a SiC switching device", Filippo Pellitteri, University of Palermo, Italy
- "Electrothermal Circuit Model of SiC Power MOSFET Based on Neural Network", Ales Chvala, SUT, Bratislava, Slovakia
- "SiC Based 15kW DC-DC Converter Development as an outcome of the first and euRoPEan SiC eight Inches pilot line - the ECSEL-JU", Tomasz Bieniek, IET, Poland
- "Recent advances in packaging technology for SiC power devices", Jacques Favre, APSI3D, France