

Università degli Studi di Padova

REACTION - first and euRopEAn siC eigTh Inches pilOt liNe

REACTION will push through the first worldwide 200mm Silicon Carbide (SiC) Pilot Line Facility for Power technology. This will enable the European industry to set the world reference of innovative and competitive solutions for critical societal challenges, like Energy saving and CO2 Reduction as well as Sustainable Environment through electric mobility and industrial power efficiency.

Establishing the first 200mm SiC Pilot Line in the world and developing the most innovative and cost competitive technology, this project will address mass-market applications like smart energy and smart mobility, and industrial. It will allow to meet the more and more increasing demand of requirements in terms of quality and cost constraint for next decade generation's power electronics.

The Project strength is the complete Pilot Line value chain implementation, integrating and optimizing partnership in the fields of SiC equipment developers, SiC process technologists, RTOs, and end users partners till the final applications context. This will allow to develop a full 8" SiC line ecosystem enhancing the competitiveness of EU- Industries down to the value chain in a market context where other countries today, such as the USA or Japan, are just starting to play on 6" SiC market.

Innovative SiC power device Performances improvements, together with cost and size reductions, are the most relevant challenges addressed in the project that are expected to lead to a new stronger European supply chain for very compact SiC converters, from 600V to 3.3kV range, ideal for the addressed applications; the ambition is therefore to play a primary role towards excellence in Europe by a first generations of 8" SiC profitable Smart Mobility and Smart Energy products and components, primary access to IPs for the relevant essential capabilities, competitiveness of manufacturing in Europe.

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