

Project Title: **Implementation of SiC Block Process Steps to Aid Transition of SiC Technology Developments**

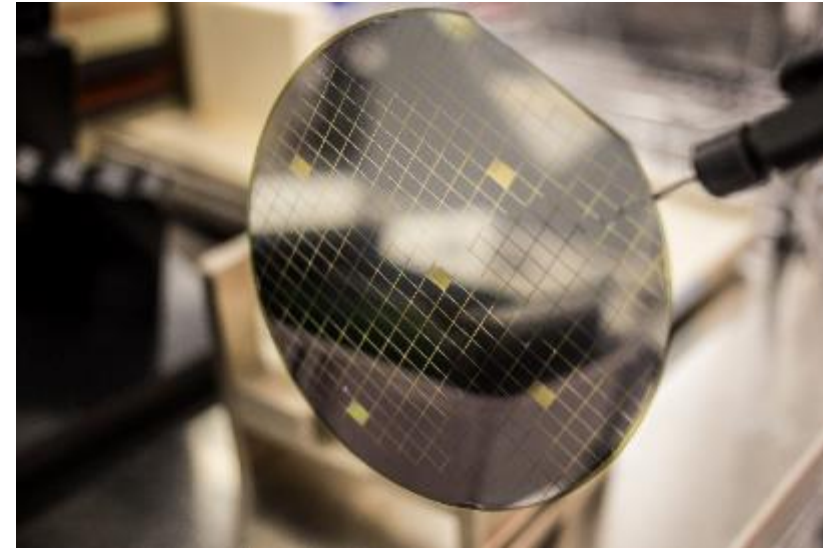
Objective: To transfer a set of SiC Standard Process Blocks (SPBs) from X-FAB to the NC State Nanofabrication Facility (NNF)

Task No. BP5-2.29

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WBG Technology Impact

The establishment of “feeder labs”, which have the same standard SiC blocks as X-FAB but with greater flexibility, would allow for X-FAB’s fabrication capabilities to be used in pilot, development, and/or small-scales wafer lots. This would enable small businesses, universities, or national labs to explore novel SiC power device ideas and further develop the technology. NNF is well-situated to be such a feeder lab due to its nanofabrication tool set and in-house power electronics expertise.

Accomplishments/Outcomes

This collaboration between the NNF and X-FAB is expected to lead to the demonstration of discrete SiC standard process blocks in NNF. These blocks are hard mask definition, gate formation, interlayer dielectric, ohmic contact formation.

NNF also views this project as an opportunity to train the next generation of SiC power device experts in fab-realistic conditions.