

## **CUBIC SILICON CARBIDE**

*Silicon carbide (SiC) has been known as a robust semiconductor with superior properties to silicon for electronic applications. The cubic form of SiC, known as 3C-SiC, has been researched for non-electronic application, such as MEMs and biosensors. It is being demonstrated that 3C - SiC is one of the few semiconductor materials that possess both bio and hem compatibility, thus opening up a plethora of applications for this material. It has being pioneered that several biomedical Devices using 3C-SiC grown on Si substrates, and recently it has being invested that the use of this novel material for both biosensor and neural prosthetic Applications has come into existence. Research to develop suitable biosensors, mainly via surface functionalization of 3C-SiC surfaces, has shown that 3C-SiC can be functionalized in much the same way as Si. A decade of activity has being reviewed in 3C-SiC on Si biotechnology, with particular emphasis on the most promising Applications: surface functionalization, in-vivo glucose sensing and biomedical implants for connecting the human nervous system to advanced prosthetics.*