

## Simulation of SiC detector

*Wednesday 4 December 2024 17:20 (20 minutes)*

SiC detector can work stably for a long time in extreme environments with high temperature and strong irradiation because of its high electron saturation drift rate, high thermal conductivity, high breakdown voltage and strong irradiation tolerance. RADIATION SEMI-CONDUCTOR is now developing the full process simulation of various SiC detector like PIN, LGAD and strip detector. Not only the basic electrical properties like IV&CV curve, but also the electronic readout after the detector activated by beam or laser can be obtained with RASER, by which we can get the timing and spatial resolution. Irradiation defect damage model will be established covering at least the range from  $1e11\text{neq}$  to  $1e16\text{neq}$  based on realistic detector defect study, and this will advance the development of SiC detectors.

### Type of presentation (in-person/online)

online presentation (zoom)

### Type of presentation (I. scientific results or II. project proposal)

II. Presentation on project proposal

**Author:** XIAO, Suyu (Shandong Institute of Advanced Technology, China)

**Presenter:** XIAO, Suyu (Shandong Institute of Advanced Technology, China)

**Session Classification:** WG4 - Simulation