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## **200 kV Ion Accelerator Facility at Kurukshetra University: SO-55 Ion Source**

*Tuesday, 9 May 2023 16:30 (2 hours)*

The Ion Beam Centre at Kurukshetra University is the first facility established by Department of Science and Technology, Govt. of India by funding and supporting Accelerator based research programs in university system. The facility has been providing accelerator-based research facilities to researchers of host university as well as researchers from all over India. The air insulated high current 200 kV Ion Accelerator, with the high voltage in the range of 30-200 kV is designed for ion implantation to provide ion beams of variable energy. It is equipped with SO-55 ion source, which is a hot filament, hollow cathode type ion source providing beams in the range of 10 nA to 120  $\mu$ A. The ion source is operated at +30kV and depending upon the experimental requirements, the source is operated as it has High temperature oven (600-1700), Medium temperature oven (400-700) and Low temperature oven (100-400) all equally capable of running gas with the choice of using charge material either in elementary form or in gas form. The overall facility has been utilized for part of Engineering and Technology based teaching of students pursuing semiconductors developments. The present presentation provides an overall development performance of modifications for the improvements in the experimental setup. The performance of the source has been tested by running argon, boron and gold beams at maximum energy of 200 keV regularly at the optimum performance of the ion sources.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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