Policy Document

Specifications:

- Substrate: Si, Ge, Diamond
- Substrate size: up to 4inch.
- Types of implants: Phosphorus and Boron
- Implant Pressure: 0.01 torr.
- RF Power: 100W to 600 W
- Bias Voltage: 0.5 to 5kV (Limited access for change. Contact SO, FIC for New Recipe)
- Gases connected to system: PH3, B2H6, Ar, CHF_3, PN_2, SiH_4, O_2
- Mass Flow Controller (MFC) Limit/Range: PH3: 100 sccm, B2H6: 100 sccm.

Note: Recipes are already available in the system. Any request for new recipe should needed FIC approval.

Training and Usage Policy:

Training is restricted. One person can get trained from each group.

- Send training request through using the link:
  http://www.cen.iitb.ac.in/equipment_usage/index.php
- Once it approves, go through the system manual to know the system capabilities and Contact the System Owner.
- User needs to attend three to four sessions with any authorized user for observation, handling the system and implantation process. After that user needs to attend two to three hands-on session (sessions to be increased on a case to case basis).
- A test will be taken by the system owner or operator.
- If the test completed successfully authorization will be given if not user needs to go for few more training sessions before next test.

Contamination Policy:

- Only Si, Ge, Diamond substrates are allowed.
- System has capability to do both p-type (Boron) and n-type (Phosphorus) implantation switching from one type to another type user needs to deposit SiO2 for 3 min (recipe is given) and etching for 60 min (recipe is given) to be performed.
- Semi-clean B

Violation Policy:

- Any abnormality during the System mishandling would lead to re-authorization by undergoing through the training procedure again.
- Sample history will be checked. Using of non-allowed materials would lead to debarring from using the system. (action will be taken from case to case basis).