

## Silanization Set-up

Silanization is a chemical process widely used in biosensor research to bind or immobilize bio-receptors on to sensor surfaces.

### *Specifications of the system*

- Organic functional groups can be introduced on to glass and silicon oxide surfaces using different organo-silanes for covalent binding with antibodies.
- The home-made set-up for silanization is a glove box with built-in vacuum cum heating chamber to facilitate dehydration of samples and necessary inert ambience for chemical reaction. The temperature of heater is fully controlled using a PI controller and a thermocouple.



### *Process Capabilities:*

- **Substrate used:** SiO<sub>2</sub>, SU-8, Oxynitride, HSQ, Spin-on- glass (SOG), Glass cover slips and silica optical fibers.
- **Substrate size:** Up to 2 inch wafer
- **Substrate temperature:** up to 200°C
- **Materials that can be deposited/grown:** Silane ( For ex. Aminosilane, Organosilane)
- **Gasses used:** Ar (Argon)
- **Chamber base vacuum:** Up to 10<sup>-3</sup> torr