CVD Equipment 1033
Tube 2 – NITRIDE

Tool Owner: Zuzanna Lewicka 609-258-1134 zlewicka@princeton.edu
Backup: MNFL-Staff@princeton.edu

Process Summary
Deposition of standard stoichiometric (Si₃N₄) silicon nitride (n = 1.995 at 625.8 nm). Process gases/parameters used: temperature 780 °C, pressure 300 mT, NH₃ = 100 sccm, H₂SiCl₂ = 10 sccm.

Process Preparation
All samples must be RCA cleaned (SC1 and SC2) before being placed in the CVD Equipment 1033 furnace. 4” whole wafers preferred, smaller sizes can be accommodated.

<table>
<thead>
<tr>
<th>Only these Materials are Allowed</th>
<th>Known Forbidden Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon</td>
<td>☒ Metal</td>
</tr>
<tr>
<td>Quartz</td>
<td></td>
</tr>
<tr>
<td>Furnace grown/deposited films</td>
<td></td>
</tr>
</tbody>
</table>

For any material not listed or if uncertain, **ASK** the Tool Owner!
CVD Equipment 1033
Tube 3 – TEOS SiO₂

Tool Owner: Zuzanna Lewicka  609-258-1134  zlewicka@princeton.edu
Backup: MNFL-Staff@princeton.edu

Process Summary
Depositing TEOS-based (Tetraethylorthosilicate) silicon dioxide. Deposition parameters: temperature 725 °C, pressure 250 m, TEOS bubbler temp = 60 °C, line temp = 70 °C.

Process Preparation
All samples must be RCA cleaned (SC1 and SC2) before being placed in the CVD Equipment 1033 furnace. 4” whole wafers preferred, smaller sizes can be accommodated.

Only these Materials are Allowed
- Silicon
- Quartz
- Furnace grown/deposited films

Known Forbidden Materials
- ☒ Metal

For any material not listed or if uncertain, **ASK** the Tool Owner!
CVD Equipment 1033
Tube 4 – Polysilicon

Tool Owner:  Zuzanna Lewicka 609-258-1134  zlewicka@princeton.edu
Backup: MNFL-Staff@princeton.edu

Process Summary
Deposition of undoped polysilicon films; process parameters: temperature 595 °C, pressure 300 mT, 4% SiH₄ in Ar = 400 sccm.

Process Preparation
All samples must be RCA cleaned (SC1 and SC2) before being placed in the CVD Equipment 1033 furnace. 4” whole wafers preferred, smaller sizes can be accommodated.

<table>
<thead>
<tr>
<th>Only these Materials are Allowed</th>
<th>Known Forbidden Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon</td>
<td>☑ Metal</td>
</tr>
<tr>
<td>Quartz</td>
<td></td>
</tr>
<tr>
<td>Furnace grown/deposited films</td>
<td></td>
</tr>
</tbody>
</table>

For any material not listed or if uncertain, **ASK** the Tool Owner!