**Post-Introduction Assessment**

**Flexible Circuits Fabrication Cycle**

On the cycle diagram below, write in the photolithography fabrication process steps in the correct order.

cleaning impurities

UV light exposure

photoresist removal

stripping

photoresist coating

etching

sputter deposition

**Photolithography**

**1**

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**2**

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**7**

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**Terminology**

*Instructions*: Draw lines to match each photolithography step with its corresponding description.

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| --- | --- | --- |
| **Photolithography Step** |  | **Description** |
| cleaning impurities |  | A method of depositing thin films of a conductor material by way of eroding a “target” source onto a non-conductor “substrate.” This is typically accomplished by bombarding the “target” (source of deposition material) with inert gas atoms. Atoms on the “target” flies to the “substrate.” |
| UV light exposure |  | A wafer coated with a thin conductor is covered with UV light-sensitive liquid by spin coating; this viscous liquid solution is dispensed onto a rapidly spun wafer to produce a uniformly thick layer. |
| stripping |  | Organic / inorganic contaminations are usually removed by wet chemical treatment, based on solutions containing hydrogen peroxide. Other solutions made with trichloro-ethylene, acetone or methanol can also be used. |
| photoresist coating |  | The photoresist that chemically reacted is removed from the substrate. This usually requires a liquid resist stripper or developer, which chemically alters the photoresist so that it no longer adheres to the substrate. |
| etching |  | The use of a solvent called a stripper to remove the photoresist and any of its residues. |
| sputter deposition |  | UV light passes through a mask (a print of the circuit to be transferred to the wafer) placed on the conductor coated wafer. Light causes a chemical change on the photoresist over portions not covered by the mask. |
| photoresist removal |  | Using a liquid ("wet") or plasma ("dry") chemical agent, the uppermost layer of the conductor substrate is removed in the areas that are not protected by the photoresist. |