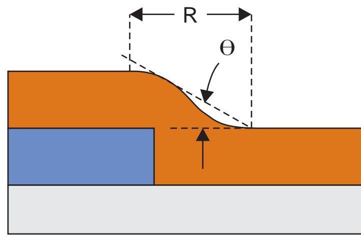
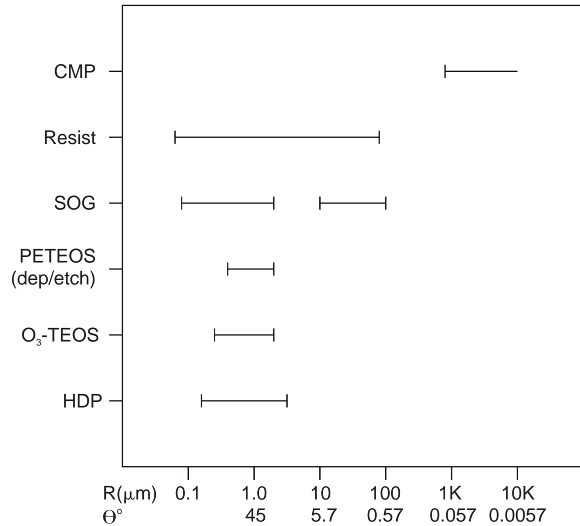
Chemical Mechanical Planarization (CMP)

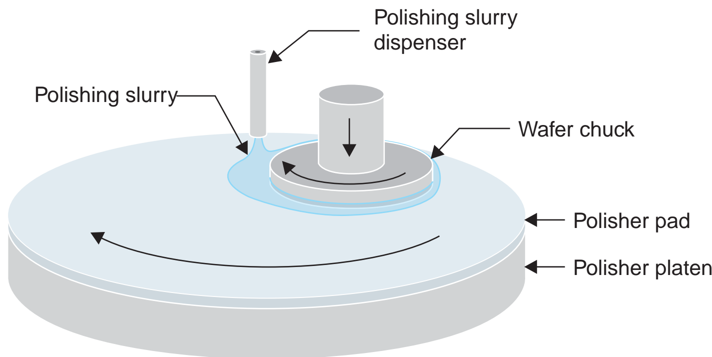


Planarization definitions

Chemical Mechanical Planarization (CMP) achieves the greatest degree of planarization of any currently known technique.



Planarization achievable by different techniques



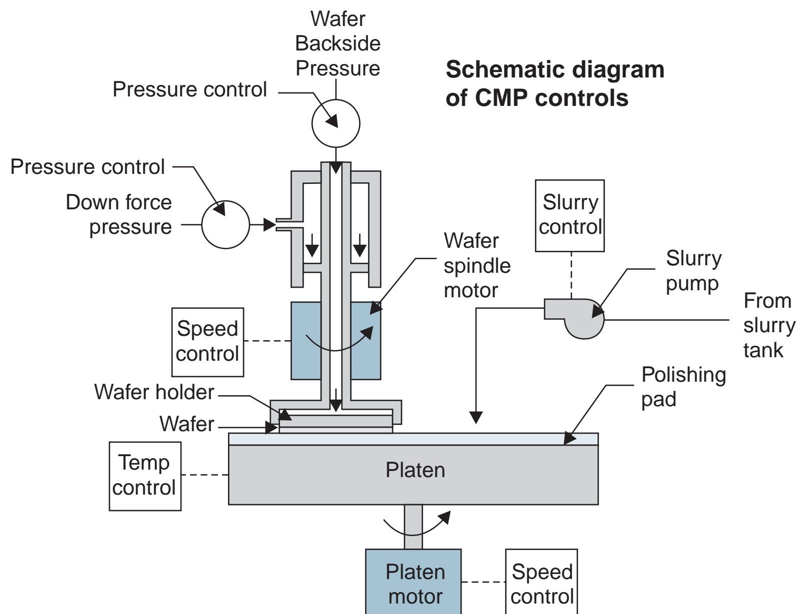
Rotary CMP tool

Chemical Mechanical Planarization (CMP) combines chemical action with mechanical abrasion to achieve selective material removal through polishing.

Successful CMP implementation requires control of:

- Wafer pressure
- Wafer backside pressure
- Wafer rotation speed
- Platen rotation speed
- Platen temperature
- Slurry type
- Slurry dispense rate
- Polishing pad type.
- Polishing pad conditioning

Schematic diagram of CMP controls



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Tech brief - Chemical Mechanical Planarization

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