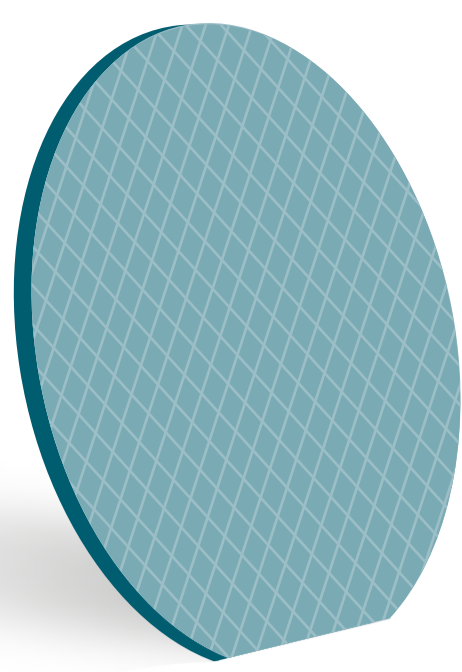


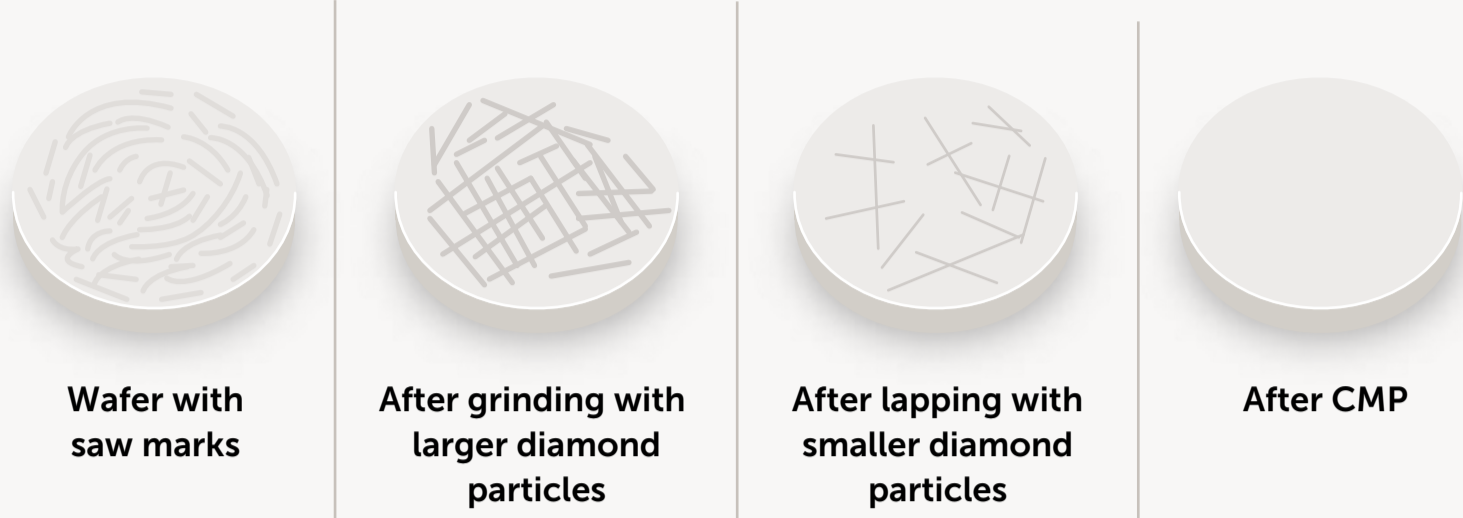
Customizing CMP for Silicon Carbide Wafers

Automotive and other industries requiring higher operating voltages are moving to chips made on silicon carbide (SiC) wafers. However, SiC is a much denser, harder material to planarize, making it more difficult to polish and prepare. Specialized chemical mechanical planarization (CMP) processes with customized SiC slurry from Entegris can accomplish this in a cost-effective way. Here's how it works.



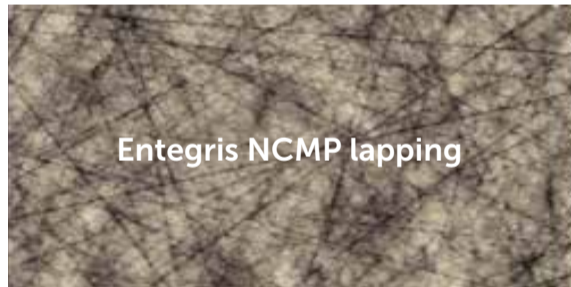
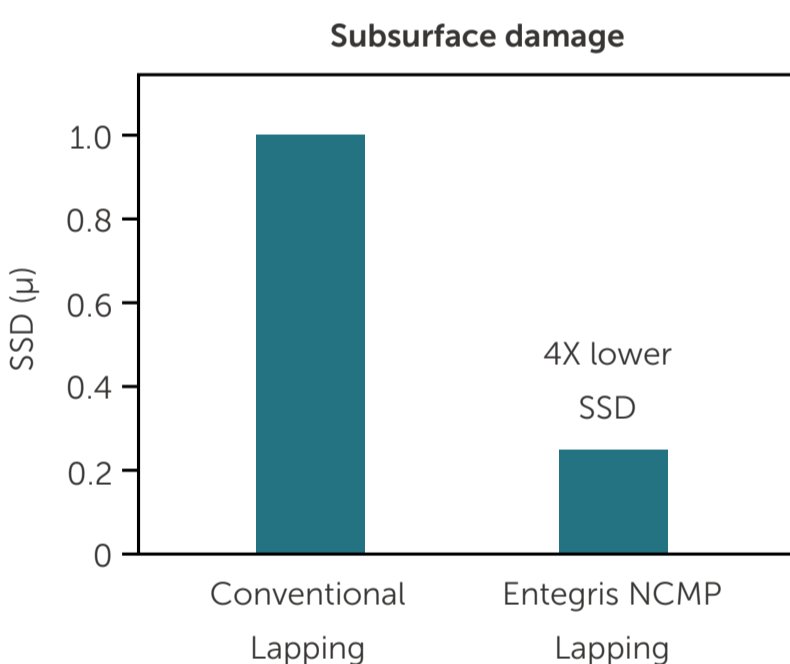
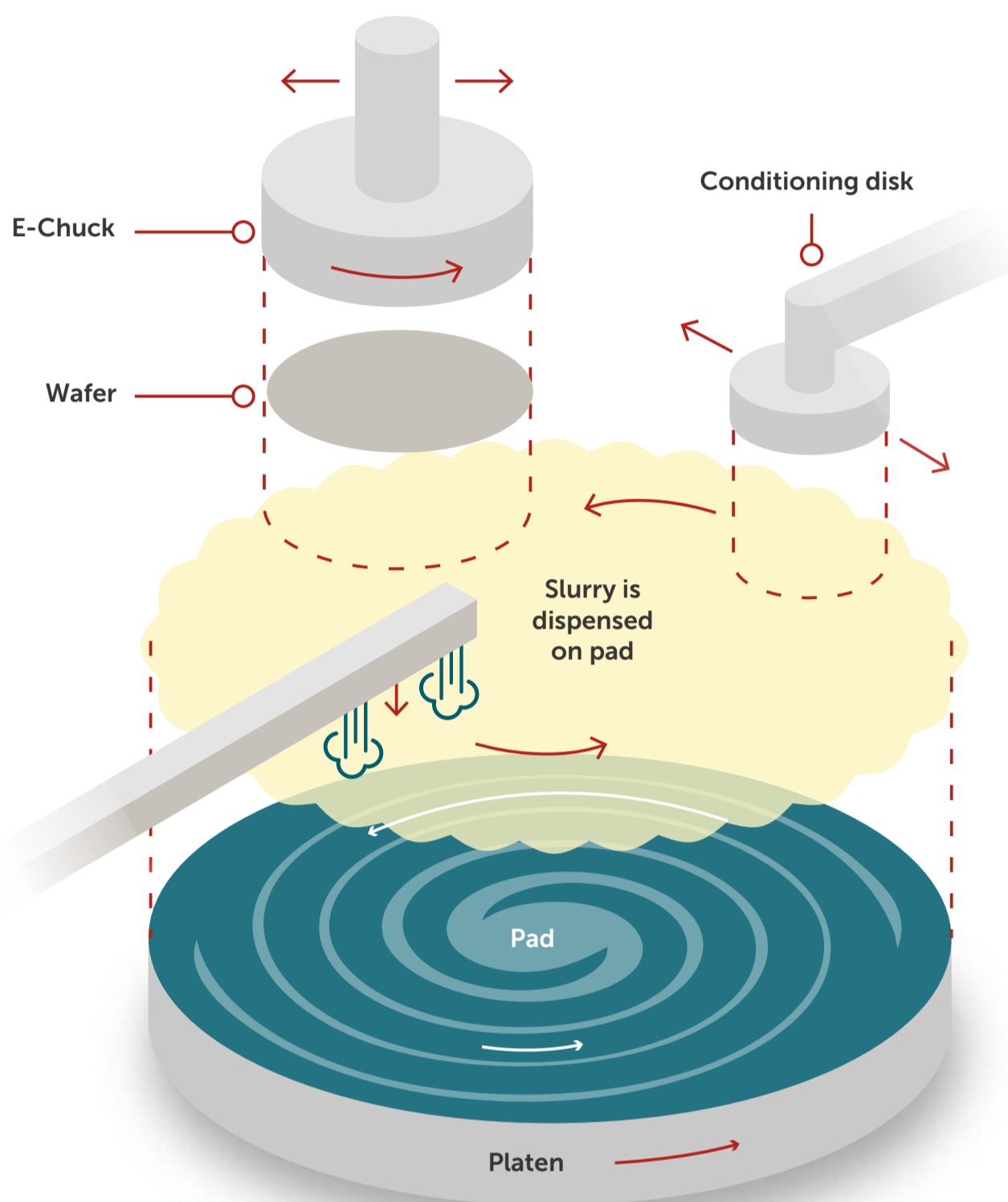
PREPARING THE SILICON CARBIDE WAFER

Once each wafer is sawed from its cylindrical ingot, a series of processes takes place to prepare it for material deposition: grinding, lapping, and CMP.



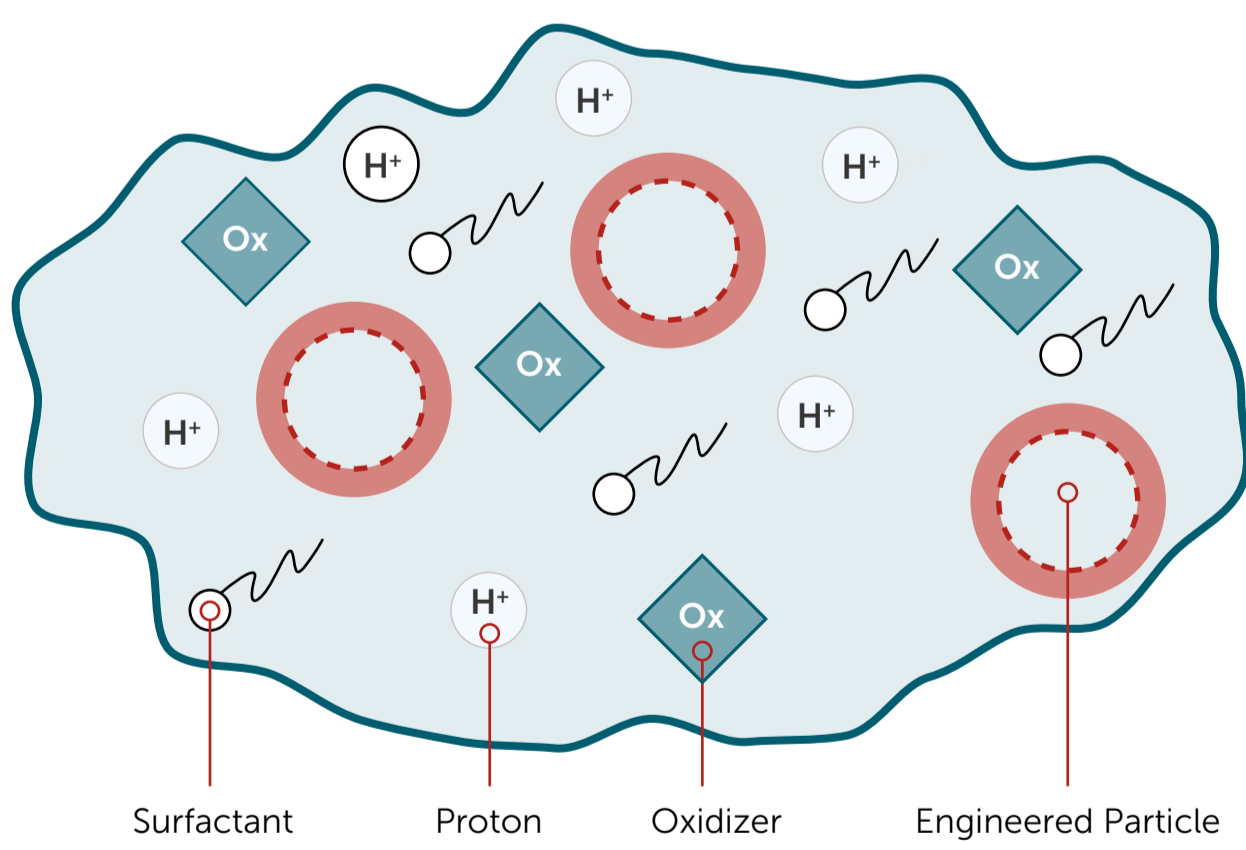
ENGINEERED PARTICLES FOR LAPPING

The lapping process is typically polished with large diamond particles, which is efficient but causes gouging and subsurface damage (SSD). Entegris uses an engineered "soft" particle coated with nanodiamond particles. This engineered particle has a higher material removal rate and causes less subsurface damage than diamond particles, reducing CMP time and increasing throughput.

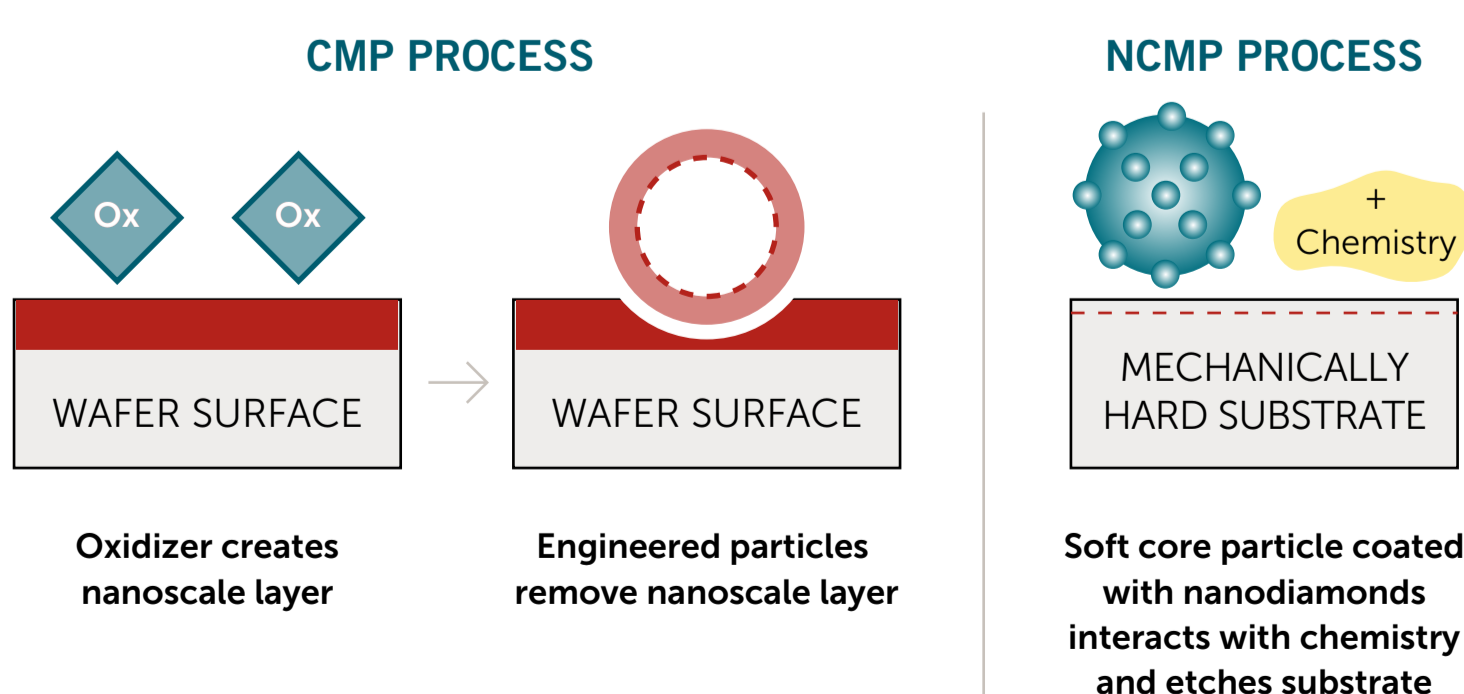


SPECIALIZED CMP SLURRY FOR SILICON CARBIDE WAFERS

Because SiC is both dense and chemically inert, Entegris' SiC slurry contains chemicals that soften the wafer surface in conjunction with specialized engineered particles that act as abrasives.



The purpose is to rapidly create and remove a nanoscale layer from the wafer surface with each pass.



www.entegris.com/sic-slurry