



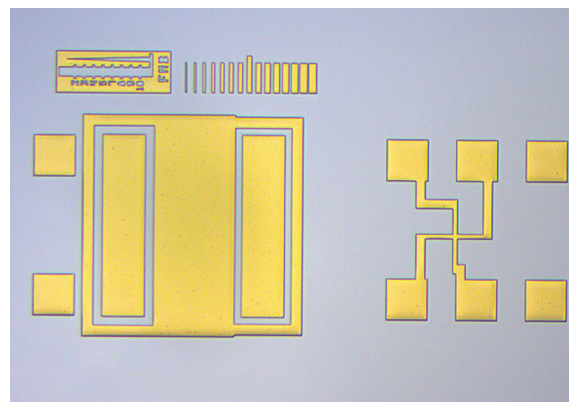
Gold Deplating for Feature Isolation Using the Solstice GoldPro Reactor

Forming features such as gold bond pads or gold bump using electrodeposition is a highly stable and cost-effective method. A subsequent photoresist strip step is followed by the removal of the original gold seed, otherwise known as feature isolation.

This feature isolation step can be performed using dry etch in a vacuum chamber, but that process is expensive and results in a roughened surface of the plated feature. Electrolytic gold deplate is a much lower-cost option that results in minimal CD loss and the smoothest possible gold surface. Further, the process step integrates easily into an advanced and flexible plating tool like the Solstice™ incorporating the proprietary GoldPro™ reactor.

Example Applications

- Bondpads for microLEDs
- VCSEL p- and n-contact plating
- Gold bump
- BAW and SAW filters
- Air-bridge
- And more...



Example of feature-isolation gold deplating using the Solstice GoldPro reactor

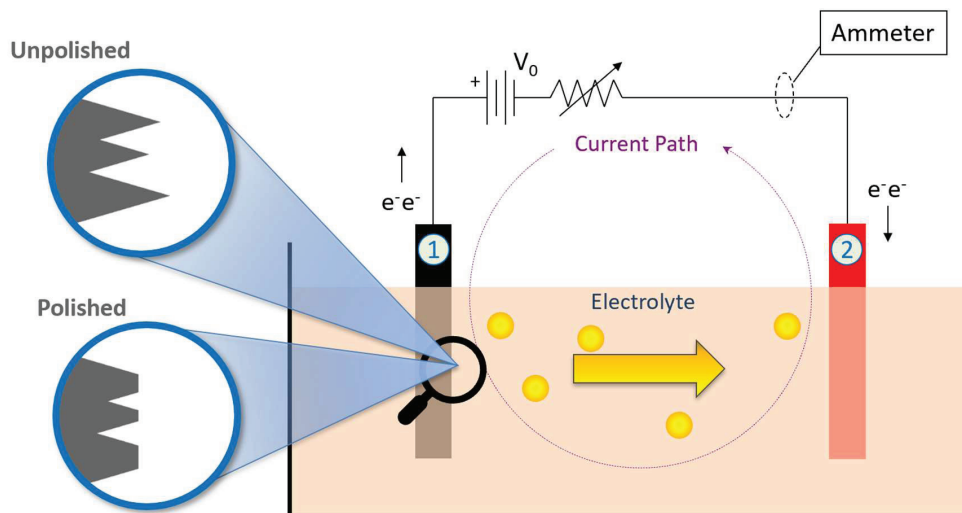
Features

- Precision wafer rotation, closed-loop flow control
- Voltage-controlled recipe construction
- Continuously filtered chemistry loop
- Optional carbon filtration
- Adjustable diffuser
- Wet-contact plating rotor, customized contact reach
- Levitronix pump with LeviFlow™

Benefits

- Extremely uniform removal
- Optimal, responsive removal rate
- Extremely uniform field profile
- Contact reach aligns to existing integration
- Accurate, precise flow rate control

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Technical Data

■ Wafer Sizes	75-200 mm	Configurable to non-standard sizes, e.g., 160 mm
■ Wafer Thickness	150µm to >6mm	
■ Wafer Materials	Silicon GaAs GaN on Si, GaN on Sapphire Sapphire Transparent substrates and more	
■ Flow Rate	30 lpm	
■ Deplating Rate	Up to 150 nm/min	
■ Within-Wafer Uniformity	<3% (range / 2*mean)	
■ CD Reduction	<0.2Å on 1200Å seed deplate	
■ Roughness	3Å Ra	

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