Integrated Solar PV - Copper mesh for Building Integrated and Industrial Solar Manufacturing with lowest Silver per cell

American Made Network

Screen print metallization expert

• 30+ years in solar, PhD from UNSW in Australia

Professor UNCC

Over 100 publications

Copper mesh enhanced interconnection:

- Screen printed silver reduction from 5% to 2.5% active area (more than 50% savings)
- Improved micro-crack resilient
- Improved conductivity (copper vs Ag paste)
- Improved aesthetics (screen window)
- 100x lower cost of copper vs silver
- Evolutionary technology 95% of production equipment is still used
- Compatible with half-cells, 0 busbar and >1 busbar

Terawatt production of PV mandates reduced silver use. Copper paste is being researched but can be harmful to crystalline silicon.



Dr. Ben Damiani

- •EE PhD from Georgia Tech
- •Studied at Fraunhofer
- Created first ion implanted Suniva products
- Worked at Intel, SolarWorld
- •30 papers and multiple patents

