

## Pd-free electroless copper activation for IC Substrates

14.06 nm

24.86 nm

31.46 nm  
11.58 nm

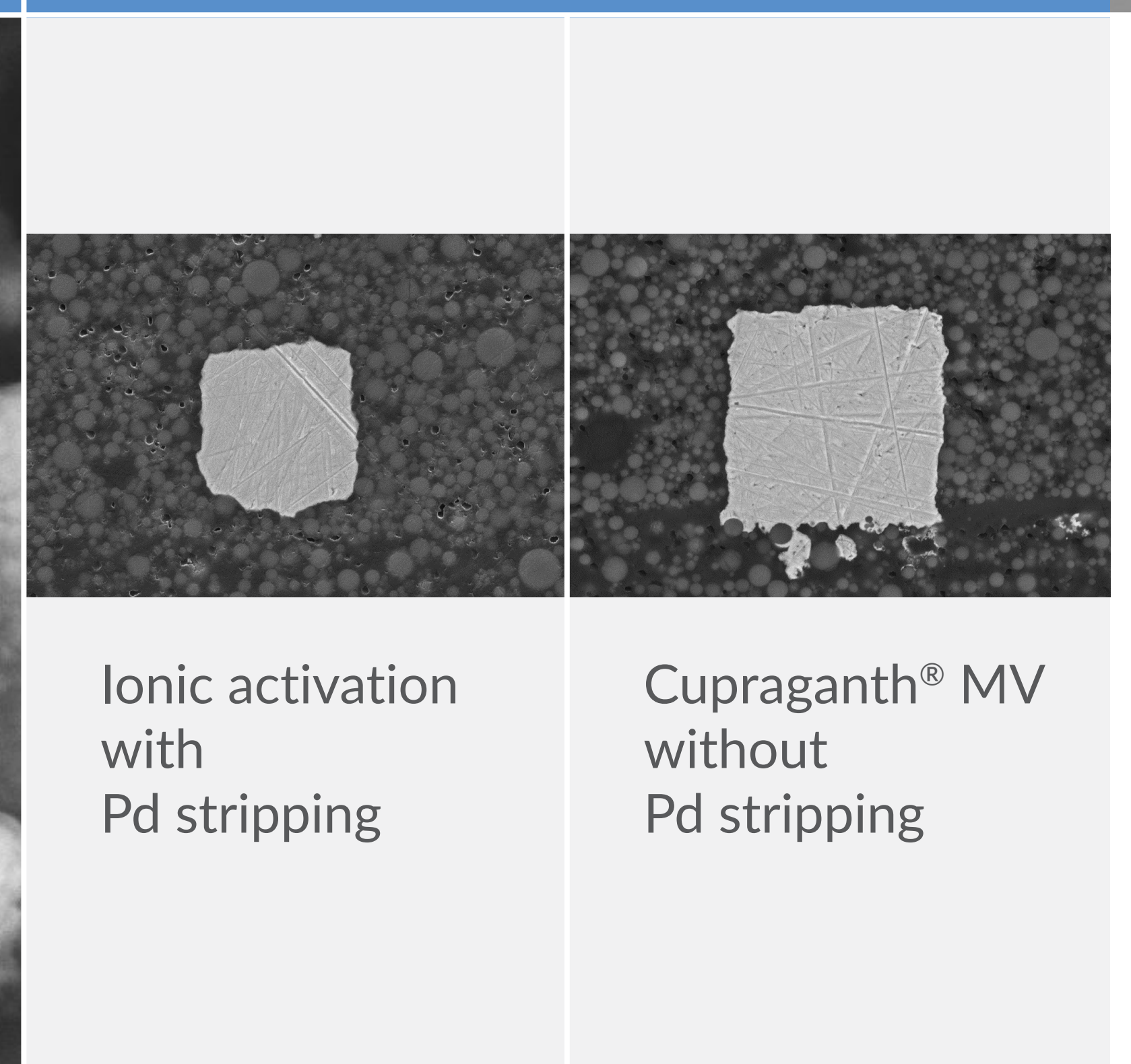
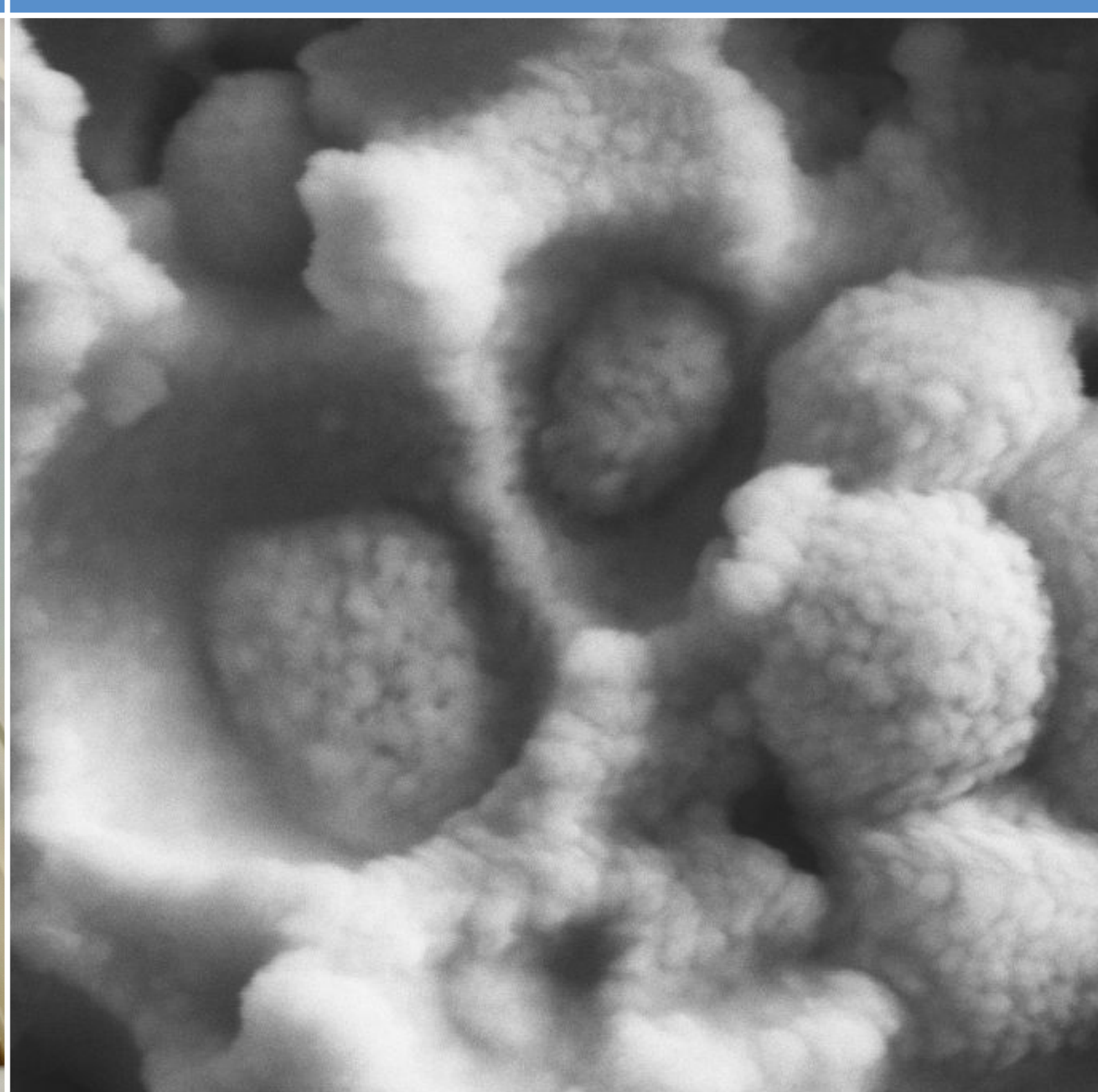
24.03 nm

Cu nano particles on activated glass fibers

Stable & robust process, compatible with standard EQ

ABF GX-92 covered with Cu nano particles

Enhanced fine line capability and track shape



### Next generation electroless copper activation

Cupraganth<sup>®</sup> MV is the next generation of electroless copper activation for advanced packaging applications. Based on a unique colloidal copper technology, Cupraganth<sup>®</sup> MV replaces traditional Pd-based activation processes and enables both performance and cost benefits. Finer features are achievable as the additional Pd seed layer etch is no longer required, and the Cupraganth<sup>®</sup> MV layer is removed in the same etch step as the bulk electroless copper layer. Reduced Cost of Ownership (CoO) is possible through the significant differences between the Pd and Cu spot prices, with Cu prices also typically being more stable.

### Features

- Revolutionary Pd-free activation based on Cu colloids
- Compatible with established tartrate based electroless Cu baths for IC substrate production
- Robust and stable process
- Comparable coverage and peel strength to POR technology (ionic Pd activation)
- Enables finer L/S due to simplified differential etch and no need for Pd stripping
- 4-step process

### Benefits

- Enables higher yields & finer track pitches
- Reduces operational costs compared to Pd activators
- Pd free – No exposure to volatile Pd spot price

