

## **ELECTRODEPOSITION OF SILVER IN SUB-MICRON-SIZED FEATURES**

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Successful superfilling of lines and vias will be shown with a commercial, silver-cyanide electrolyte. Hysteretic  $i$ - $V$  behavior and chronoamperometric transients on planar electrodes are used to extract parameters that quantify the kinetics of the deposition process. These parameters are used in the curvature accelerator coverage (CEAC) model to quantitatively predict filling of features on patterned substrates. The fundamental premise of the CEAC model is that area reduction at the bottoms of filling features leads to increased local coverage of adsorbed catalyst and thus local deposition rate. It has previously been shown to accurately predict superconformal copper electrodeposition for sulfate-based electrolytes with thiols as catalysts. This work examines the model's generality through application to a cyanide-based electrolyte and selenium catalyst.