

**PRESS RELEASE****MacDermid Alpha to Exhibit and Present at the IMAPS Device Packaging Conference**

(Waterbury, CT USA) – February 17, 2022 – MacDermid Alpha Electronics Solutions, a global supplier of integrated solutions from our Circuitry, Assembly and Semiconductor divisions that provides unmatched capabilities in electronics design and manufacturing, will be exhibiting and presenting a paper at the IMAPS Device Packaging Conference at the WeKoPa Resort and Conference Center, Fountain Hills, AZ, March 7-10, 2022.

Jianwen Han, Principal Research Scientist, will be presenting “Electrochemical Plating System Development of Nano-twinned Cu for Multiple WLP Features”. The paper discusses the development of a series of electrochemical plating baths and processes, generating nano-twinned Cu in wafer-level packaging applications to fulfill the expanding market demand for copper-to-copper direct bonding and hybrid-bonding. This newly developed system shows a high density of nt-Cu (close to 100%), controllable grain size (0.10 to 1.0 micron), vertical columnar structure, and minimal transition layer between Cu seed and nt-Cu initial position.

Featured in the booth will be the MacDermid Enthone brand of product offerings from the Circuitry Solutions division that enable upgraded FCCSP and PCBGA fabrication. Highlighted will be the entire Systek family of high-performance build-up processes for IC Substrates and their integrated leadframe product portfolio which incorporates connected solutions and spans the entire process of building QFN packages from leadframe roughening to enhancing sidewall solderability for enhanced reliability.



**MacDermid Alpha**  
ELECTRONICS SOLUTIONS

**CIRCUITRY SOLUTIONS   SEMICONDUCTOR SOLUTIONS   PHOTOMASK SOLUTIONS**

**One Solutions Supplier to Support the Entire Semiconductor Manufacturing Process**

**VISIT US AT BOOTH 23-24**

The Alpha, Kester, and MacDermid Enthone brands from the Semiconductor division will promote MICROFAB EVF NiBAR, a boric acid free sulfamate nickel electroplating process for semiconductor applications and ATROX CF200-1D an electrically conductive die attach film with thermal conductivity of >20 W/m-K. Also highlighted will be their complete line of STAYSTICK and STAYCHIP adhesives for structural and functional bonding.

The Compugraphics brand, will showcase their complete line of photomask solutions and support services. From 1X master photomasks and reticles to pellicle replacement, MPT coating and photomask cleaning, with quick-turn service, they are a partner you can rely on.

MacDermid Alpha's team of industry experts from their Circuitry and Semiconductor divisions will be available at booth #23/24 to discuss the challenges the semiconductor and IC substrate manufacturing sectors face as technology continues to push the limits of performance and miniaturization.

**About MacDermid Alpha Electronics Solutions:**

MacDermid Alpha Electronics Solutions enables electronics interconnection through the innovative specialty chemicals and materials from our Alpha, Compugraphics, Electrolube, Kester, and MacDermid Enthone brands. We serve all global regions and all steps of device manufacturing within every segment of the electronics supply chain. The experts in our Semiconductor Solutions, Circuitry Solutions, and Assembly Solutions divisions collaborate with OEMs and fabricators in the implementation of new technologies that redefine what is possible in device design. Our world class technical service is constantly at hand to ensure optimized outcomes in yield and productivity. Our solutions can increase throughput, reduce carbon footprints, lower total cost of ownership, and enable electronics innovation. To learn more visit: [MacDermidAlpha.com](https://www.MacDermidAlpha.com).