



November 2015

## Enhanced Sputter Targets

Materion produces "enhanced" sputter target designs that provide improved performance, increased target lives, and ultimately lower costs to our customers. The nature of the particular enhancement is tailor-made depending upon the sputter target material, the cathode design, and the specific customer requirements. Materion is a world leader in the customization of [sputtering targets](#), and is in the process of developing a number of



new designs and approaches that will further enhance our target offerings. For precious metal sputter targets, the enhanced designs emphasize "metal thrifting," or reducing the amount of precious metal in the target while still maintaining the target sputter life.

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## Microelectronic Packaging Developments

The microelectronic packaging business in Asia has grown substantially in the past few years. The industry has an increased need for hermetic lids to secure devices from moisture, and for contaminant-free metals and alloys for joining electronic devices. This is particularly true for semiconductor, MEMS, medical and optical applications where optimal performance is critical. To meet such demanding challenges requires that customers work with a technical partner capable of innovative solutions for their new developments. When it comes to packaging, Materion has you covered!

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## Breakthrough in PVD Parts Cleaning

Materion is offering a new service to customers who use precious and non-precious metals for physical vapor deposition (PVD). The breakthrough technology provides a unique method for removal of deposition material from chamber parts. Our chemists have developed this [copper parts cleaning](#) process as an alternative to more traditional cleaning methods. The innovative cleaning approach chemically removes deposition materials and surface contaminants from copper without the use of aggressive mechanical processes. This technology is a huge advancement over conventional means. It offers multiple advantages including minimizing surface damage, extending the useful life of expensive copper parts, achieving higher metal returns, and lowering total cost of ownership for customers.

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## Booming MEMS Business

MEMS business has steadily escalated for years and has really taken off in 2015. Starting with less than \$5,000M to around \$12,000M this year, it is expected to grow to over \$20,000M by 2020. Why has this happened and what can we expect in the future? MEMS (micro-electro-mechanical systems) applications are practically limitless.

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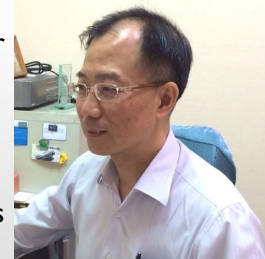
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## Face to Face

Meet Daniel Ha, Materion's Sr. Director of Sales, Asia and key to the growth of Advanced Materials & Services in that region. Daniel's responsibilities include identifying new Asian markets and opportunities, as well as managing Sales and the Sales team.



Daniel is based in Taoyuan, a major industrial city in Taiwan. He has been part of the Materion family for over eleven years (starting in 2004 when the company was still Williams Advanced Materials) and reports to Kevin Banks, Sr. Sales Director, International. His work travels take him to various parts of Asia, including China, Korea and South East Asia, with an occasional trip to the United States.

[Read more about Daniel...](#)

## eSERVICES

Materion is providing convenient online access to answer your account questions - 24 hours a day, seven days a week. This One-Stop Source is a convenient tool that provides information ranging from orders to invoices to refine metal statements and more. eSERVICES is available for orders placed at our Buffalo, NY, Brewster, NY or Albuquerque, NM facilities. Click for easy [sign-up](#) or visit [eSERVICES](#) on our web site.

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