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Top 5 from Minnesota Medtech Week 2015

Wed, 11/11/2015 - 4:11pm
by [Kaylie Duffy](#) - Managing Editor -
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Minneapolis Convention Center. Image credit: Kaylie Duffy

Last week, LifeScience Alley and MD&M Minneapolis joined forces to put on the annual [Minnesota Medtech Week](#) at the Minneapolis Convention Center. The two-day event featured more than 50 expert speakers, and more than 1,000 exhibitors from the medical device industry.

In addition to listening to thought leaders from Boston Scientific, Heliuss Medical, Ximedica, and Hill-Rom, I was able to peruse the show floor to check out the latest innovations in medical device technology. Below are my top five medical device innovations from the event.

Deeper Insights



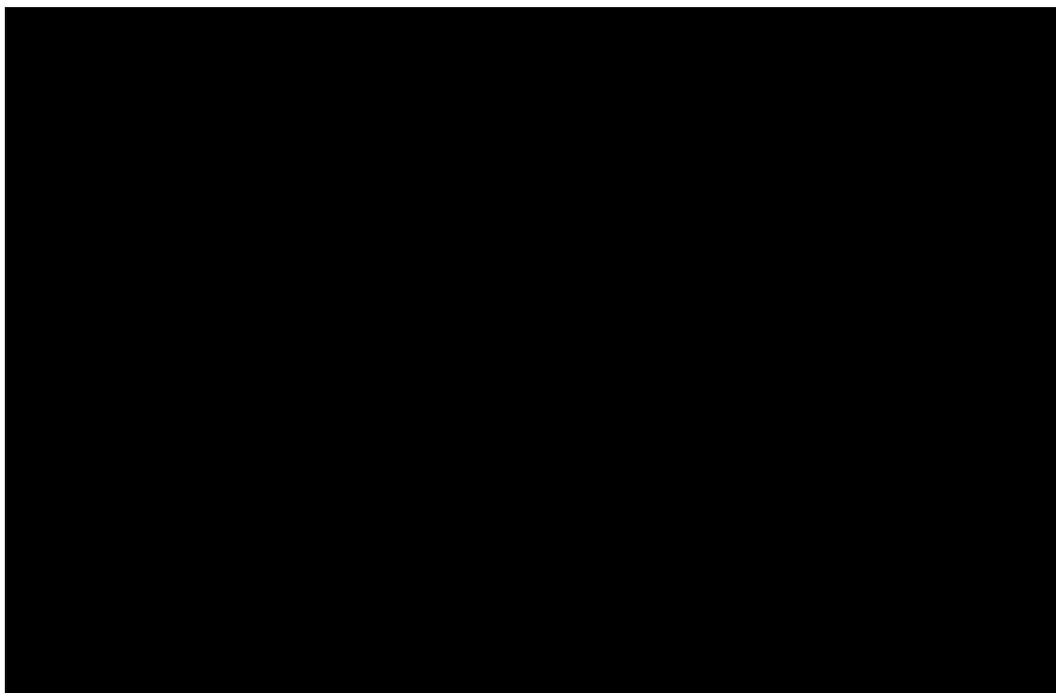
[Antimicrobial Coating for FDM Medical Devices](#)

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5. [ProPlate](#) showcased **Vizi-Band**, a patent-pending metal coating process that atomically bonds to a catheter, guide wire, hypotube, stent, or similar device. Traditional [radiopaque marker](#) products have risks, such as long-term storage degradation of metal-filled polymers and dislodgement of crimped-on marker bands. However, these risks are eliminated with Vizi-Band, because the radiopaque coating is bonded at an atomic level, and does not degrade over time. Plus, the radiopaque and biocompatible coating can be applied to any section of a medical device.

Traditional machined marker bands are installed by crimping individually. To improve upon this lengthy process, Vizi-Band markers are coated, and can be accomplished simultaneously for the

sake of efficiency. In addition, the Vizi-Band marker coating can be applied in thinner layers than traditional marker bands are machined.



4. [Heraeus Medical Components](#) caused quite the buzz with its **CerMet** technology. According to the company, the part ceramic, part metal material could enable even smaller implantable medical devices, such as biosensors. Furthermore, CerMet Composites offer complete electrical integration, hermetic encapsulation, and 3D design functionality.



CerMet technology. Image credit: Kaylie Duffy

Instead of brazing several individual metal pins into an insulating ceramic, Heraeus uses a multi-layered printing process to create conductive, 3D-shaped channels into a ceramic matrix.



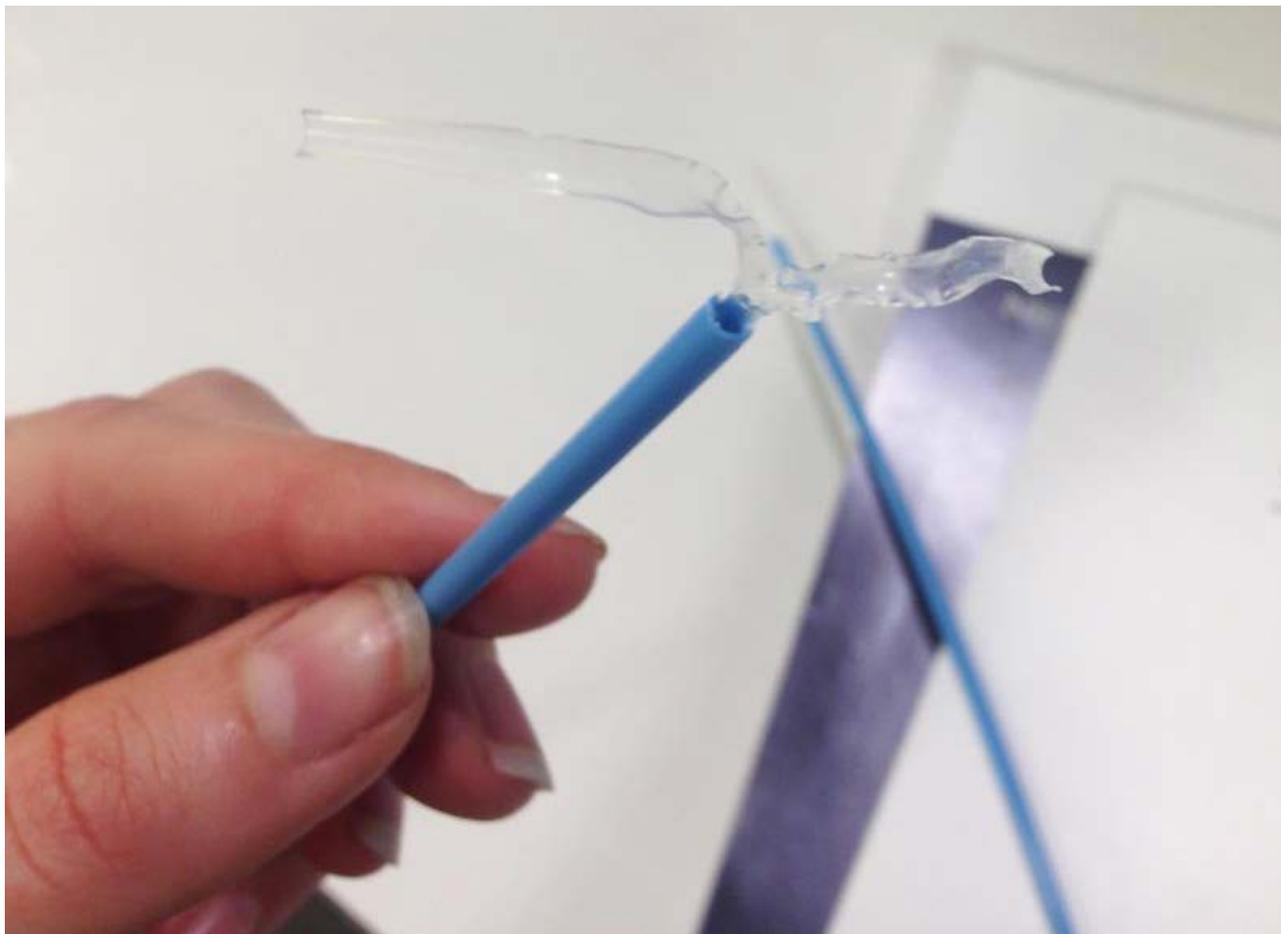
Cermet technology. Image credit: Kaylie Duffy

3. The last step of removing the recovered heat shrink over a catheter's outer shaft is very critical and laborious.

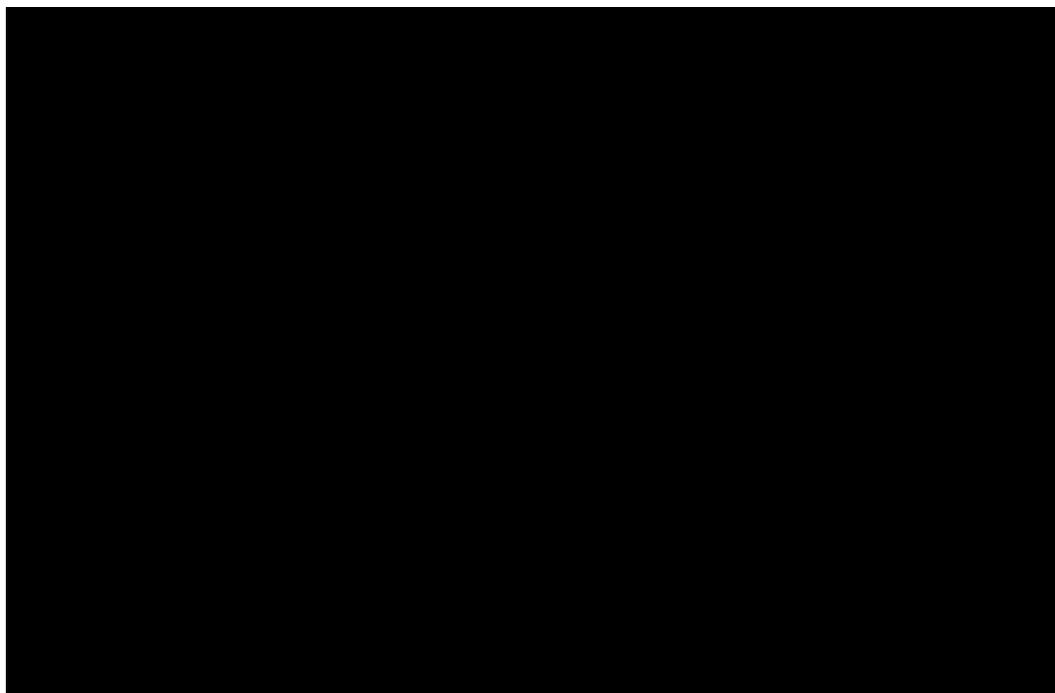
However, with a linear tear, [Zeus' FluoroPEELZ](#) easily peels away from the recovered catheter shaft. The innovation reduces scrap, improves yields, and increases worker safety. Additionally, the clear material allows end users to inspect the construction after the reflow process.



Zeus' FluoroPEELZ technology. Image credit: Kaylie Duffy



I was able to peel FluoroPEELZ with relative ease. Image credit: Kaylie Duffy



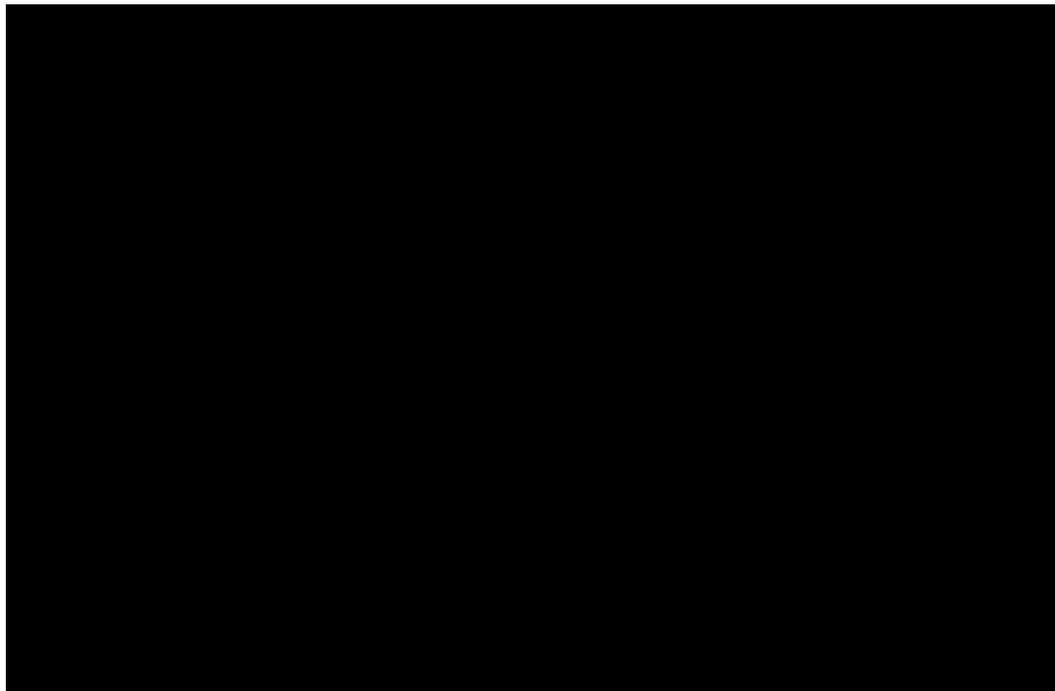
2. It's always a good sign when you see a line forming on the showroom floor. This was the case when I passed by [Sunstone Engineering](#)'s booth, which housed the company's **Orion 200i2** micro (pulse arc) welder. According to the booth staffers, the machine is able to fuse together metal as fine as a piece of hair or as large as medical tools and devices. While the Orion 200i2 is primarily marketed as a jewelry welder, its ability to control a wide range of power allows it to work on a variety of projects.

The machine features a Pico weld mode for intricate welds as small as 0.01 Joules of energy;

however, it is also user selectable up to 200 Joules of energy. Moreover, the welder has a 10-inch touchscreen interface, with one-touch access to all welding parameters, and 3 unique pulse shape wave form options to choose from.



An expo visitor tests out the Orion 200i2 welder. Image credit: Kaylie Duffy



1. According to a recent global forecast [report](#), the 3D printing medical device market will be worth \$2.13 billion by 2020. The potential to 3D print surgical tools or even print organs for transplant is an exciting new realm of medical technology, with room for exponential growth.

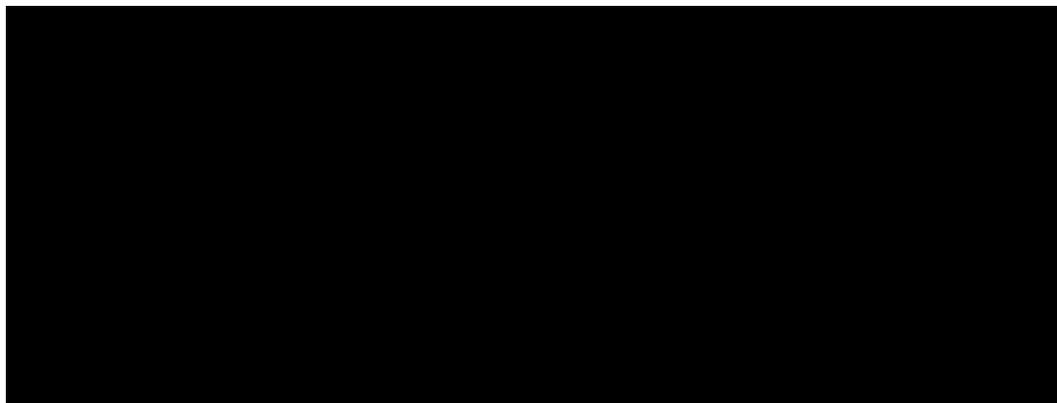
Formlabs, a company born out of the MIT Media Lab in 2011, gained national fame when it became one of the most highly funded crowdfunding projects of all time on Kickstarter. The startup was trying to gain backing for its Form 1 3D printer, which uses stereolithography to create objects.

The company has come a long way with the September 22, 2015 reveal of the **Form 2** 3D

printer, which features a larger build volume ($5.7 \times 5.7 \times 6.9$ in) and a resin wiper. The new printer costs \$3,499 and is ideal for creating medical device prototypes. The Form 2 could even be used to create exact 3D replicas of a patient's internal anatomy for surgical practice.



The Form 2. Image credit: Kaylie Duffy





If you are curious as to what other technologies were displayed at Minnesota Medtech Week 2015 or would like to learn more, please comment below, tweet me @kaylieanduffy, or email me at Kaylie.Duffy@advantagemedia.com.

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