

Hi-Tech Gadgets

Your precision parts need to perform in demanding applications, & lasers are the best technology to ensure your parts are prepared for the job.

Innovation Culture

As a major owner of A-Laser and the other FCT companies (Florida CirTech, FCT Water, FCT and FCT Solder) since 1993, I get to participate in quarterly meetings to review ideas. The excitement and energy around pushing the limits and problem-solving that is brought to the table within these companies makes me grateful to be a part of it.

In having only been peripherally involved in A-Laser, I'm going to write this with a slightly different perspective. The company culture at A-Laser carries throughout this family of companies. So, I want to switch gears and talk about innovations from A-Laser's partners and provide some insight into the values and ideas that set us apart. Let's start.

Immersion Tin

This project started over twenty years ago. At that time, the exposed copper on a finished printed circuit boards were primarily coated by conventional solder in a process known as Hot Air Level or HASL, with the idea being to protect the surface of a "bare board" prior to final assembly solder. During this time, there was a new Electroless Nickel Immersion Gold process known as ENIG but this process was cumbersome, not well understood and expensive. We spent a good five years developing our Immersion Tin process by refining and getting a better understanding of the role intermetallic Tin/Copper plays in overall solderability and the solder reflow process. Our company at this time was much smaller and this effort was our first real work involved in developing a process while working intimately with both printed circuit board manufacturers, assemblers, and OEM's. In contrast to some of our more conventional products we developed, this project really energized everyone in our organization.

Lead Free Hot Air Surface Levelling

One of our next projects was started over ten years ago and involved a collaboration with a Japanese soldering company Nihon Superior and their SN100C patented lead-free solder alloy. We started selling this alloy for both wave and hand soldering but wondered if it could be used as the alloy for Hot Air Leveling or LF HASL on a bare printed circuit board. Prior to our work, many larger companies attempted LF HASL with their own proprietary lead-free solder alloys with very little success due to excessive oxidation of the solder, etching of the copper substrate and even attack on the solder pot itself. In working with Nihon Superior, we were able to come up with a process that enabled SN100C to be the de-facto standard for LF HASL.

NanoSlic

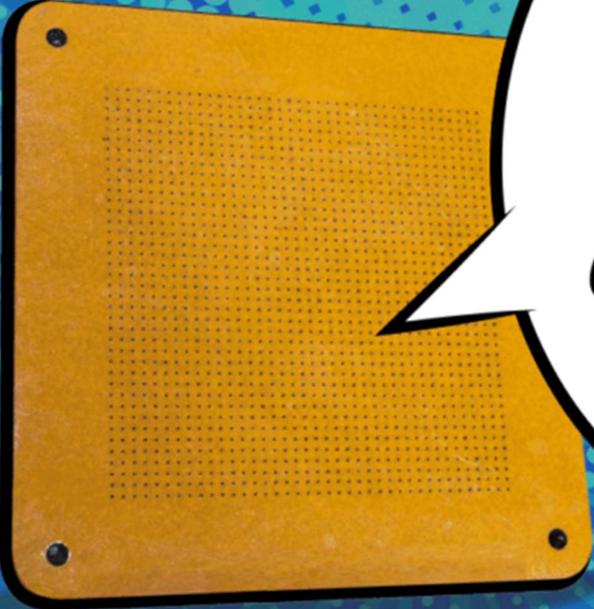
My next example deviates from the previous examples in that this chemistry had nothing to do with a printed circuit board. [NanoSlic](#) is a product that is coated both on the under-side and inside the

apertures of a stencil to both reduce solder bridging and enhance the printing of solder paste for high aspect ratio apertures. This project started by developing a high contact angle oleophobic coating that is thin and uniform and does not clog apertures. We continued developing this process by enhancing adhesion through novel laser structuring, something unheard of in the industry. We have also leveraged our knowledge and expertise in Oleophobic and Hydrophobic chemistry by developing quasi permanent waxes for cars, trucks, boats, and other applications where ceramic coatings provide a protective benefit...

HI-TECH GADGETS

A LASER

YOUR PRECISION PARTS NEED TO PERFORM IN DEMANDING APPLICATIONS. LASER TECHNOLOGY IS THE BEST TECHNOLOGY TO ENSURE YOUR PARTS ARE PRECISE AND CLEAN.



***TO DO MY JOB,
I NEED EXTREME
PRECISION, A
CLEAN FINISH, &
HIGH QUALITY***

Please Read More at:

[Innovation Culture - A-Laser Precision Laser Cutting](#)

[Hi-Tech Gadgets - A-Laser Precision Laser Cutting](#)

[A-Laser Precision Laser Cutting - Laser Ablation, UV and IR Lasers](#)