

# PHOTOFOCUS



Sonia Romero

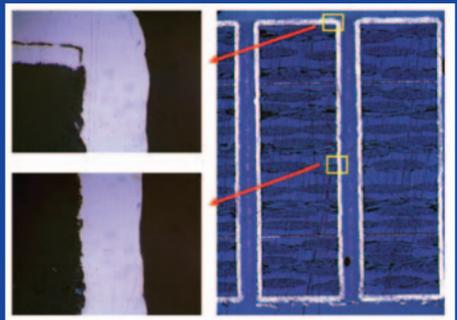


**U**yemura's Tech Center Office Team welcomes guests, responds to customer requests, manages logistics, and handles purchasing, accounting and shipping. They're key to our success – and we thought you'd like to see who they are!

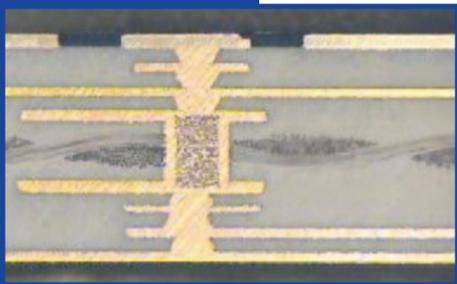
**Abbey Williams** (left) is our internal sales representative.

She and **Jesse Robertson** (center) share responsibility for managing product orders and making sure delivery commitments are met. **Tricia Wolowicz** (right) manages the Connecticut office and also oversees order entry and inventory.

**Sonia Romero** is Credit Manager for US operations and works in our California office.



Thru-Cup EPL plated through hole.



EVF plated Via filled copper.

## Thru-Cup EPL

(Cont. from Page 1)

The process produces a fine-grained equiaxed Cu deposit. The leveling capability of Thru-Cup EPL overcomes irregularities on the substrate surface and does not allow nodule growth.

Deposits are bright and ductile, with greater than 25% elongation and 35-50 KPSI tensile strength. Thru-Cup EPL maintains these properties plating as low as 5 ASF (0.5 ASD) and as high as 25 ASF (2.5ASD).

Thru-Cup EPL is a two-component system: the carrier controls deposit uniformity, and the brightener is the grain-refining additive. The solution components and additives have a wide operating window and are easily controlled.

Thru-Cup EPL is compatible with air and eductor agitation. It is also compatible with "EZ-PLATE," a plating system, available through UIC, that uses insoluble anodes with copper regeneration in a vertical plating mode. The anodes are titanium coated with

iridium oxide and a patented synergy coating. The copper regeneration is a patented process that uses the bath chemistry with air sparging to dissolve copper external to the plating cell.

**Also Available: Thru-Cup EVF, "for Better Via Fill"**

Uyemura EVF acid copper DC plating fills blind vias in 45-60 minutes (not 4 hours!), for better process results and major cost advantages. *Via filling performance is not affected by bath age.*



offers a wealth of information, including technical papers. Visit [www.uyemura.com](http://www.uyemura.com) and click the link on the menu bar.

**UYEMURA INTERNATIONAL CORPORATION**

Corp HQ: 3633 Inland Empire Blvd. #575 • Ontario, CA 91764 • ph: 909.466.5635

Tech Center: 240 Town Line Road • Southington, CT 06489 • ph: 860.793.4011

[www.uyemura.com](http://www.uyemura.com)



# CLEARSignals

Industry Newsletter from . . .

**UYEMURA INTERNATIONAL CORPORATION**



[www.uyemura.com](http://www.uyemura.com)

## A WALSH WELCOME . . .



**Welcome to the Uyemura-USA Newsletter.** We will send these out several times a year and I'll include a short article addressing some issue affecting us all.

As I have for four years, I want to grab this opportunity to thank you for contributing to our phenomenal growth. Each year's record is due in part to our products and tech support, but especially to our growing customer base.

Future articles will update you on changes here – the major news now, of course, is the hiring of additional people to manage the new efforts-latest updates are on page 2.

Future articles will discuss commodity pricing, environmental rules changes (if you think RoHS affected us, wait till you see how China's new regulations impact North American manufacturing!), new products, changing technologies, etc.

(A Walsh Welcome continued on p 3)

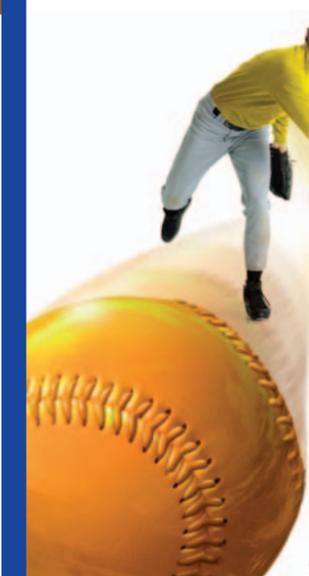
## RoHS Regs are the Start – Not the "End-game"

**U** Industry has worked hard to comply with RoHS. Effective July 1 of 2006, it prohibits the use of lead, cadmium, hex chrome and other hazardous substances in electronic and electrical equipment ("EEE") throughout the EU. But anyone who thinks RoHS is the end-game is in for a shock. Industrial nations including Japan, China, Argentina and Korea, have adopted, or are seriously considering, similar requirements.

Among the most important: China's Regulation for Pollution Control of Electronics Products law will outlaw the same six materials as Europe's RoHS directive, but will actually be stricter because there are no exclusions. Europe's End of Life Vehicle Directive will preclude the use of a variety of materials for virtually anything with wheels.

(RoHS Regs continued on p 2)

## Thru-Cup EPL: The Ultimate High-Throw Acid Copper Additive for PWB Plating



Thru-Cup EPL was engineered for today's high aspect ratios with fine lines circuitry. It offers the simplicity of DC plating with results equivalent to more complex waveforms of pulse plating. The chemistry is highly stable and does not require continuous regeneration.

(Thru-Cup EPL continued on p 4)



## RGA Immersion Silver Displaces Rivals as HASL alternative of Choice for PWB

**High density mounting performance, superior environmental and selective deposition are keys to migration**

Uyemura's RGA-14 Immersion Silver deposits directly, displacing copper **fast** in an immersion reaction.

The deposit is exceptionally uniform and tarnish-resistant, and provides exceptional solderjoint

strength. It is an ideal soldering surface under "lead-free" assembly temperatures. RGA has a long shelf life, and because the reaction is displacement, the bath is highly stable. It won't UV-decompose – or attack the substrate or soldermask.

RGA-14 is a high productivity process that's compatible with the horizontal (or vertical) equipment used in electronics, telecommunications, computer and automotive applications.



## Mario Orduz Brings Wealth of Industry Experience



**Former Atotech Product Manager Joins Tom Walsh and Bill Rodriguez in Major Expansion of Uyemura Field Team**

UIC has for the third time in a year, expanded its US professional staff. We have added the post of National Product

Manager and appointed Mario Orduz to the position. Orduz is based at the tech center in Southington, CT.

Orduz brings to the position 18 years with Tyco Electronics in PWB Manufacturing Engineering, 6 years with Cookson Electronics (Dexter/Enthone) as Technical Service Manager and Product Introduction Manager, and most recently, five years as product Marketing Manager, Electronics, with Atotech USA.

According to Don Walsh, "his strong technical and product management experience complements our commitment to the introduction of new products to meet customer needs for performance and competitive advantage."

## RoHS Regs (Continued from Page 1)

Closer to home, California has a new law that bans the use of many chemicals in the manufacture of electronic equipment. It became effective

January 1. Twenty other states are considering similar laws.

"People like to talk about RoHS, but what is coming

is going to make RoHS look like a little pebble," says Seb Nardecchia, director, environmental compliance for Flextronics, of San Jose, CA. He says the biggest challenge for the electronics industry will be China RoHS, which goes into effect March 1, 2007, according to an interview published in Purchasing June 15, 2006.

Equally notable is a related European directive known as the

EuP (Energy-using Products) Law, which takes effect in August, 2007. It deals with material and energy usage during manufacturing and use and covers electronic products shipped to EU countries, or sold in those countries in quantities of 200,000 or more. Its purpose

is to provide consumers with an ecological summary of the product, indicating efficiency, in terms of materials and energy. (Choosing materials, and finishes, is about to become much more interesting.)

So, how can manufacturers produce products that meet these complex requirements, and satisfy customers' demands?

Four times per week, on average, a prospective customer brings us

a set of performance and regulatory specs. Often, there's a standard product that meets the requirements. Our KAT Electroless Nickel/Immersion Gold process (ENIG), for example, produces a uniform mid-phos electroless nickel deposit with a thin topcoat of immersion gold, over copper substrates. The finish is highly resistant to corrosion, and is both solderable and aluminum wire bondable. It is also an ideal contacting surface.

Exceptional finishing chemistries, with the best-possible performance characteristics, and environmental that meet current and upcoming requirements, is how Uyemura can help you get a competitive edge. **Talk with us soon.**



## Uyemura "Final 4" Finishes Give Users Competitive Advantage



**ENIG KAT Electroless Nickel/Immersion Gold** produces a uniform mid-phos EN deposit with a thin topcoat of immersion gold, over copper. It offers high corrosion-resistance, is solderable, and aluminum wire bondable. And, it runs at least 10°F below competitive products. Plus, no "dummy plating" is needed!

**Uyemura is now #1 for ENIG in North America!**

**RMK-20 Immersion Tin** deposits a uniform co-planar tin surface over copper, provides superior thickness distribution. It's ideal for lead-free soldering, and meets the needs of soldering and press fit connections.

**DIG Direct Immersion gold on copper** is the ultimate replacement for OSP finishes – and only Uyemura has it. It deposits a 1-2 micro inch coating of immersion gold directly on copper. Ideal for lead-free, high-temperature assembly.

**For info about UIC Immersion Silver, see facing page.**

**Also ask about Electroless Gold – a Uyemura technology exclusive!**



## A WALSH WELCOME Continued



Uyemura is based on a solid and substantial commitment to research – Uyemura-USA also facilitates access to R&D at Umicore-Galvanotechnik and CL Technologies in Germany and MEC in Japan. You will continue to see important developments emerging from all these research centers.

Please also visit and bookmark [www.uyemura.com](http://www.uyemura.com). The "New and Notable" column on our home page is updated often with information on technology, people, events, regulatory issues and more. And our "library" link offers white papers on many useful topics.

Uyemura-USA has been blessed with amazing growth, industry recognitions, and a steady stream of new products engineered to meet specific customer needs. We look forward to working with you!

– Don Walsh, Director of Operations

**"Thanks to our customers for yet another record year in '06"**