



The European Institute for the PCB Community

EIPC SPEeDNEWS

The Weekly On-Line Newsletter
Issue 26 – October 2022

NEWS FROM ELECTRONICA

PCB & Components Marketplace

The PCB & Components Marketplace allows leading companies in the PCB, components and EMS industry to present their latest products and solutions. In addition, the Electronic Components and Systems and PCB & Electronic Systems Associations in the German Electrical and Electronic Manufacturers' Association (ZVEI) present their latest recommendations and work results there.

The PCB & Components Marketplace is one of the most important gatherings for the PCB, components and EMS industry. Whether it comes to obsolescence management, additive manufacturing, rework and repair, traceability, design, component cleanliness or supply-chain management:

During lectures and discussions visitors can gather information on a myriad of topics that are related to PCBs, electronic components and electronic manufacturing services. Technical information is rounded out by market data, trends, and development scenarios in various product and service segments.

The forum addresses everyone who is interested in the exchange of experience between multiple companies—from developers, engineers and decision-makers in the industry to technical editors and college students.

Where: **Forum in hall A1**

When: **Tuesday, November 15, 2022 until Friday, November 18, 2022**



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ELECTRONICS INDUSTRY NEWS

1990s: The Graduate Student Who Helped The Electronics Industry Face A Global Crisis

His strategy? That the industry needed to make a fundamental shift from applying environmental solutions at the end of the pipe to embedding them in design, process development, and every aspect of manufacturing, including the design of factories.

By David H. Freedman

In 1974, three scientists published a paper that would rock the U.S. and global electronics industry 15 years later.

The paper laid out the chemical life cycle of chlorofluorocarbons (CFCs), a family of compounds that had proven hugely useful in a vast range of applications, from refrigerants to non-stick coatings. Even better, CFCs evaporated and floated away after use.

But the paper suggested that CFCs weren't, in fact, simply floating away harmlessly. They were building up in the upper stratosphere, opening a hole in the ozone layer that filters out most ultraviolet radiation from the sun. If the hole continued to grow, the scientists predicted, the human race would be slammed with increasing rates of cancer, immune disorders, blindness, and even starvation from crop damage.

By the late 1980s, nations had come together to commit to ridding the world of CFCs by 2000. But the electronics industry relied intimately on CFCs for cleaning every electrical connection at every step of the manufacturing process. No one had any idea how to make chips or circuit boards without them.

Yet over the next few years, the electronics industry would find a way to do exactly that. But it would require electronics companies — especially the big, fiercely competitive semiconductor manufacturers — to cooperate in a way they never had before and to almost literally turn the way they thought about environmental issues upside down.

The results would reverberate far beyond CFCs and would set the stage for today's efforts to combat climate change. An important catalyst for that enormous shift was a dissertation by a Ph.D. student named Braden Allenby.

Allenby was a young attorney for AT&T in the late 1980s when he decided to get his doctorate in environmental science on the side. His dissertation, finished in 1992, addressed a problem that had been getting more and more attention in previous years: Large corporations often caused considerable environmental damage but were incentivized to resist efforts to be greener because doing so tended to be costly.

Companies had typically treated environmental considerations as an afterthought, relegating corrective action to "end of pipe" solutions — that is, trying to mitigate problems such as emissions and toxic chemicals after they were produced. "Executives saw environmental concerns as overhead," said Allenby. "They didn't think about them during planning and production. If you ended up with a bunch of barrels of toxic chemicals, then you got rid of the barrels. If you made the air or water dirty, then you tried to clean it up. There was no systemic approach to protecting the environment."

Government regulators like OSHA and the EPA, and any number of environmental activist groups, were on industry's case about the environment. "They were hitting industry over the head with demands, without any concerns for the constraints that companies faced," said Allenby. "That wasn't going to bring about real change."

What Allenby developed in his dissertation was a different approach to getting industry to do better, one that sought to integrate environmental concerns with the interests of the company. Coining terms like "industrial ecology" and "design for environment," Allenby argued in his dissertation and in subsequent published papers that executives needed to see environmental protection as a strategic issue critical to the welfare of the company — and one that had to be worked into all parts of the organization. "They needed to make a fundamental shift from applying environmental solutions at the end of the pipe to embedding them in design, process development, and every aspect of manufacturing, including the design of factories," he explained.

Of course, thoughtful dissertations rarely lead to large-scale corporate change. But in his day job as an AT&T attorney, Allenby happened to be in a critical time and place. AT&T was a leader in the electronics industry, and CFCs were a huge threat, one that could lead to enormous fines and even get companies shut down if not solved. Nor was this a problem that could be fixed at the end of the pipe, because for CFCs, the end of the pipe was 30 miles above Earth.

If there had ever been a time for a corporation to think strategically and broadly about the environment, this was it. And Allenby had executives' ears. AT&T became the first major company in the electronics industry to step up. By 1992, it had set up a formal collaboration with one of its direct rivals, Northern Telecom, and invited the

EPA to join in as well in order to pool technical resources to figure out how electronics could be manufactured without CFCs. The collaboration studied more than 50 potential replacements. None of them could match CFCs for cleaning power without posing any risk of poisoning people or exploding, but it was a start.

The rest of the industry soon proved ready to jump in, and Allenby's instigation and organizing led to the founding of the Industry Cooperative for Ozone Layer Protection, or ICOLP, for which Allenby served as head counsel. Putting all concerns about proprietary processes and trade secrets aside, the group — which included IBM, TI, HP, Intel, and Honeywell — brought in a range of engineers to look at everything from new ways of designing circuit boards to new ways of bonding connections. Soon, Ford, Boeing, General Electric, Motorola, Toshiba, and other industrial giants signed on.

The goal was to come up with processes that would lower the need for ultraclean surfaces so that CFC alternatives with less cleaning power might do the trick. Even environmental activist groups were invited to pitch in to the effort. "Competition and antagonism were suspended," said Allenby. "Everyone was working toward a common goal."

Within a few years, ICOLP had produced a range of techniques and identified a number of CFC alternatives that filled the bill in different electronics manufacturing applications, at different stages of the process, and with different types of materials. Those solutions were not only freely shared with all of the industry, including companies that had nothing to do with ICOLP, but they were distributed to other industries and governments around the world.

The group even went on to find ways to mitigate another environmental problem hanging over the electronics industry's head: the toxicity of lead solder, used ubiquitously in the industry. While some lead solder is still used today, the group helped develop a way to use nitrogen gas that allowed lead alternatives such as bismuth and silver to work in many soldering applications.

The lessons from ICOLP have enormous significance today. That's because industries face the far more complex challenge of reducing carbon emissions to try to halt climate change. "The skills and expertise to solve the problems are in place today," said Allenby, now a professor in sustainable engineering at Arizona State University. "And so is the understanding that solutions will have to come from shared efforts, not proprietary approaches."

David H. Freedman is a Boston-based science writer. His articles appear in The Atlantic, Newsweek, Discover, Marker by Medium, and Wired, among many other publications. He is the author of five books, the most recent being "Wrong," about the failure of expertise.

Apple's tech supply chain shows difficulties in cutting dependence on China

Bloomberg Intelligence estimates it would take about eight years to move just 10% of Apple's production capacity out of China, where roughly 98% of the company's iPhones have been made

Chinese vendors account for nearly half of global smartphone shipments, the region has a well-developed supply chain, which will be tough to replicate and one Apple could lose access to if it moves

American companies have had a growing list of reasons to downgrade their ties with China in recent years. Former President Donald Trump's tariffs. Beijing's stringent Covid lockdowns. The US-Sino standoff over Taiwan. Political pressure to "friend-shore" supply chains toward nations aligned with Washington.

But breaking up, as the adage goes, is hard to do.

That conclusion is evident from a Bloomberg Intelligence analysis of Apple Inc., which is trying to reduce its dependence on China. The Cupertino, California-based company already started producing some iPhone 14 models in India, in an earlier than usual move for new models. And Apple's largest supplier, Foxconn Technology Group, recently agreed to a \$300 million expansion of its production facilities in Vietnam.

Read BI's Report: Untangling US-China Technology Supply Chain Hard, Not Impossible

But Bloomberg Intelligence estimates it would take about eight years to move just 10% of Apple's production capacity out of China, where roughly 98% of the company's iPhones have been made. Scores of local component suppliers -- not to mention modern and efficient transport, communication and electricity supplies -- make it particularly difficult to get out of the world's second-largest economy.

"With China accounting for 70% of global smartphone manufacturing and leading Chinese vendors accounting for nearly half of global shipments, the region has a well-developed supply chain, which will be tough to replicate -- and one Apple could lose access to if it moves," BI's report from analysts Steven Tseng and Woo Jin Ho said.

An Apple spokesperson did not respond to a request for comment.

It's one thing to look outside China for other makers of toys and t-shirts. But US technology firms invested more than two decades, and tens of billions of dollars, setting up complex production chains to provide essential goods for the e-commerce boom. Unwinding those ties could end up taking just as long, and may result in lasting damage to an already battered global economy.

Of course, unanticipated events -- like Europe and America's rupture with Russia -- provide a potent reminder of both the systemic risks of deep economic integration and the speed at which decoupling can occur.

Political headwinds in the US have been steadily leaning against US-Chinese integration. Under President Joe Biden, the \$615 billion US-China trade relationship has simmered into a cold war following the commercial tensions under Trump that resulted in tariffs on a collective \$360 billion worth of bilateral goods, along with US sanctions on key Chinese technology manufacturers like Huawei Technologies Co Ltd.

The pandemic then ushered in President Xi Jinping's strict virus-containment policies, which essentially barred travel and has left major areas locked down for extended periods of time. Rising tensions over US ties with Taiwan and China's unprecedented scale of military exercises in the Taiwan Strait have become the latest flashpoint offering a case for decoupling.

"There was some momentum in this direction as a consequence of the trade war and the pandemic," Scott Kennedy, a senior adviser at the Washington-based Center for Strategic and International Studies, said about decoupling. "The Shanghai lockdown was really a monster accelerant. And the cross-strait crisis in early August added more fuel to the fire."

Yet the Biden administration's reshoring strategy -- or "friend-shoring" as termed by US Treasury Secretary Janet Yellen -- remains a lofty but unfulfilled ambition, as far as the data go.

US firms had \$90 billion directly invested in China at the end of 2020, and despite all the talk of decoupling, added another \$2.5 billion in 2021, according to data compiled by China's commerce ministry. The actual total is likely even higher, because some businesses are thought by analysts to route some investments through Hong Kong, or via tax havens like the Cayman and Virgin Islands.

US tech supply chains in China rely on firms from Taiwan and elsewhere as well as domestic Chinese firms, increasing the level of dependence further.

Friendshoring Reticence

Furthermore, America's allies aren't exactly swayed by Yellen's "friend-shoring" concept. Key US partners like Singapore warned the Biden administration that isolating China could destabilize the global economy and potentially "sleepwalk" the world's largest economies into a dangerous conflict.

"Such actions shut off avenues for regional growth and cooperation, deepen divisions between countries and may precipitate the very conflicts that we all hope to avoid," Singapore's Prime Minister Lee Hsien Loong said following Biden's visit to the region in May.

That's not to say untangling the tech supply chains that link the US with China isn't already happening to some extent. A Sept. 23 report from Goldman Sachs Group Inc. found that the share of US tech imports coming directly from China has declined by 10 percentage points since 2017, "mainly on moderating China mobile phone exports."

Apple's exposure to China is also notably bigger than many others. Amazon.com Inc., HP Inc., Microsoft Corp., Cisco Systems Inc. and Dell Technologies Inc. also depend on China to produce hardware for servers, storage and networking products, but the extent of their dependence is far below that of Apple.

Bloomberg Intelligence says that overall tech-industry dependence could be reduced by 20%-40% "in most cases" by 2030. For hardware and electronic manufacturers, they could reduce their reliance on the Chinese market to 20%-30% over the next decade, BI calculates.

The Biden administration is taking a two-pronged approach to weakening economic ties with China that simultaneously incentivizes companies to shift their production via subsidies and penalizes investment in China via tariffs and export controls.

This summer, Biden signed two pieces of legislation -- the Chips and Science Act and the Inflation Reduction Act -- that contain provisions to help bolster domestic manufacturing of certain strategic goods like semiconductors, electric vehicles, batteries and pharmaceuticals.

The legislation bars companies that access the program's \$52.7 billion in federal funding from materially expanding production of chips more advanced than 28-nanometers in China -- or a country of concern like Russia -- for 10 years.

Also this year, the US administration expanded curbs on sending US semiconductors to China, with new license requirements to sell chip-making equipment to factories that produce 14-nanometer or more advanced chips.

US industry officials are developing contingency plans in anticipation of more barriers to US-China trade and expect the Biden administration to trigger a slate of additional export restrictions sometime this fall.

While there's the potential for a political reset between Biden and Xi on the sidelines of the upcoming Group of 20 leaders summit in Bali, expectations for a grand détente remain low.

"I don't see any breakthroughs coming out of the Xi-Biden meeting," said Wendy Cutler, a former US trade negotiator and vice president at the Asia Society Policy Institute.

Meanwhile, private-sector sentiment has also deteriorated.

A recent survey from the US-China Business Council found that US firms' optimism about China has already fallen to a record low and evolving challenges -- like China's Covid Zero policy, power cuts and geopolitical tensions -- have caused more than half of surveyed companies to delay or cancel planned investments in China.

China Headaches for US Companies

Covid trumps geopolitical tensions as leading challenge

No.	Problem area
1	Covid shutdowns
2	US-China relations
3	Covid travel restrictions
4	Data, personal info and cybersecurity
5	Cost increases
6	Tech decoupling
7	Competition
8	Industrial policy
9	Procurement policies
10	IP protection

Source: US-China Business Council

Bloomberg

Nearly a quarter of the survey respondents said they've moved segments of their supply chains out of China over the past year.

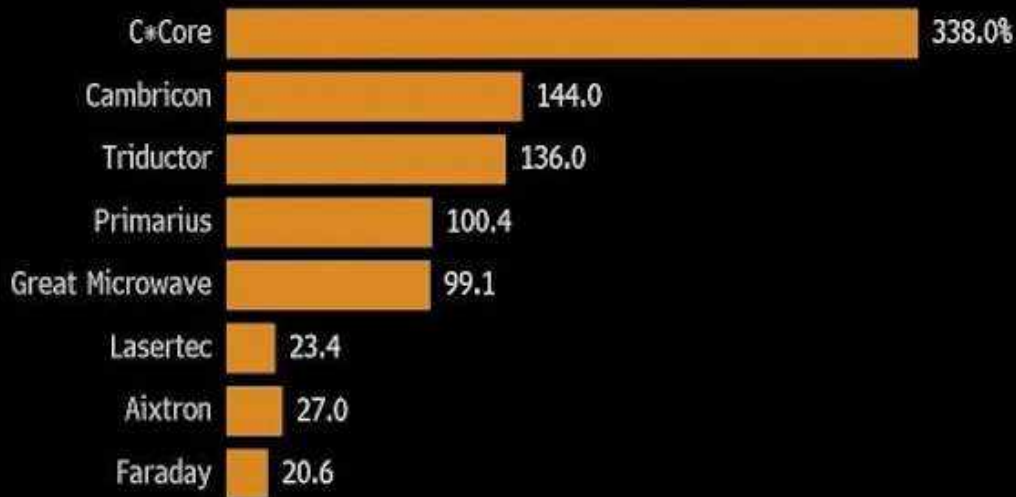
But it's not exactly an exodus from China. A common approach has become "China Plus One" -- whereby China remains a core production base, and any additional capacity is added in South and Southeast Asian nations like India, Vietnam, Malaysia, Thailand and Indonesia.

Last year, US firms pledged to invest about \$740 million in Vietnam, the most since 2017 and more than double the amount in 2020.

Taiwan itself remains a vital but vulnerable component of US supply chains. Led by Taiwan Semiconductor Manufacturing Co. Ltd., the island currently manufactures more than 90% of the world's most advanced chips used for military and corporate computing services. Apple, MediaTek and Qualcomm, which control more than 85% of the global handset chip market, all rely on TSMC's supply.

Leading the Pack

Chinese chip firms led the world in average sales growth over the past four quarters



Source: Bloomberg

Bloomberg

Taiwan is expected to remain the key manufacturing hub for cutting-edge chips over the next five years, according to the Bloomberg Intelligence report.

China's booming market also underscores the opportunity cost for US suppliers. Some 19 of the world's 20 fastest-growing chip industry firms over the past four quarters, on average, are based in China, according to data compiled by Bloomberg.

--With assistance from James Mayger and Mark Gurman.



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NEWS FROM THE UK

iMAPS-UK

POWER4 - POWERING THE FUTURE

One Day Conference on Thursday 24th November 2022 at the Jubilee Conference Centre, University of Nottingham

iMAPS-UK is pleased to announce the Preliminary Programme for the iPower4 Conference, covering the following topics:

- Power Electronics Market Analysis
- Silver and Copper Sintering
- Embedded die in PCB
- Encapsulation
- Laser Activated Bonding
- Multi-Chip Module Assembly
- Inductance Modelling Optimisation
- Reliability investigations on Bonded Structures

There will also be the opportunity during the day to visit the adjacent Power Electronics and Machines Centre (PEMC) at the University of Nottingham containing three state-of-the-art laboratories for:

- Power Electronics
- High Power
- Machine Drives and Power Converters

A PEPTUS Workshop on Power Electronics Packaging will be held on the afternoon of Wednesday 23rd November 2022 at the Jubilee Conference Centre focusing on Developing Packaging Options. Attendees at the iPower4 Conference will receive a discount for attending the PEPTUS Workshop.

For Any other details or information Please contact:
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Tel: +44 0131 2029004
e-mail: Office@imaps.org.uk

Power Electronics Packaging - Training and Upskilling (PEPTUS Project)

PEP-IT-UP Workshop

Microelectronics packaging for power electronics

Monday 25 April - Afternoon at Rutherford Appleton Laboratory, Harwell Campus, I
Didcot, Oxon.

The Power Electronics Packaging Training Workshop will cover the following topics:

- Power Package Drivers
- Basic Packaging Processes
- Equipment
- Standard Power Packages

Who Should Attend:

- Engineers and Technicians involved in Power Electronics Design, Manufacture and Test
- Undergraduates and Post-graduates interested in Power Electronics Research and Development
- Engineers and Technicians seeking to become involved in Driving the Electric Revolution
- QC/Reliability Personnel and Managers wanting to gain an appreciation of power E, Electronics assembly processes

i MAPS-UK Member and students: £25 – Ticket PEP-IT-UP-01

Non-Member: £50 – Ticket PEP-IT-UP-02

MicroTech 2022 Conference Attendee: £0 (Free) – Ticket PEP-IT-UP-03

If you have registered to attend MicroTech 2022, you can register for a place at the Training Workshop for free, by booking Ticket PEP-IT-UP-03. However, there are only limited places available and they will be allocated on a first come, first served basis.

For any other details or information Please contact:

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NEWS FROM TAIWAN

A Quick Take on Semicon Taiwan 2022

Opinion

By [Matthew Holzmann](#)

Taiwan has been moving full speed ahead since the onset of the Covid crisis. Locked down to the outside world, the government internally implemented strong measures that have allowed the country to forge ahead while keeping the crisis at bay.

Semicon Taiwan 2022, held this month, was an excellent gauge of where the Taiwanese industry is and where it is going. Thousands of engineers, technologists, technicians, and suppliers crowded the halls at the Nangang Exhibition Center in Taipei.

Following Covid, many manufacturers accelerated production to keep up with demand from around the world. Taiwan is widely expected to remain the world's leading market for chip making equipment for both front and back end through 2024—even as global sales hit another record. Packaging will expand along with this.

An expanding industry

The industry is expanding at a rate never before seen. Wafer and package complexity and diversity to meet unique applications has provided the industry with an expanding range of choices in technology. Technology for fan-out and fan-in design was also featured on many stands. One of the themes of the show was, "Beyond and More than Moore."

To achieve the goals of higher densities, faster speeds, and higher reliability, redistribution layers and copper pillars are gaining wider acceptance. Companies, such as Taiwan Semiconductor Manufacturing Co. and Intel, have been expanding in-house high-technology packaging facilities to keep up with these trends.

In the EV and power electronics space, 1,000 V+/500+ amp applications now require copper-to-copper interconnection, which is achieved at 1000oC+ temperatures—a world apart from conventional interconnect technology.

In every one of these cases, the supply base must work more closely with their customers to meet technological demands as they arise.

Critical shortages remain a concern

Taiwan is experiencing the same problems we are seeing all over the world: critical shortages of engineers and technicians to maintain and improve ever more complex systems and processes within ever more precise parameters. As the industry approaches the current 2-nm threshold, not only is near perfection required but also reductions in direct labor. Automation was one of the central takeaways from this year's Semicon Taiwan.

“Lights Out” manufacturing has become the norm. Remote, real-time monitoring and process control and “green” manufacturing, which sometime conflict with process necessities, have all become standard operations wherever possible. Even simple processes, such as curing and baking, have become fully automated. Automatic handling of wafers down to 100 microns thick is another challenge accepted by many equipment suppliers.

Supply chain issues have also challenged the industry. While much has focused on mainland China, in the semiconductor sector this is much more complex. Specialty gases come from one part of the world while critical additives and materials may come from two or three other continents—all of which must arrive at the same place at the same time and then be shipped somewhere else across the planet. “Match Set” has slowed down the delivery of everything, from raw chemicals to automobiles, as the world found out during the crisis.

Semicon Taiwan 2022 has shown a path forward in solving some of the most complex issues facing the industry over the next several years. As the industry moves from virtual to hybrid to in person, face-to-face discussions, education, “kicking the tires”, and evaluating process and equipment will ensure that expositions and trade shows are an absolute necessity to the creative and production processes

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NEWS FROM THE IPC

Likelihood of a Recession in 2023 in the United States and Europe Continues to Increase

IPC releases September 2022 economic outlook report

According to IPC's [September 2022 economic outlook report](#), the economic picture in the United States continues to dim and the likelihood of a recession next year continues to increase. The U.S. economy is expected to expand just 1.6 percent in 2022, less than half as fast as the 3.9 percent growth projected at the start of the year. Next year, the economy is slated to expand just 0.6 percent, down from an expected 2.6 percent growth. A recession in the United States next year is not a foregone conclusion, but the probability has increased.

The picture in Europe is decidedly dimmer. The Russian invasion of Ukraine continues to put tremendous pressure on the global economy, but the impact is especially pronounced in Europe. Europe reported annual inflation of 9.1 percent in August, another new high for the continent. Moreover, pressures continue to mount and Europe will see a few more months of new inflationary highs.

"Right now, all eyes are on inflation," said Shawn DuBravac IPC chief economist and report author. "Whereas inflation has likely peaked in the U.S., that is not the case in Europe, and likelihood of a recession in Europe next year is high. When the prospect for growth is limited, it does not take much to push an economy into recession."

In addition to DuBravac's observations, the report also provides U.S. and European data on economic growth, employment, consumer sentiment,

manufacturers' sentiment (PMI), manufacturing capacity utilization and end markets for electronics.

View [full September 2022 report](#). To view other industry intelligence information, visit <https://www.ipc.org/advocacy/industry-intelligence>

Engineer Turned Accomplished Author and Emmy-nominated Science TV Host Emily Calandrelli to Keynote IPC APEX EXPO 2023

Each year, [IPC APEX EXPO](#) features industry's most dynamic, innovative minds to deliver keynote presentations that are both educational and entertaining. IPC APEX EXPO 2023 will feature Emily Calandrelli, host and co-executive producer of the hit *Netflix* series "Emily's Wonder Lab," host and executive producer of *FOX* channel's "Exploration Outer Space" and author of the children's chapter book series, "The Ada Lace Adventures." During her keynote on January 24, Calandrelli will present, "The Sustainability, Economics and Advocacy of Space Exploration."

Why is space exploration and space-based technologies worth the effort and the investment? Space exploration has led to the development of various technologies that feed back into the economy and improve our lives on Earth. Without space programs, we wouldn't have GPS, accurate weather prediction, solar cells, or the ultraviolet filters in sunglasses and cameras. In her keynote presentation, Calandrelli will address how space exploration is helping life here on Earth and provide an overview of the innovation occurring today, where we're headed and the economics and advocacy behind it all.

Calandrelli frequently presents on the importance of science literacy, the benefits of space exploration, and the challenges for women in STEM careers. In addition to her morning keynote on January 24, she will also be the featured speaker at the Women in Electronics Reception in the evening, addressing why women are in the minority in STEM professions and what is

being done to break barriers into STEM for the next generation.

Calandrelli's educational background is in engineering and policy. At West Virginia University she received a bachelor's degree in mechanical and aerospace engineering. While at WVU she was awarded the Goldwater scholarship for research and Truman scholarship for policy work. She received her master's degrees from MIT in aeronautics and astronautics as well as technology and policy.

Calandrelli's keynotes are free to all IPC APEX EXPO participants with advance registration (\$40 online and onsite after January 21, 2023). Meetings and courses will run January 21-26; the technical conference and exhibition will run January 24-26, 2023. For more information on schedule and registration options, visit www.IPCAPEXEXPO.org.

Industry Well Represented on New U.S. Government Advisory Committee on Microelectronics Industry

Two of the electronics industry's most far-sighted and innovative leaders have been named to the U.S. Department of Commerce's new Industrial Advisory Committee (IAC), which will provide guidance to the Secretary of Commerce on a range of issues related to CHIPS for America Act programs.

Meredith LaBeau, the Chief Technology Officer at Calumet Electronics in Calumet, Michigan, and Carol Handwerker, the Reinhardt Schuhmann, Jr. Professor of Materials Engineering and Professor of Environmental and Ecological Engineering at Purdue University, are among the first batch of nominees to be named. Both Handwerker and LaBeau have participated in IPC's Thought Leaders Program, standards development and other IPC activities. They were chosen for their expertise in semiconductor fabrication and advanced packaging.

IPC and the U.S. Partnership for Assured Electronics (USPAE) jointly nominated the pair, and electronics manufacturing is well represented on the panel in other ways. Several other panel members are associated with IPC member companies Analog Devices, Microsoft, and Intel.

The IAC, established by Congress under the National Defence Authorization Act of 2021, will provide federal officials with advice on the science and technology needs of the nation's domestic microelectronics industry; the research and development programs funded through the CHIPS for America Act, including an advanced packaging program that IPC has advocated for; and opportunities for new public-private partnerships.

"I'm grateful for the opportunity to serve on this committee and share my thoughts on the future R&D of semiconductor advanced packaging," said LaBeau. "With passage of the CHIPS and Science Act, the U.S. has an opportunity to both fabricate and package the most cutting-edge silicon chips and electronic systems in the world, and I'm thrilled to be a part of that effort."

"Congratulations to Carol, Meredith, and the others appointed to the committee," said Chris Peters, executive director of USPAE. "They will provide the government with invaluable advice and industry insights on the nation's electronics manufacturing ecosystem."

IPC President and CEO John Mitchell said, "IPC congratulates all our friends and colleagues on their appointment to the Industrial Advisory Committee. This is great news for the U.S. electronics manufacturing industry because they know, like we do, that America's economic security and national security depend not just on silicon fabrication but on advanced packaging and the broader ecosystem that sustains innovative, resilient, and secure electronics manufacturing."

Dr. Hans-Peter Tranitz Appointed Senior Director, Solutions at IPC Electronics Europe GmbH

IPC announces the first employee of its new legal entity in Germany, Hans-Peter Tranitz, Ph.D. Dr. Tranitz will serve as senior director, Solutions, at IPC Electronics Europe GmbH in Munich. In this role, Dr. Tranitz will focus on IPC

global initiatives including automotive electronics, advanced packaging, and Factory of the Future as well as serving as a technical resource for regional activities in Europe.

“As we announced at productronica in November 2021, IPC has increased its commitment in 2022 to better serve our members and the electronics manufacturing industry in Europe,” said Sanjay Huprikar, president, Europe and South Asia operations. “Peter's subject matter expertise is well known across the region and we are looking to leverage his skills across several important verticals here including automotive, aerospace, medical, and factory automation.”

“As an industry leader, Peter brings a tremendous wealth of experience and expertise to the team,” added Matt Kelly, IPC chief technologist. “I look forward to his many contributions in helping advance IPC and the industry. IPC is committed to building stronger internal technical capabilities, and Peter is an integral part of this direction.”

Formerly with Continental Automotive in Germany, Dr. Tranitz served as a principal expert for mechanical joining of metals and plastics as the head of final assembly and test. An active volunteer with expertise in press-fit technology and tin whiskers, Dr. Tranitz chairs several IPC standards development committees including the Cold Joining Press-Fit Standard for Automotive Requirements and Other High-Reliability Applications (IPC-9797). Recipient of the IPC Dieter Bergman Fellowship Award in 2021 and the IPC Rising Star award in 2019, Dr. Tranitz holds a Ph.D. in physics from Chemnitz Technical University in Chemnitz, Germany.

Dr. Tranitz can be reached at Hans-PeterTranitz@ipc.org.



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International Diary

2022

HDP Fall Member Meeting

12 & 13 October

Rock Hill, South Carolina USA

EIPC Technical Snapshot Webinar

Registrations via www.eipc.org

19 October

TPCA Taiwan

26-28 October

Taiwan

EIPC @ Electronica

Stand B1-643

15-18 November

Munich, Germany

EIPC Technical Snapshot Webinar

Registrations via www.eipc.org

30 November

EIPC @ Evertiq Tampere

1 December

Tampere, Finland

2023

EIPC Winter Conference

9 & 10 February

Lyon, France