

BOOK YOUR ROOM NOW

46th Annual Conference June 11-14, 2022 Orlando, Florida

**Registration Ongoing!
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https://www.ipmi.org/events/event_list.asp

Sponsorships Available

Contact: Sandra Arrants, International Precious Metals Institute
850-476-1156, or email mail@ipmi.org

Final Program

DATE / TIME	EVENT/SPONSOR	MODERATED BY	LOCATION/ROOM
Saturday, June 11th			
8:00am-5:00pm	Registration Lounge <i>Sponsored by the IPMI European Chapter</i>		Palm ABC
8:00am-4:00pm	The Meeting Place <i>Sponsored by Sims Lifecycle Services</i>		Portico
7:00am	Shuttle to Golf Course		Hotel Lobby
7:30am	Breakfast followed with Shotgun Start at 8:30 AM <i>Sponsorships Available</i>		Golf Course
3:30pm-5:00pm	Women of IPMI <i>Sponsored by FidelityTrade</i>		La Coquina & Alcove
5:00pm-6:00pm	Student Meet & Greet		Grand View Terrace
6:00pm-8:00pm	Welcome Reception <i>Sponsored by Tanaka/Metalor</i>		Grand Cypress DEF
8:00pm-10:30pm	Dueling Piano Bar <i>Entertainment Sponsored by Dillon Gage</i> <i>Open Bar Sponsored by R S Bruce Metals & Machinery Ltd.</i> <i>Dessert Sponsored by Techemet</i>		Portico & Terrace
Sunday, June 12th			
8:00am-4:00pm	Registration Lounge <i>Sponsored by the IPMI European Chapter</i>		Palm ABC
8:00am-4:00pm	The Meeting Place <i>Sponsored by Sims Lifecycle Services</i>		Portico
8:00am-4:00pm	Exhibit Hall		Grand Cypress ABC
7:30am-9:00am	Continental Breakfast <i>Sponsored by Hensel Recycling</i>		Grand Cypress ABC
8:30am-9:45am	Session A : World of Precious Metals Finance	Jonathan Butler, Mitsubishi Bart Melek, TD Securities	Grand Cypress GH
9:30 am	Registered Spouse Brunch		Four Flamingos
9:45am-10:15am	Morning Coffee Break <i>Sponsored by CIBC</i>		Grand Cypress ABC
10:15am-11:30am	Session B : Clean Energy Emerging Technologies and Precious Metals	Matt Watson, Precious Metals Commodities Management	Grand Cypress GH
11:30am-1:30pm	Members Meeting and IPMI Luncheon <i>Sponsored by BASF</i>		Grand Cypress DEF

46th Annual Conference Final Program (continued)

DATE / TIME	EVENT/SPONSOR	MODERATED BY	LOCATION/ROOM
1:30pm-3:00pm	Session C : An Insider's Look at Retail Gold Investment	Miguel Perez-Santalla, Heraeus	Grand Cypress GH
3:00pm-4:00pm	Sustainability - SESG Kickoff Event <i>Sponsored by Sabin Metal Corp.</i>		Cocquina +Alcove
4:00pm-5:00pm	Young Professionals Social <i>Sponsored by United Catalyst Corp.</i>		Lakehouse
4:30pm-6:00pm	Registered Spouse Event		TBD
5:00pm-6:00pm	Premier Member Social <i>by Invitation Only</i>		Grand View Terrace
6:00pm-8:00pm	Johnson Matthey Reception		Windsong Lawn Area
8:00pm-10:30pm	Motown Night <i>Open Bar Sponsored by PGM of Texas</i> <i>Dessert Sponsored by Loomis</i>		Grand Cypress GHI
	<i>Entertainment Sponsors</i>		
	<i>Platinum - KBI</i>		
	<i>Platinum -Mastermelt Group of Companies</i>		
	<i>Platinum- Rand Refinery</i>		
	<i>Gold -Colt Refining</i>		
	<i>Gold - Hugh Wood</i>		
	<i>Gold- Mitsubishi</i>		
	<i>Silver - Cotecna</i>		
	<i>Silver - United PMR</i>		
Monday, June 13th			
8:00am-1:00pm	Registration Lounge <i>Sponsored by the IPMI European Chapter</i>		Palm ABC
8:00am-4:00pm	The Meeting Place <i>Sponsored by Sims Lifecycle Services</i>		Portico
8:00am-4:00pm	Exhibit Hall		Grand Cypress ABC
7:30am-9:00am	Continental Breakfast <i>Sponsored by PMR</i>		Grand Cypress ABC
8:30am-9:45am	Session D : Sustainability ESG	James Gavilan, Gavilan Commodities Sam Sabin, Sabin Metal Corp.	Grand Cypress GH
9:45am-10:00am	Morning Coffee Break <i>Sponsored by PMR</i>		Grand Cypress ABC
10:00am-11:15am	Session E : Responsible Sourcing	Monica Mellas, Materion Randy Weinerman, Mitsubishi	Grand Cypress GH
11:15am-12:30pm	Session F : PGM and Autocat Recycling and Refining	Mark Caffarey, Umicore Craig Ostroff, BASF	Grand Cypress GH
1:30pm-3:00pm	Session G : Precious Metal Technologies and New Horizons	Federico Padrono-Martini, IKOI	Grand Cypress GH
1:30pm-3:00pm	Autocat Theft Committee Meeting <i>Chaired by Steve Contreras and Oliver Krestin</i>		Poinciana A-D
3:00pm-5:00pm	Gannon and Scott Afternoon Party		Upper Pool Deck
5:00pm-6:00pm	Bureau Veritas Happy Hour		Grand View Terrace
6:00pm-8:00pm	Sabin Metal Corp. Reception		Portico + Terrace
8:00pm-10:00pm	Caribbean Night <i>Open Bar & Dessert Sponsored by Metallix</i> <i>Entertainment Sponsored by Asahi Refining</i>		Upper Pool Deck
Tuesday, June 14th			
8:00am-12:00pm	Registration Lounge <i>Sponsored by the IPMI European Chapter</i>		Palm ABC
8:00am-4:00pm	The Meeting Place <i>Sponsored by Sims Lifecycle Services</i>		Portico
8:00am-12:00pm	Exhibit Hall		Grand Cypress ABC
7:30am-9:00am	Continental Breakfast <i>Sponsored by Brinks</i>		Grand Cypress ABC
8:30am-10:00am	Session H - Legislation, Regulation & Rules	Grace Stockley, FideliTrade	Grand Cypress GH
10:00am-10:15am	Morning Coffee Break <i>Sponsorship Reldan</i>		Grand Cypress ABC
10:15am-11:30pm	Sampling and Analytical Committee (SAC) <i>Chaired by Algis Naujokas, Sabin Metal Company</i>		Grand Cypress GH
1:00pm-2:00pm	Student Lunch <i>by Invitation Only</i>		Poinciana A-D
2:00pm-3:15pm	Student Presentations Part 1	Jonathan Jodry, Metalor	Poinciana A-D
3:15pm-3:30pm	Afternoon Refreshment Break		Poinciana A-D
3:30pm-4:45pm	Student Presentations Part 2		Poinciana A-D
6:00pm-7:00pm	President's Reception <i>Sponsored by BASF</i>		Portico
7:00pm-9:00pm	Awards Banquet Entertainment <i>Sponsored by Heraeus</i>		Grand Cypress DE
	Awards Banquet Wine <i>Sponsored by QML</i>		Grand Cypress DE
9:00pm-10:00pm	Closing Dessert Reception <i>Sponsored by Umicore</i>		Portico

Premier Member Profile: BASF

Committed to Precious Metals

BASF offers precious metal recycling of automotive and chemical catalysts, trading services, and a wide array of precious metal chemicals. We are investing in new capacity and capabilities to help make our customers even more successful. In these volatile precious metal markets, BASF has the financial stability, the transparency and reliability to ensure our customers are working with the best global partner in this space.

Growing our Team

Kumar Sugavanam, has joined our team as Vice President, Refining & Precious Metal Chemicals, based in Iselin, New Jersey. He is a customer-focused leader with over 15 years' experience at BASF with assignments in the US, Europe and Asia/Pacific. The previous VP, Tim Ingle, has been promoted to Senior Vice President, Precious Metal Services, which includes both Precious Metal Refining and Trading businesses.



We create chemistry



Kumar Sugavanam, VP, BASF Refining & Precious Metal Chemicals

[continued on page 4](#)

Premier Member Profile: BASF

continued from page 3

Trusted Catalyst Recycling

We continue to invest in our PGM recycling business to stay ahead of the needs of this growing market. Most recently we announced a joint venture with Heraeus to offer world-class precious metal recycling solutions in China. Customers will benefit from access to best-in-class technology for recovery of precious metals from spent automotive catalyst.



Rendering of BASF and Heraeus plant in China

Last year BASF expanded its chemical catalyst recycling capacity and capability with the acquisition of the assets of Zodiac Enterprises LLC in Caldwell, Texas. This complements BASF's precious metal refining in Seneca, South Carolina, which is also being expanded. With our additional sites in Converse, South Carolina and Cinderford, UK, we have a global presence to serve customers.

BASF offers:

- Best Total Precious Metal Returns
- Global Trading & Hedging Services you can rely on
- World Renowned Assay Lab with ISO-17025 certification
- Highest Transparency in Sampling, Assaying & Processing
- Outstanding Customer Service

continued on page 5

Premier Member Profile: **BASF**, continued from page 4

Precious Metal Chemicals Expansion

BASF is expanding its broad portfolio of precious metal chemicals to meet the needs of our customers. We recently launched Ashby & Karstedt Catalysts for the Silicones market, with an adjustable curing rate and minimal turbidity of the catalyst solutions to ensure that the customer can realize complete curing and the often-desired high transparency of their product. We also introduced Rhodium-based Hydroformylation Catalysts that are produced with the target to yield high ratios of linear aldehydes, which are preferred in most industrial applications. BASF has added new manufacturing assets that allow us to develop and produce a variety of precious metal chemicals to meet emerging market needs.



Smelter at Caldwell, Texas site

continued on page 6

Premier Member Profile: **BASF**, continued from page 5

BASF — Committed to Precious Metals

Contact BASF for more information on precious metal recycling of automotive and chemical catalysts, trading services, and a wide array of precious metal chemicals.

Americas

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Trading: Kate Silvestri +1-732-956-4730

Asia

Recycling & Precious

Metal Chemicals: Nancy Ren +86-21-6109-1843

Trading: Eric Wang +86-21-6109-1841

Europe, Middle East, Africa

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Metal Chemicals: Ben Browning +44-1594-821322

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www.catalysts.basf.com/pgm

www.linkedin.com/showcase/basf-precious-metals-recycling



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WASHINGTON ADVISORY



Washington Advisory

Ford, GM Need U.S. Battery Sector to Avert Another Supply Shock

After Ford showed off the first F-150 Lightning electric pickups at its plant in Dearborn, Michigan, this week, I caught up with Bill Ford, the chair and founding family scion, and asked what I confessed was a geeky question: Where will Ford get all the lithium and other metals for the many electric vehicles the company plans to produce?

“It’s not a geeky question; it’s a good question,” Ford said. Echoing his crosstown counterpart, General Motors Chair Mary Barra, Ford said his company had secured enough supply of battery metals including lithium, cobalt and manganese to make 2 million EVs a year by 2026. But beyond that, the U.S. industry needs to grow a domestic business because America just plain doesn’t make enough of the raw materials that go into EV batteries.

Lithium is the biggest piece of the problem. The lightweight metal is essential to the lithium-ion batteries that power not only EVs, but iPhones and other contemporary devices. The element itself is plentiful, but there isn’t enough mining going on globally, and precious little production happens in the U.S.

Worse yet, the processing done to make lithium usable in battery cells is mostly done in China — about 80% of it, according to Piedmont Lithium, a startup pursuing lithium production in North Carolina. Automakers have similar concerns about nickel and cobalt, much of which happens to be sourced from geopolitical pariah Russia and the Democratic Republic of the Congo, where extraction has been linked to human rights abuses and environmental destruction.

Automakers have been taking or considering extreme measures to line up supply. Elon Musk recently tweeted that Tesla may have to enter the lithium mining and refining industry. GM’s Barra last year announced an investment in and joint venture with Controlled Thermal Resources to source lithium from California’s Salton Sea. Bill Ford said at the Lightning launch event that his company will look into similar deals, but those may take years to get to scale.

All of this is a big change for the incumbent carmakers. Tesla has emphasized its desire to be vertically integrated, meaning it handles or has a role in making components including batteries, chips and motors. Older carmakers have long outsourced more and more parts-making and raw material procurement to suppliers. The companies have pushed over decades to wring every bit of savings out of those partners, which has contributed to the manufacturing of key components moving to markets with lower-cost labor. Now, the industry is looking to in-source and re-shore production to build up a domestic battery sector.

WASHINGTON ADVISORY

Bill Ford said his company is in regular conversations with the federal government to foster mining and manufacturing of key battery materials. He said Ford has had conversations with the Biden administration and members of Congress to make it happen.

“Down the line, there is the whole supply base issue, not only in terms of raw materials but where are they going to be made,” Ford said. “Are we going to have a national effort to ensure that we have an American supply base for a lot of these things? As we think about infrastructure that needs to be built out and the supply base we’d like to have in America, it’s going to require some partnerships with federal and local governments.”

He’s right. U.S. automakers have fared worse during the chip shortage than their Japanese and Korean competitors, which have maintained a steadier supply to keep vehicle production going. Toyota managed to sell more cars in the U.S. than GM last year for the first time since 1931 and stayed ahead in the first quarter of this year.

For now, carmakers are at the mercy of a far-flung group of miners and suppliers that are racing to keep up with demand for electric vehicles. Prices are soaring: lithium alone has risen more than 200% since Tesla’s Model 3 first shipped in July 2017, notes Grayson Brulte, who consults carmakers on government affairs. Price hikes like that are surely setting off alarm bells in Dearborn and Detroit.

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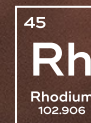
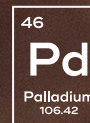
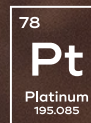
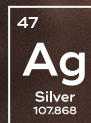
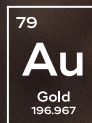
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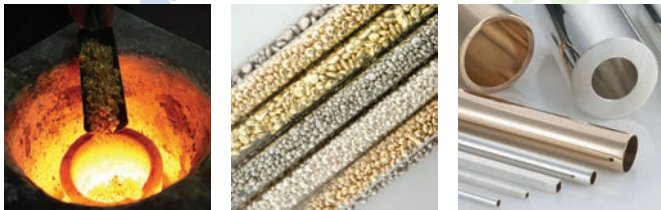
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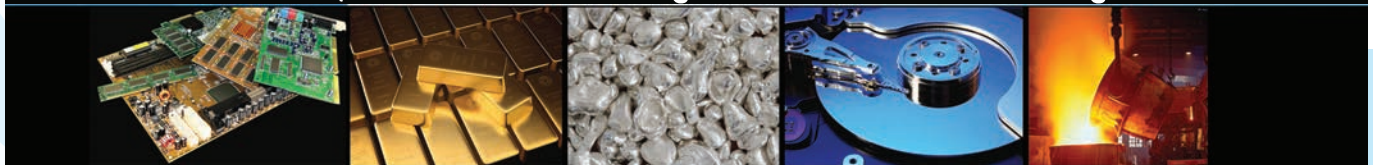
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*A Refining and
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October 16-19, 2022



October 16 - Opening
Evening Reception

October 17-18 - Symposium
Details to Follow

October 19 - Optional
Social Outing



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Precious Metals Market News

Gold

- **Gold books worst day in 2 months, after suffering biggest monthly loss since September**

- “Gold was turned back from \$1,920 before the weekend and appears poised to test last week’s low near \$1,872,” said Marc Chandler, chief market strategist at Bannockburn Global Forex, in a note.
- “The precious metals are getting hit early this week by the bearish outside market forces of a strong U.S. dollar index that is near a 20-year high, solidly lower U.S. crude oil prices and higher U.S. Treasury yields,” Jim Wyckoff, senior analyst at Kitco.com wrote, in a Monday note.

https://www.marketwatch.com/story/gold-sinks-after-suffering-biggest-monthly-loss-since-september-11651494893?mod=mw_latestnews

- **Gold price gives up \$1,900 and silver falls below \$24 an ounce, analysts see room for lower prices**

- Gold and silver are starting the week with some heavy selling pressure as gold prices drop below \$1,900 an ounce and silver falls below \$24 an ounce.
- According to some analysts, the drop below the critical psychological level opens the door to further losses as bearish sentiment rises in the marketplace.

<https://www.kitco.com/news/2022-04-25/Gold-price-gives-up-1-900-and-silver-falls-below-24-an-ounce-analysts-see-room-for-lower-prices.html>

Silver

- **Silver Markets Continue to Plunge**

- Silver markets have been very negative as we continue to plummet. The US dollar has been like a wrecking ball against most other markets as well, so therefore you need to be very close to the US Dollar Index. If that continues to rise, it will put a lot of negative pressure on the silver market overall. After all, silver is highly sensitive, and then of course it is also not only a precious metal but an industrial one as well.

<https://finance.yahoo.com/news/silver-markets-continue-plunge-153651403.html>

- **Nontoxic Silver Coating for Medical Implants Resists and Kills Bacteria**

- According to folklore, silver bullets kill werewolves, but in reality, researchers have been looking to harness this metal against bacteria. Scientists at the University of British Columbia have now developed a long-acting silver-ion releasing coating for implanted medical devices that, when tested in experiments in rats, both prevented bacteria from adhering to the implant, and also killed the microorganisms.

<https://www.genengnews.com/topics/drug-discovery/nontoxic-silver-coating-for-medical-implants-resists-and-kills-bacteria/>

Platinum

- **Geopolitical support for hydrogen evolution positive for platinum group metals**

- The overall geopolitical situation is lending strong support to the hydrogen evolution, which in turn continues to drive the demand for platinum group metals (PGMs).
- Hydrogen Europe and the European Clean Hydrogen Alliance are now calculating that 2030 will see the generation of 320 GW to 400 GW of green hydrogen, at least half of which is forecast to be brought about with the help of PGMs.

https://www.miningweekly.com/article/geopolitical-support-for-hydrogen-evolution-positive-for-platinum-group-metals-2022-04-19/rep_id:3650

Precious Metals Market News, continued from page 12

PGM's

- **Shortage of Materials Threatens Planned Green Hydrogen Production**

- The Netherlands is fully committed to developing the hydrogen economy: replacing fossil fuels with (green) H₂ from sustainable sources such as sun and wind. However, an important aspect remains underexposed in the plans: there is a threat of a major shortage of the raw materials needed for the electrolyzers that produce the H₂.
- A threat is looming of a major shortage of the raw materials needed for the electrolyzers that produce the H₂. Because the availability of those scarce raw materials such as iridium and platinum will become acute in the short term, there is a growing problem for the energy transition. By 2050, H₂ production in the EU alone will require much more iridium than is currently produced worldwide annually.
- Iridium Atomic Layer Deposition (ALD) for thin film deposition is key to future loadings reductions.

<https://www.tno.nl/en/about-tno/news/2021/6/shortage-of-materials-threatens-planned-green-hydrogen-production/>

continued on page 14



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INDUSTRY NEWS

Precious Metals Market News, continued from page 13

Precious Metals Mining

- Mining giants struggle despite commodities price boom
- The world's biggest miners had a tough start to the year, struggling to hit production goals and keep costs under control in the face of Covid-19 disruptions and global inflationary pressures. There are also signs of growing problems at their operations as soaring energy prices boost costs, while Covid absenteeism and operational missteps curb output. For the wider economy, tightening raw materials supply risks fueling an inflationary spiral.

<https://www.mining.com/web/mining-giants-struggle-despite-commodities-price-boom/>

Precious Metals Recycle

- BEST4HY H2020 project: stock of the situation after one year
- An international partnership developing technologies for the recovery of critical raw materials from hydrogen technologies. Matt: A EU Green New Deal Funded Clean Energy Recycle Research Project
- The validation of existing and novel technologies for PEMs recycling led by Hensel Recycling have progressed with the optimisation of PEM dismantling through 5 different mechanical trials. The ideal disassembling procedure has been successfully individuated and proved satisfactory results. Similarly, a hydrometallurgical treatment has been performed by IDO-Lab for the Pt recovery from the PEM FC provided by EKPO. Good progress also on the ionomer extraction with alcohol dissolution, where a BEST4Hy advisor have been involved.

<https://best4hy-project.eu/best4hy-h2020-project-stock-of-the-situation-after-one-year/>

Please see our IPMI.org website [IPMI & Industry News](https://www.ipmi.org) for a complete listing of news articles relative to the world of precious metals.

A photograph of a Vortex Worldwide Logistics building and a truck. The building is a two-story structure with a peach-colored facade and large windows. The Vortex logo is visible on the building's facade. A white Vortex truck is parked in the foreground, also featuring the Vortex logo. The scene is set outdoors with trees and a clear sky.

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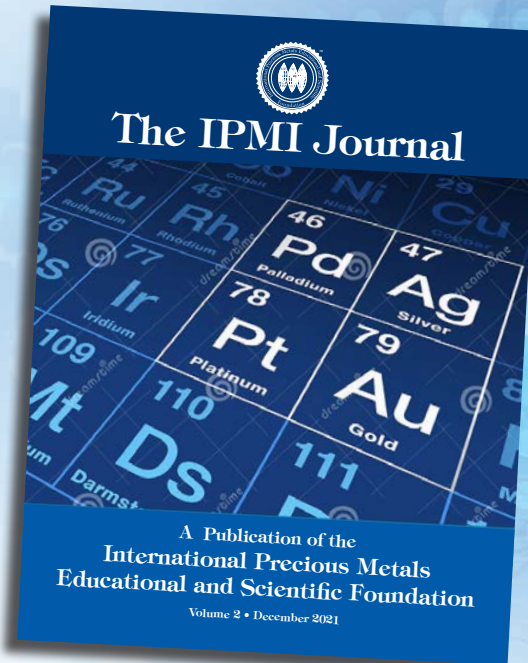
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2022

- | | |
|-----------|--|
| Jun 11-14 | 46th Annual Conference • Hyatt Regency Grand Cypress • Orlando, FL |
| Sep 14 | Metro New York Chapter Platinum Week Event |
| Sep 15 | IPMI Platinum Dinner • New York, NY |
| Oct 6 | EHS Seminar • BASF Office • Iselin, NJ |
| Oct 17-18 | SAC Symposium II • Colorado School of Mines • Golden, Colorado |
| Nov 13-15 | Europe Chapter Seminar • Lisbon, Spain |