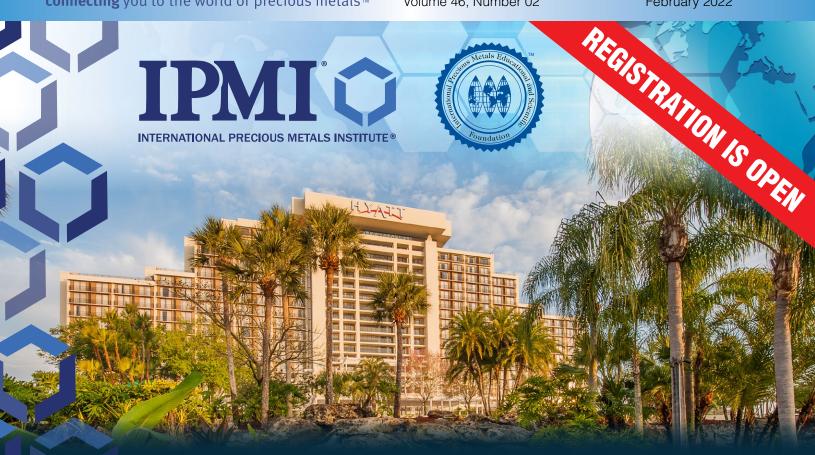


Precious Metals News

Volume 46, Number 02

February 2022



46th Annual Conference June 11-14, 2022

Hyatt Regency Grand Cypress • Orlando, Florida

Early Registration Open Until April 30, 2022

\$1,075 for members and \$1,325 for nonmembers. Higher rates apply beginning May 1st.

Registration Now Open! Register Here! 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

46th Annual Conference

Preliminary Program

LOCATION/ROOM DATE / TIME **EVENT/SPONSOR MODERATED BY**

Saturday, June 11th

Registration Lounge Sponsored by the IPMI European Chapter Palm ABC 8:00am-5:00pm 8:00am-4:00pm The Meeting Place Sponsored by Sims Lifecycle Services **Portico** 7:00am Shuttle to Golf Course **Hotel Lobby** 7:30am Breakfast followed with Shotgun Start at 8:30 AM Sponsorships Available **Golf Course** 3:30pm-5:00pm Women of IPMI Sponsored by FideliTrade La Coquina & Alcove 5:00pm-6:00pm Student Meet & Greet **Grand View Terrace** 6:00pm-8:00pm Welcome Reception Sponsored by Tanaka/Metalor **Grand Cypress DEF**

Entertainment Sponsored by Dillon Gage

Open Bar Sponsored by R S Bruce Metals & Machinery Ltd.

Dessert Sponsorship Available

Dueling Piano Bar

Sunday, June 12th

8:00pm-10:00pm

8:00am-4:00pm	Registration Lounge Sponsored by the IPMI European Chapter		Palm ABC
8:00am-4:00pm	The Meeting Place Sponsored by Sims Lifecycle Services		
8:00am-4:00pm	Exhibit Hall Grand Cypres		
7:30am-9:00am	Continental Breakfast Sponsored by Hensel Recycling Grand Cypre		
8:30am-9:45am	Session A : World of Precious Metals Finance	Jonathan Butler, Mitsubishi	Grand Cypress GH
		Bart Melek, TD Securities	
9:30 am	Registered Spouse Brunch		Four Flamingos
9:45am-10:15am	Morning Coffee Break Sponsored by CIBC		Grand Cypress ABC
10:15am-11:30am	Session B : Clean Energy Emerging Technologies and Precious Metals	Matt Watson,	Grand Cypress GH
		Precious Metals Commodities Managemen	ıt
11:30am-1:30pm	Members Meeting and IPMI Luncheon Sponsored by BASF		Grand Cypress DEF
1:30pm-3:00pm	Session C : New Horizons	Federico Padrono Martini, IKOI	Grand Cypress GH
3:00pm-4:00pm	Sustainability - SESG Kickoff Event Sponsored by Sabin Metal Corp.		Cocquina +Alcove
4:00pm-5:00pm	Young Professionals Social Sponsored by United Catalyst Corp.		Lakehouse
4:30pm-6:00pm	Registered Spouse Event		TBD
5:00pm-6:00pm	Premier Member Social by Invitation Only		Grand View Terrace
6:00pm-8:00pm	Johnson Matthey Reception		Windsong Lawn Area
8:00pm-10:00pm	Motown Night		Grand Cypress GHI
	Open Bar Sponsored by PGM of Texas		

Entertainment Sponsors

Dessert Sponsored by Loomis

Platinum - KBI

Gold - Hugh Wood, Colt Refining

Silver - Cotecena

Portico & Terrace

46th Annual Conference

Preliminary Program (continued)

<u>DATE / TIME</u> <u>EVENT/SPONSOR</u> <u>MODERATED BY</u> <u>LOCATION/ROOM</u>

Monday, June 13th

8:00am-1:00pm	Registration Lounge Sponsored by the IPMI European Chapter		Palm ABC
8:00am-4:00pm	The Meeting Place Sponsored by Sims Lifecycle Services		
8:00am-4:00pm	Exhibit Hall	Grand Cypress ABC	
7:30am-9:00am	Continental Breakfast Sponsored by PMR Gra		Grand Cypress ABC
8:30am-9:45am	Session D : Sustainability ESG	James Gavilan, Gavilan Commodities	Grand Cypress GH
		Sam Sabin, Sabin Metal Corp.	
9:45am-10:00am	Morning Coffee Break Sponsored by PMR		Grand Cypress ABC
10:00am-11:15am	Session E : Responsible Sourcing	Monica Mellas, Materion	Grand Cypress GH
		Randy Weinerman, Mitsubishi	
11:15am-12:30pm	Session F : PGM and Autocat Recycling and Refining	Mark Caffarey, Umicore	Grand Cypress GH
		Craig Ostroff, BASF	
1:30pm-3:00pm	Autocat Theft Committee Meeting Chaired by Steve Contreas	and Oliver Krestin	
Grand Cypress GH			
1:30pm-3:00pm	SAC Meeting Chaired by Algis Naujokas		Poinciana A-D
3:00pm-5:00pm	Gannon and Scott Afternoon Party		Upper Pool Deck
5:00pm-6:00pm	Bureau Veritas Happy Hour		Lakehouse
6:00pm-8:00pm	Sabin Metal Corp. Reception Portico + Te		Portico + Terrace
8:00pm-10:00pm	Caribbean Night		Upper Pool Deck
	Open Bar & Dessert Sponsored by Metallix		

Tuesday, June 14th

Entertainment Sponsored by Asahi Refining

8:00am-12:00pm	Registration Lounge Sponsored by the IPMI European Chapter	Palm ABC	
8:00am-4:00pm	The Meeting Place Sponsored by Sims Lifecycle Services		
8:00am-12:00pm	Exhibit Hall Grand Cypress A		
7:30am-9:00am	Continental Breakfast Sponsored by Brinks Grand Cyp		Grand Cypress ABC
8:30am-9:45am	Session G - Legislation, Regulation & Rules Grace Stockley, FideliTrade Inc		Grand Cypress GH
9:45am-10:15am	0:15am Morning Coffee Break <i>Sponsorship <mark>Available</mark></i>		Grand Cypress ABC
10:15am-11:30pm	m Session H - Technical Developments in Precious Metal Technologies Stacey Santolli, BASF		Grand Cypress GH
11:30pm-1:00pm	Session I - Jewelry	Zibi Milkiewicz, Refinery Group	Grand Cypress GH
1:00pm-2:00pm	Student Lunch by Invitation Only		Poinciana A-D
2:00pm-3:15pm	Student Presentations Part 1 Jonathan Jodry, Metalor		Poinciana A-D
3:15pm-3:30pm	Afternoon Refreshment Break Poince		Poinciana A-D
3:30pm-4:45pm	Student Presentations Part 2 Poince		Poinciana A-D
6:00pm-7:00pm	President's Reception Sponsored by BASF Por		Portico
7:00pm-9:00pm	Awards Banquet Wine Sponsored by QML Grand Cypress		
9:00pm-10:00pm	Closing Dessert Reception Sponsored by Umicore		Portico



IPMI 46TH ANNUAL CONFERENCE CALL FOR PAPERS

IPMI IS OFFERING A CALL FOR PAPERS, SPECIFICALLY FOR TECHNICAL DEVELOPMENTS IN THE PRECIOUS METALS INDUSTRY





Integrated Management System

Metallix has now gained all three ISO certifications, giving us an integrated management system to operate our business.

Achieving these important global standards illustrates our commitment to providing a safe, healthy and supportive working environment for our employees and visitors.

OUR ACCREDITATIONS

The Metallix Environmental Management System is the result of our continuous investment in developing proprietary technology and systems which help protect the environment without compromising on cost.

Metallix is an industry innovator with a global reputation for delivering unrivalled excellence to the precious metal recycling and refining industry. Our focus on customer satisfaction, integrity and trust has secured us a loyal international client base.

At Metallix, health and safety in the workplace is, and will always be, our number one priority. We are fully committed to ensuring the safety and wellbeing of our employees and visitors.

benefit your organization, please contact us on:

+1 - 800-327-7938

+1 - 732-945-4132

metallix.com sales@metallix.com



IPMI - FideliTrade 2022 Student Intern Award Recipient

Daniel DeLong

Currently a chemical engineering student at Northeastern University, Daniel DeLong has joined the staff at Colt Refining, Inc. in Merrimack, NH for a 6-month internship. Daniel will be assisting Colt in the research, design and implementation of a new acid scrubbing and waste treatment system in Colt's chemical refining operation.

Daniel is finishing his chemical engineering degree at Northeastern University where he is in their master's program for Mechanical Engineering with a concentration in Materials Science.

Daniel previously interned at E Ink where he worked on different ways to measure the moisture content across multilayered electronic parts including electrical impedance testing, Karl Fischer titrations, and NIR spectroscopy. He also developed and tested algorithms to determine most prevalent factors that influenced variation between measurements.

Daniel DeLong can be reached at 603-429-9966 or at delong@coltrefining.com







Legislative and Public Affairs Conference Held in Washington, DC

Held at the Army Navy Club in Washington, DC February 8 and 9 the IPMI Legislative and Public Affairs Conference was a well-attended event. Chaired by Grace Stockley of FideliTrade, the presentations were varied and very informative. The first speaker was Chris Fitzpatrick of Johnson Matthey who spoke on the Infrastructure Bill and its Impact on EHS. He was followed by Joseph Cavatoni from the World Gold Council whose talk centered on Not Sold on Gold: What's Preventing Adoption on Gold by Investors The next speakers zoomed in to talk about Future of Precious Metals and Critical Minerals (Laura Berkey-Ames of BASF) and Salim Bhabhrawla who talked about the Biden Administration Trade Priorities and 100

days of Critical Minerals Supply Chain. Scott Schwartz of FideliTrade wrapped up the day's presentations with Privacy and Cybersecurity. The next day, a half day, started with a Washington Update by Paul Miller of Miller Wenhold Capitol who was followed by Amy Donohue-Babiak of Johnson Matthey whose presentation was entitled Precious Metals Recycling-Rules, Regulations and Issues. Steve Contreras of PGM of Texas followed that with a discussion on Auto Catalyst Theft and Regulations.

In addition to the presentations the Attendees was treated to a Reception sponsored by FideliTrade and a breakfast sponsored by Techemet. IPMI also thanks sponsors United PMR and Hugh Wood.









IPMI's Sampling and Analytical Committee

Precious Metal Sampling, Assay, and Representation Symposium II

A Refining and Mining Perspective







October 16-19, 2022



October 16 - Opening Evening Reception

October 17-18 - Symposium Details to Follow

October 19 - Optional Social Outing





Heraeus

Precious Metals

BASF and Heraeus to form a joint venture offering world-class precious metal recycling solutions in China

- The joint venture will enable a circular economy solution through recycling of spent catalysts for high-tech industries in China that use precious metals
- Customers benefit from access to best-in-class technology for recovery of precious metals

Ludwigshafen and Hanau, Germany — BASF and Heraeus have agreed to form a joint venture (BASF: 50%; Heraeus: 50%) to recover precious metals from spent automotive catalysts. The new company named **BASF HERAEUS (China) Metal Resource Co., Ltd** will be set up in Pinghu, China. The founding of the legal entity is targeted in Q1 2022, following the approval of the relevant authorities. Construction is planned to begin in 2022, with start of operations in 2023.

China has limited natural resources in Platinum Group Metals (PGMs) consisting predominately of platinum, palladium and rhodium and strongly relies on imports. Recycling scrap materials, such as spent automotive catalytic converters, to recover PGMs, enable a circular

economy. The precious metals are used to make new products for the automotive, chemical, electronics and green hydrogen industries. Recycled precious metals are furthermore very environmentally friendly and have as much as a 90 percent lower CO_2 footprint than primary metals from a mine. Ensuring a local supply of recycled precious metals for China is an enabler for a sustainable future.

"Through the partnership with Heraeus, we will bring best-in-class pyrometallurgy technology for the recovery of precious metals from spent automotive catalysts in China and help improve resource utilization for high-tech and other companies that use precious metals," said Tim Ingle, Vice President, BASF Precious Metals Refining, Chemicals & Battery Recycling. "BASF's leading position in automotive catalysts recycling

continued on page 10



The BASF and Heraeus plant will enable a circular economy solution through recycling of spent automotive catalysts for high-tech industries in China that use precious metals.

BASF and Heraeus to form a joint venture offering world-class precious metal recycling solutions in China, continued from page 9

and our combined expertise in precious metals will provide customers with a world-class circular economy solution to re-use precious metals in China."

Marius Vigener, Vice President Business Line Chemicals at Heraeus Precious Metals, added: "This JV builds on our already strong presence in China within the wet-chemical recycling industry. Recycled precious metals minimize emissions and will enable our customers to reduce their

CO₂ footprint. This will support China in the development of its circular economy and contribute significantly to the stability of local precious metal supplies."

The new factory will contribute to the advancement of the local economy through the creation of 100 new jobs.

About BASF's Catalysts Division

BASF's Catalysts division is the world's leading supplier of environmental and process catalysts. The group offers exceptional expertise in the development of technologies that protect the air we breathe, produce the fuels that power our world, and ensure efficient production of a wide variety of chemicals, plastics and other products, including advanced battery materials. By leveraging our industry-leading R&D platforms, passion for innovation and deep knowledge of precious and base metals, BASF's Catalysts division develops unique, proprietary solutions that drive customer success. Further information on BASF's Catalysts division is available on the Internet at www.catalysts.basf.com.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 110,000 employees in



The main building of the BASF and Heraeus plant

the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2020. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.

About Heraeus Precious Metals

Heraeus Precious Metals is a leading provider of precious metals services and products. We combine all activities related to our comprehensive expertise in the precious metals loop — from trading to precious metals products to recycling. We are one of the world's largest refiners of platinum group metals (PGMs) and a leading name in industrial precious metals trading. Our precious metals products are used in a wide variety of industries, including the chemical, pharmaceutical, glass, electronics and automotive industries. We offer top quality solutions and products based on many years of experience and technical expertise. We are a reliable development partner for our customers and find the best solutions for their requirements.

BASF and Heraeus to form a joint venture offering world-class precious metal recycling solutions in China, continued from page 10

About Heraeus

Heraeus, the technology group headquartered in Hanau, Germany, is a leading international family-owned portfolio company. The company's roots go back to a family pharmacy started in 1660. Today, the Heraeus group includes businesses in the environmental, electronics, health and industrial applications sectors. Customers benefit from innovative technologies and solutions based on broad materials expertise and technological leadership.

In the 2020 financial year, Heraeus generated revenues of €31.5 billion with approximately 14,800 employees in 40 countries. Heraeus is now one of the top 10 family-owned companies in Germany and holds a leading position in its global markets.

Media contacts:

BASF

Paul Warkentin
Communications Manager
BASF Corporation
Phone: +1 732 277-2752
paul.warkentin@basf.com

www.basf.com

Heraeus

Till Weber
Corporate Communications
Heraeus
Phone: +49 6181 35-5785
till.weber@heraeus.com

www.heraeus.com



(At signing table, from left to right) Dr. Bradley Morrison, Senior Vice President, Sites and Operations, BASF Greater China; Zhuang Zhihao, Director of Dushan Port EDZ Administrative Committee and Linda Hu, Head of Heraeus Precious Metals China signed the agreement.

(Witnessed by, from left to right) Graham Jiang, Director, Government Affairs, BASF China; Michelle Wang, Project Manager of Heraeus Precious Metals China; Dr. Ryan Liu, Senior Manager, Strategic Project Management, BASF; Dr. Ai Zhouping; President of Heraeus Greater China; Zhong Xudong, Secretary of Pinghu Municipal Party Committee; Hu Hongtian, Member of the Standing Committee of Pinghu Municipal Party Committee, Vice mayor; Dai Zhen, Member of the Standing Committee of Pinghu Municipal Party Committee; Ge Haoqiang, Mayor of Dushan Port Town.

Arc Metal

Toll Smelting Process

Given the current, and increasing values of precious metals such as Platinum, Palladium, Iridium, Rhodium and Ruthenium it is important for customers to recover **as much value** from materials containing these precious elements.

Arc Metal AB based in Sweden has been offering a dedicated smelting and processing service to our customers for 30 years, but what make us unique?

Unlike other Refiners our processes, licenses, knowledge, facilities etc allow us to offer our customers a **dedicated batch processing service**.

Our service allows us to:

- Treat every customer lot individually on a batch process basis
- Incoming material can be as **low as** 10's of PPM's
- Results show > 98 % of the PGM's retained in the collector metal bullion, the resultant slag is clean and can be disposed of in an environmentally sustainable manner
- ALL precious metals, as above retained and upgraded in the collector metal allowing further downstream refining of the refiner of your choice
- Can handle various substrates such as Alumina, Cordierite, Silica,
 Mixed materials, and other smeltable feedstocks
- Our site is ISO 14001 certified with an environmental permit giving us capacity of more than 10,000 mts per annum

As you can see at current metal prices our service enables customers to recover value from extremely low level, mixed metal, complex materials

If you would like to understand anything further about our company, please contact us as below

Phone: +46 290 288 80 Telefax office: +46 290 281 81 Telefax smelt house: +46 290 246 30

e-mail: info@arcmetal.se

Precious Metals Market News

Gold

- Gold Price Analysis: Falls back under \$1,900 after setting fresh multi-month highs near-\$1,910
 - Gold hit fresh multi-month highs near the \$1,910 on Monday but has since dropped back under the \$1,900 handle. Geopolitics remains the wildcard that could stoke surprise volatility in either a bullish or bearish direction.

https://www.fxstreet.com/news/gold-price-analysis-xau-usd-fells-back-under-1900-after-setting-fresh-multi-month-highs-near-1910-202202211352

- Gold consumption soars during Lunar New Year
 - During the Spring Festival break in the first week of February, gold jewelry consumption in Shanghai reached 1.1 billion yuan (US\$171.8mil or RM718.66mil), up 12% year-on-year. As it is the Year of the Tiger, tiger-themed gold products and heritage gold jewelry were popular, the Shanghai Gold Jewelry Association said. In the first 15 days of the first month of the Chinese lunar calendar, consumption of gold in China went up by 12% year-on-year, the council said.

https://www.thestar.com.my/business/business-news/2022/02/18/gold-consumption-soars-during-lunar-new-year

continued on page 14



Precious Metals Market News, continued from page 13

Silver

- Here's Why Silver Should Keep Climbing Higher in 2022
 - It's been a volatile start to the start for most asset classes, with the Nasdaq 100 Index down more than 10% year-to-date, and most growth stocks also remain deep in negative territory. However, among violent correction, precious metals have been giving up ground grudgingly, with gold and silver in positive territory year-to-date. This relative strength is a great sign because both metals tend to perform better when they are above their monthly moving averages and outperform the major market averages.

https://www.entrepreneur.com/article/419202

Palladium

- Palladium Price Surge Ahead? Russia-Ukraine Crisis Stokes Supply Risks
 - Russia-Ukraine tensions continue to escalate will sanctions be imposed?
 - Eastern European giant is the largest producer and exporter of palladium
 - XPD/USD is up over 20% YTD are markets overpricing future demand?

https://www.dailyfx.com/forex/fundamental/article/special_report/2022/02/18/Palladium-Price-Surge-Ahead-Russia-Ukraine-Crisis-Stokes-Supply-Risks.html

continued on page 15



Precious Metals Market News, continued from page 14

Rhodium/Iridium/Ruthenium

- Rhodium trades above \$17,000/oz for first time in six months (now \$19,500/oz)
 - "It's trading well above \$17,000/oz, and offers are approaching \$18,000/oz," one platinum group metals, or PGMs, refiner said, noting that prices quickly moved above the mid-\$17,000s in the afternoon. (Update: February 21st trading \$19,550/oz)
 - "It's hard to put a finger on what's driving it, but we're seeing some heavy interest today and the end of yesterday," the refiner added. "There were a couple of players looking to take some metal, and there hasn't been that much for sale," a second PGMs refiner said

https://www.spglobal.com/platts/en/market-insights/latest-news/metals/020822-rhodium-trades-above-17000oz-for-first-time-insix-months

- (Iridium & Platinum) Electrolysers & green hydrogen: Are we moving quick enough?
 - Hydrogen demand continues to soar across the world and, according to the IEA Hydrogen Projects Database 2021 global
 installed capacity will reach 54GW by 2030. The IEA also believes that consumption of 220 million megatonnes of Hydrogen
 per year will need to be consumed to attain our climate goals.

https://www.h2-view.com/story/electrolysers-green-hydrogen-are-we-moving-quick-enough/

continued on page 16



Precious Metals Market News, continued from page 15

Chemists Discover New Way to Harness Clean Energy From Ammonia (using Ruthenium catalyst)

• The scientists were excited to find that the addition of ammonia to a metal catalyst containing the platinum-like element ruthenium spontaneously produced nitrogen, which means that no added energy was required. Instead, this process can be harnessed to produce electricity, with protons and nitrogen gas as byproducts. In addition, the metal complex can be recycled through exposure to oxygen and used repeatedly, all a much cleaner process than using carbon-based fuels.

https://www.goodnewsnetwork.org/chemists-discover-new-way-to-harness-clean-energy-from-ammonia/

Precious Metals Recycle

BASF, Heraeus to form joint venture

German companies BASF and Heraeus have agreed to form a joint venture to recover precious metals from spent automotive
catalysts in Pinghu, China. The companies will have an equal ownership stake in the new company, BASF Heraeus Metal
Resource Co. Ltd. The founding of the legal entity is targeted for the first quarter of this year, following the approval of the
relevant authorities. Construction to begin in 2022, with operations starting in 2023, according to a joint press release.

https://www.recyclingtoday.com/article/basf-heraeus-pgm-recycling-joint-venture-china

San Jose police announce new method to stop thefts of valuable car part

• The program, called Etch and Protect, is a collaboration between the police department and the San Jose Police Foundation. Auto mechanics have been enlisted to etch the vehicle license plate #s, and other identifying info, on catalytic converters for free while conducting routine vehicle maintenance.

https://www.kron4.com/news/bay-area/san-jose-police-announce-new-method-to-stop-thefts-of-valuable-car-part/

Please see our IPMI.org website IPMI & Industry News for a complete listing of news articles relative to the world of precious metals.



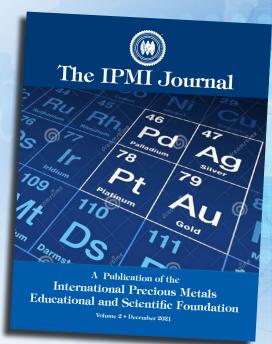


2021 IPMI Journal Bound Copies Available



Limited amount of soft cover bound copies are available for purchase.

Contact mail@ipmi.org for details.



IPMI® Calendar

To register attendance to IPMI events or add to your personal calendar, click on the following: https://www.ipmi.org/events/event_list.asp

2022	May 19	New England Chapter Jewelry Awards and Networking Event
	Jun 11-14	46th Annual Conference • Hyatt Regency Grand Cypress • Orlando, FL
	Sep 12-16	Platinum Week • New York, NY
	Oct 17-18	SAC Symposium II • Colorado School of Mines