Weekly Precious Metals News Articles: May 14, 2021

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Below is a cross section of relevant news article to the world of Precious Metals:
Markets, Supply & Demand, Investment, and Industrial Applications.
Printable PDF version attached. Enjoy-

Gold

- **Gold demand plunges in pandemic-battered India**
    - Physical gold demand in India dived this week as shops shuttered and people turned cautious due to surging coronavirus infections across the world's second-largest bullion consumer, which also fanned fears of a wider spread to other Asian centres.
    - Retail purchases have nearly stopped as jewellery stores are closed across the country, said Mukesh Kothari, director at Mumbai bullion dealer RiddiSiddhi Bullions. "Priorities have changed. People are trying to protect themselves from coronavirus rather than stepping out for gold buying," he said. https://www.yahoo.com/now/gold-demand-plunges-pandemic-battered-123209350.html
- **China gold consumption surges in Q1**
    - China's gold consumption soared 93.9 percent year on year to 288.2 tonnes in the first quarter of 2021, industry data showed. The rebound indicates that gold consumption in the Chinese market has recovered to the level of the same period of 2019, according to data released by China Gold Association (CGA).
    - In the first three months, consumption of gold jewelry in China surged 83.81 percent from a year earlier to 169.18 tonnes, while that of gold coins and bars went up 155.67 percent to 96.31 tonnes. https://www.msn.com/en-xl/news/other/china-gold-consumption-surges-in-q1/ar-BB1gfENS?ocid=BingNewsSearch
- **Gold prices on track for first back-to-back decline in May after a jump in U.S. inflation**
    - Gold prices were on track to log their first back-to-back retreat so far this month, as a reading of U.S. inflation revealed the biggest monthly increase in 13 years, leading to a rise in U.S. Treasury yields. https://www.msn.com/en-us/money/markets/gold-prices-on-track-for-first-back-to-back-decline-in-may-after-a-jump-in-us-inflation/ar-BB1gEaxP?ocid=BingNewsSearch
- **Researchers Discover Bacteria That Produces Pure Gold**
    - The bacteria is called Delftia acidovorans, and it turns out that its King Midas-like conversion is part of a self-defense mechanism. Gold ions dissolved in water are toxic, so when the bacteria senses them it releases a protein called delftibactin A. The protein acts as a shield for the bacteria and changes the poisonous ions into harmless particles that accumulate outside the cells. https://news.yahoo.com/blogs/trending-now/researchers-unearth-bacterium-produces-pure-gold-181100690.html

Semiconductor Related Articles (impacting Precious Metals electronics):

- **Worldwide Semiconductor Revenue Grew 10.8% in 2020 to $464 Billion, Growth Will Accelerate This Year Despite Market Shortages, According to IDC**
    - Worldwide semiconductor revenue grew to $464 billion in 2020, an increase of 10.8% compared to 2019, according to the Semiconductor Applications Forecaster (SAF) from International Data Corporation (IDC). IDC forecasts the semiconductor market will reach $522 billion in 2021, a 12.5% year-over-year growth rate. IDC anticipates continued robust growth in consumer, computing, 5G, and automotive semiconductors. https://www.idc.com/getdoc.jsp?containerId=prUS47664821
- **The global chip shortage is starting to have major real-world consequences**
    - As technology has advanced, semiconductor chips have spread from computers and cars to toothbrushes and tumble dryers — they now lurk beneath the hood of a surprising number of products. But demand for chips is continuing to outstrip supply, and car makers are no longer the only companies feeling the pinch.
    - Many companies — particularly those in China who have been hit by sanctions — are boosting their stockpiles of in-demand chips to try to ride out the storm, but that's making chips even harder to get hold of for other firms. https://www.cnbc.com/2021/05/07/chip-shortage-is-starting-to-have-major-real-world-consequences.html
- **China struggling with semiconductor self-sufficiency**
    - China unlikely to meet 70% chip self-sufficiency target set for 2025.
    - Survey respondents told Nikkei that U.S. trade sanctions against China have made acquiring parts and materials from abroad difficult. Using Chinese parts and materials as substitutes has also led to lower yield rates. https://www.taiwannews.com.tw/en/news/4199737
- **US-China tech war: Taiwan's TSMC joins American chip coalition in another blow to China's self-sufficiency drive**
    - Major world chip makers and buyers set up a new coalition to bolster American semiconductor industry. New coalition may make it harder for China to achieve semiconductor independence from US technologies, analysts say. https://www.scmp.com/tech/tech-war/article/3133235/us-china-tech-war-taiwans-tsmc-joins-american-chip-coalition-another
- **Dell chief executive sees chip shortage lasting a few years**
    - "The shortage will probably continue for a few years," Michael Dell said in an interview published on Tuesday. "Even if chip factories are built all over the world it takes time."
    - With an annual order volume of $70 billion, the firm is one of the most important customers of many semiconductor makers, but still had to pay a premium to secure supply, Dell added. https://www.reuters.com/technology/dell-chief-executive-sees-chip-shortage-lasting-few-years-2021-05-11/

Silver

- **Silver ETF assets surge to all-time high as retail investors pile in**
    - Industrial demand for precious metal is expected to rise as part of the transition to greener energy https://www.ft.com/content/22ee1221-166f-4829-b4a4-e118fcdffac8
- **Silver Prices Left Behind In The Green Investment Narrative**
    - After hitting a low of $24/oz back in early April, the silver price has seen a steady appreciation to just under $27.50/oz today. Total silver holdings in ETFs now exceed a billion ounces, underlying what an important factor ETFs have become in the silver market.

- While inflows are slowing in 2021, physical demand for the metal is picking up. In particular, industrial sector demand is rising.
  https://seekingalpha.com/article/4427190-silver-prices-left-behind-in-green-investment-narrative

- **Silver ETF assets surge to all-time high as retail investors pile in**
  - Industrial demand for precious metal is expected to rise as part of the transition to greener energy
    https://www.ft.com/content/22ee1221-166f-4829-b4a4-e118fcdffac8
- **Silver price rockets as investment and industrial demand continues**
  - It's often overlooked in favor of its lustrous cousin gold, but the price of silver has jumped over 70% in the last year. Leading commodity strategists saying the rally is likely to continue as the global economy reopens.
  - Silver was trading around $27 an ounce on Wednesday, a 74% rise from a year ago when the spot price was around $15.5 per ounce. Gold prices have risen 6.4% in a year.
    https://www.cnbc.com/2021/05/13/silver-price-rockets-as-investment-and-industrial-demand-continues.html

Precious Metals Mining:

- **Streaming: Wheaton Precious Metals' Q1: Record-High Revenues And Operating Cash Flow**
  - Summary: Wheaton Precious Metals' attributable gold equivalent sales 175,419 toz in Q1.
  - The revenues and operating cash flow reached new record highs of $324 M and $232 M respectively.
  - The bank debt was eliminated.
  - A new sizeable gold stream was acquired, has the potential to increase gold production by 10%.
  - Wheaton increased its dividend for the third consecutive quarter.
    https://seekingalpha.com/article/4426354-wheaton-precious-metals-q1-record-high-revenues-and-operating-cash-flow
- **"In a way we did bet the farm" Froneman on the roaring success of Stillwater**
  - Sibanye has had an incredible few year, reaping the rewards of concentrated bets on the PGM basket. Froneman is a renowned deal-maker, with the commodity bull having increased Sibanye's market value 20-fold since its demerger from Gold Fields in 2013. Many South African chief executives should take a page out of Froneman's book. Unlike many top local executives, Froneman's interests are aligned with shareholders given his substantial shareholding in the business.
    https://www.biznews.com/global-investing/2021/05/07/neal-froneman-stillwater?

E-Waste & Precious Metals Recycle Related:

- **Do It Yourself: How To De-Can Your Catalytic Converters**
  - It is first important to understand that quantity is KING. It is not worth de-canning your converters if you cannot collect a large quantity of loose catalyst. This blog will go over the tools necessary to de-can your catalytic converters to reach the loose catalyst weight requirement.
    https://pgmrecoverysystems.com/do-it-yourself-how-to-de-can-your-catalytic-converters/
- **Everything You Need To Know About Oxygen Sensors**
  - The first-generation oxygen sensors carry the absolute most recyclable value. As you can in the oxygen sensor consists of a thimble made from platinum. When compared to the second-generation model you can see a noticeable difference in design where less platinum is being used. These first and second-generation oxygen sensors will provide you the most recyclable value due to their high precious metal content located on the outer lining of the thimble and the inside coat as well.
    https://pgmrecoverysystems.com/everything-you-need-to-know-about-oxygen-sensors/
- **E-scrap export ban comes before Congress again**
  - The Secure E-Waste Export and Recycling Act (SEERA), which enacts controls on exporting used electronics, has been introduced several times in the past, most recently in September 2019. This month, Reps. Adriano Espaillat, D-N.Y., and Steve Stivers, R-Ohio, reintroduced SEERA as H.R.3036.

- The bill takes a national security angle to e-scrap export controls. According to its official description, SEERA would “control the export of electronic waste in order to ensure that such waste does not become the source of counterfeit goods that may re-enter military and civilian electronics supply chains in the United States,” among other purposes. https://resource-recycling.com/e-scrap/2021/05/13/e-scrap-export-ban-comes-before-congress-again/?utm_medium=email&utm_source=internal&utm_campaign=May+13+ESN

- **Solar panels are ‘the new CRT’ but the recycling sector is preparing**
  - The Solar Panel recycle material carries a high cost to recycle properly. Additional factors include limited commodity value, the presence of hazardous metals, a relatively small number of downstream processors and markets working against reuse. “Solar panels are pretty much the new CRT,” said AJ Orben, vice president of Arizona-based We Recycle Solar.
  - Recycling companies can easily separate the aluminum frame and external copper wires for recycling. But because the PV cells are encapsulated in layers of ethylene vinyl acetate (EVA) plastic and bonded to the glass, additional processes are needed to recover the silver, copper or high-purity silicon in the silicon wafers. https://resource-recycling.com/e-scrap/2021/05/13/solar-panels-are-the-new-crt-but-sector-is-preparing/?
- **Copper price hits new high on declining scrap supplies**
  - Shortages of copper and declining inventories could drive prices to levels beyond current record highs unless scrap supplies increase — scrap accounts for about a third of the roughly 30 million tonnes of annual global copper supplies. https://www.mining.com/copper-price-hits-new-high-on-declining-scrap-supplies/

Platinum

- **Platinum and catalytic converters**
  - This is one area to watch/investigate further that I came across this week and wanted to bring to readers attention. https://www.forexlive.com/news/!/platinum-and-catalytic-converters-20210511
- **Walmart fleet testing the world's 'cleanest combustion engine'**
  - The 10.6-liter is bolted to a conventional underfloor aftertreatment system with SCR. Because of its more fuel-efficient, opposed-piston design, the engine does not require a valve train which reduces complexity along with material and production costs.
  - “We can see from analysis and studies that we’ve done based on published data that we expect the new opposed-piston engine base cost will be about $10,000 less at the 2027 emissions level compared to the solutions that the four-stroke engine will need to deploy to achieve that performance,” Fabien said.
  - According to Achates’ website, conventional four-stroke diesels will have to rely on costlier and more complex technologies to meet 2027 emissions such as cylinder deactivation, dual zone SCR and 48-volt electric heaters. https://www.ccjdigital.com/regulations/article/15065487/walmart-fleet-testing-the-worlds-cleanest-combustion-engine
- **Platinum on cathodes of zinc-air system chosen to decarbonise New York City**
  - “We’re (Zinc8) using some platinum in our cathodes. We could not find a cathode that gave us the performance and the economics that we require, so our team here developed our own cathode.
  - “It’s a trade secret and it’s giving us the performance that allows us to go to the market and truly give them the cost that’s required from the market to start using this type of storage and getting the economics out of it. https://www.miningweekly.com/article/platinum-on-cathodes-of-zinc-air-system-chosen-to-decarbonise-new-york-2021-05-13

- **<u>Fuel Cells/Hydrogen Economy Related Articles</u>:**
  - **Biden administration and industry alike see hydrogen as 'Swiss Army knife' for eliminating emissions**
    - Hydrogen can be used in a fuel cell to power a heavy-duty truck. It can be converted into ammonia, which can then be used to fuel a cargo ship. Hydrogen can be blended into natural gas and run through a gas turbine to generate electricity. It can serve as a replacement fuel for steel, cement, chemical, and other manufacturing plants that can't be easily electrified. Hydrogen can even store energy, acting similar to a long-duration battery to provide power to the grid when renewable energy is in short supply.
https://www.washingtonexaminer.com/policy/energy/biden-administration-and-industry-alike-see-hydrogen-as-swiss-army-knife-for-eliminating-emissions
  - **WPIC: Fuel Cell Passenger Vehicles**
    - Demand for platinum in fuel cell electric vehicles (FCEVs) is currently being led by the heavy-duty vehicle segment, principally trucks, buses and fleet vehicles. However, developments in the FCEV passenger vehicle segment highlight that this market is also evolving.
    - Global fuel cell electric vehicle (FCEV) car sales jumped 89.2 per cent year on year in the first quarter of 2021, hitting a record 4,000 units, with the Toyota Motor Corporation's second-generation Mirai model leading the way.
https://platinuminvestment.com/files/sixtysecs/WPIC_60seconds_Fuel_cell_passenger_vehicles_05122021a.pdf
  - **Volvo sees a greener future in hydrogen fuel cells**
    - Volvo Group chief technology officer Lars Stenqvist clearly sees a future in fuel-cell-electric vehicles – a generation of trucks that will draw their power from hydrogen. But it would be a mistake to believe he expects such equipment to fill every need.
    - "We are working with three technologies in parallel. We don't believe in one silver bullet," he stresses, noting that battery-electric vehicles and even combustion engines will have a role to play in a fossil-free future. "All three will be major cornerstones in our strategy going forward … I don't see any retirement date at all for the combustion engine."
https://www.trucknews.com/transportation/volvo-sees-a-greener-future-in-hydrogen-fuel-cells/1003151045/
  - **Is nuclear hydrogen fuel a feasible source of clean renewable energy?**
    - First nuclear electricity would be used to power the water electrolysis that produces the hydrogen. Using current variable renewable sources (solar or wind) is that while they offer 20% to 40% capacity factor, nuclear power's capacity >90%.
    - Second, the high temperatures generated by Generation-IV nuclear power plants. This could be indirectly beneficial to scaling up H_2 production using nuclear hydrogen fuel. Nuclear energy would be able to provide heat directly to industrial process, instead of having to convert that heat into electricity while suffering thermal efficiency losses
https://www.hydrogenfuelnews.com/nuclear-hydrogen-fuel/8544906/?mc_cid=294ec2f229&mc_eid=70c1246d58
  - **ARENA backs ATCO and Engie with $71M for WA green hydrogen**
    - The Australian Renewable Energy Agency will fund ATCO to feed green hydrogen into Perth's gas grid and Engie to supply the clean feedstock into Yara Pilbara's ammonia plant.
    - ATCO, Engie and the Australian Gas Infrastructure Group in Victora will build 10-megawatt electrolysers powered by renewable energy with Federal Government funds backing its goal of Australia producing hydrogen for less than $2 a kg.
https://www.boilingcold.com.au/arena-backs-atco-and-engie-with-71m-for-wa-green-hydrogen/

- **New hydrogen fuel plant in Nevada launches greater role for Hydrogen Fuel Cell Vehicles in zero-emission transportation mix - begin operations in early 2022**
    - The sources of renewable natural gas that Air Liquide plans to utilize for its plant on day one includes the likes of biogas, landfill gas and waste-water treatment gas. By using these forms of renewable gas in place of natural gas in the steam-methane process, the carbon emissions of the plant can be further driven down toward zero and even a net negative carbon footprint over the plant's lifetime. https://www.sierranevadaally.org/2021/05/13/new-hydrogen-fuel-plant-in-nevada-launches-greater-role-for-hydrogen-fuel-cell-vehicles-in-zero-emission-transportation-mix/
- **Bend company develops technology to advance hydrogen fuel cells**
    - The technology uses methanol to create hydrogen through a process that avoids the need for large tanks to store hydrogen, which is a clean source of energy.
    - And it's much lower in cost because the fuel cell generator technology can produce a kilowatt of hydrogen for $3 to $4, whereas a kilowatt of hydrogen can go for as much as $16. https://www.bendbulletin.com/localstate/bend-company-develops-technology-to-advance-hydrogen-fuel-cells/article_2b38fb86-ad25-11eb-be90-c7d75a5b335d.html

Palladium

- **China's April auto sales rise 8.6%, up for 13th straight month**
    - Vehicle sales in China rose 8.6% in April versus the same month a year earlier, their 13th consecutive month of gains, industry data showed on Wednesday, as the world's biggest car market leads the sector's recovery from the COVID-19 pandemic.   Sales reached 2.25 million vehicles in April, data from the China Association of Automobile Manufacturers (CAAM) showed. https://www.reuters.com/business/retail-consumer/chinas-april-auto-sales-rise-86-up-13th-straight-month-2021-05-12/
- **Palladium Price Analysis: Weekly resistance line probes XPD/USD bulls**
    - Palladium picks up bids from intraday low while flashing $2,965.77 as a quote ahead of Tuesday's European session. In doing so, the bullion justifies its pullback moves from a short-term resistance line and sustained trading beyond important supports. https://www.fxstreet.com/news/palladium-price-analysis-weekly-resistance-line-probes-xpd-usd-bulls-202105110326

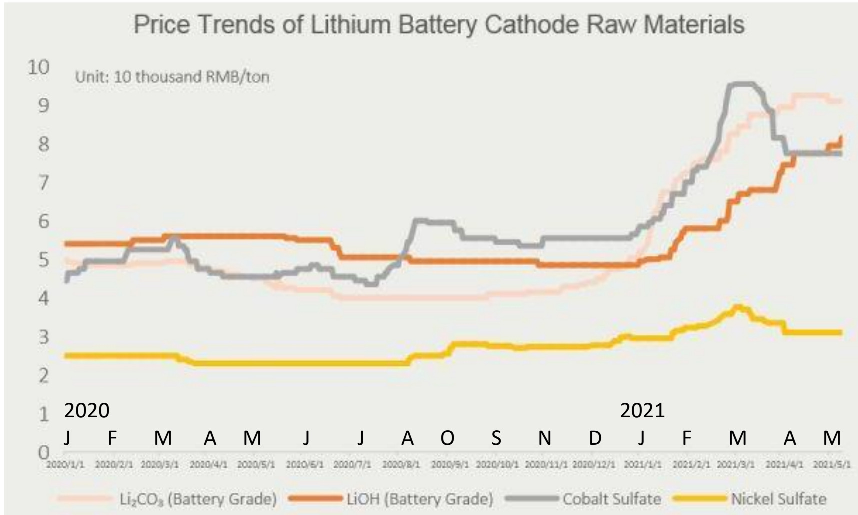
PGM Minor Metals (Rhodium, Iridium, Ruthenium, Osmium)

- **Ruthenium and Platinum: TSMC shows its eMRAM technology roadmap | MRAM-Info**
    - During a presentation during Persistent Memory Summit, a new slide from TSMC was shown that describes the company's eMRAM roadmap.
    - As we already know, TSMC is offering 22nm eMRAM option as an eFlash alternative. The company is also looking to develop 14/12 nm eMRAM option to replace SRAM memory (this is interesting as before it was revealed that the company is developing 16nm MRAM). Finally eMRAM is touted as a possible replacement for configuration memory (eFUSE / OTP / Flash). https://www.mram-info.com/tsmc-shows-its-emram-technology-roadmap
- **Ruthenium and Platinum: Big HDDs Set New Sales Record: 288 Exabytes in Q1**
    - Unit shipments of hard drives in the first quarter of 2021 were down both sequentially and year-over-year as consumer devices continued their migration to SSDs. Still, HDD capacity sold during Q1 set a new record of 288 exabytes as hyperscalers and enterprises upgraded their storage capabilities. Seagate remained the world's largest maker of hard drives in terms of units and exabytes shipped.
    - Nearly 60% of New PCs Use SSDs, 64 Million HDDs Sold in Q1, 288 EB ~ 303 EB Shipped in Q1
    - Matt: Ru and Pt demand relate directly to the number of HDD disc media produced.

https://kodepedia.net/id/big-hdds-set-new-sales-record-288-exabytes-in-q1.html

BEV / LiB Battery Market News

- **Ford to develop, produce its own electric vehicle batteries**
    - Eventually the company wants to do large-scale manufacturing of its own batteries globally, a task now performed by supply companies. Like many global automakers who have been stung by computer chip and other supply chain shortages, Ford wants to make sure it has enough batteries for what it says is an accelerating transition away from internal combustion engines. https://auto.economictimes.indiatimes.com/news/passenger-vehicle/cars/ford-to-develop-produce-its-own-electric-vehicle-batteries/82279013
- **Copper is 'the new oil' and low inventories could push it to $20,000 per ton, analysts say**
    - In a note Tuesday, Bank of America commodity strategist Michael Widmer highlighted inventories measured in tons are now at levels seen 15 years ago.
    - Given the fundamental environment and the depleted inventories, Widmer said copper may spike to $13,000/t in the coming years after recently notching $10,000 for the first time in a decade.
    - David Neuhauser, founder and managing director of U.S. hedge fund Livermore Partners, told CNBC that copper is "the new oil." https://www.cnbcafrica.com/2021/copper-is-the-new-oil-and-low-inventories-could-push-it-to-20000-per-ton-analysts-say/
- **An Acid Squeeze Is the Latest Obstacle Facing Giant Copper Mines**
    - Add sulfuric acid to the list of challenges facing copper miners as the world clamors for more of the wiring metal.
    - The compound, used to extract copper from ore, is getting harder to come by. A slowdown in oil refining during the pandemic has resulted in less availability of sulfur, a key input for the acid. At the same time, more acid made in Asia is being used locally as industries there rebound. At least one copper mine in top-producer Chile has already been impacted and spot prices have surged. https://news.yahoo.com/acid-squeeze-latest-obstacle-facing-202458362.html
- **Tesla in talks with new LFP cell supplier for low-cost battery deal: report**
    - Tesla is reportedly in talks with Chinese battery maker EVE Energy Co for a potential supply deal for low-cost batteries to boost the Gigafactory Shanghai's supply chain.
    - EVE is noted for producing lithium iron phosphate (LFP) cells, which are affordable to produce but generally have lower density than NCA batteries. Tesla is already using LFP batteries for its vehicles such as the Made-in-China Model 3 Standard Range Plus currently produced in Shanghai. Tesla's LFP batteries have so far been supplied by CATL. https://www.teslarati.com/tesla-new-lfp-battery-supplier-report/
- **Glencore boss warns of future China dominance in electric vehicles**
    - US and Europe risk being left behind unless they secure cobalt supplies for batteries, says Ivan Glasenberg https://www.ft.com/content/0ee4a6cb-9dbe-4fee-84d0-3f48f3190935
- **LiB cathode material prices**
    - Since the fourth quarter of 2020, the Chinese lithium battery industry has started a new round of price increase cycle. According to the data from ICCSINO, compared with the third quarter of 2020, prices of lithium carbonate, lithium hydroxide, cobalt sulfate, and nickel sulfate have increased by 91%, 21%, 48%, and 32%, respectively. In addition, prices of LiPF6 and copper foil have increased by 65% and 19% respectively.
    - LFP material output has a 50% year-on-year growth rate. The abnormal growth of LFP batteries has been the most important factor in the rise in raw material prices since the fourth quarter of 2020.


Price Trends of Lithium Battery Cathode Raw Materials
Unit: 10 thousand RMB/ton
2020
2021
J F M A M J J A O S N D J F M A M
Li2CO3 (Battery Grade)
LiOH (Battery Grade)
Cobalt Sulfate
Nickel Sulfate


Price Trends of LiPH6 & Copper Foil
Unit: 10 thousand RMB/ton
LiPF6
LiPF6
Copper foil 6μm
Copper foil 8μm

Regards –