



## Weekly Precious Metals News Articles: December 24, 2020

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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 turns negative as dollar strengthens on new virus strain | Nasdaq**
  - Silver hits more than 3-month high
  - Dollar hits one-week high, off multi-year lows
  - European shares fall as new coronavirus strain shuts Britain

<https://www.nasdaq.com/articles/precious-gold-turns-negative-as-dollar-strengthens-on-new-virus-strain-2020-12-21>
- **What Is In Store For Gold In 2021?**
  - Gold prices are snapping their three-day losing streak today as investors are favoring the risk-off trade. The precious metal is up nearly 22% year-to-date, but it has been under selling pressure for the past three days, as traders have been busy booking their profits as 2020 comes to an end.

<https://www.forbes.com/sites/naeemaslam/2020/12/23/what-is-in-store-for-gold-in-2021/?sh=747deadb3274>
- **Gold rises on weaker dollar as market eyes Brexit deal**
  - Gold prices rose on Thursday, supported by a weaker dollar ahead of a widely expected Brexit trade deal and as uncertainties around a new variant of the coronavirus overshadowed vaccine optimism.

<https://www.nasdaq.com/articles/precious-gold-rises-on-weaker-dollar-as-market-eyes-brexit-deal-2020-12-24>

### Semiconductor Related Articles (impacting Precious Metals electronics):

- **200mm Demand Surges**
  - A surge in demand for various chips is causing shortages for select 200mm foundry capacity as well as 200mm fab equipment, and it shows no signs of abating in 2021.
  - Foundry customers will face a shortfall of 200mm capacity at select foundries at least in the first half of 2021, and perhaps beyond.

<https://semiengineering.com/200mm-demand-surges/>
- **Global semiconductor shortage puts pressure on tech supply chain**
  - Soaring demand for electronic devices such as smartphones, computers, gaming consoles, and cars has created a global shortage of chips, leading to manufacturing delays, as consumer demand bounces back amid the pandemic.

<https://www.taiwannews.com.tw/en/news/4081176>

### Silver

- **Will silver prices go up in 2021? What should you expect and when**

- Rising industrial demand and continued investment interest are expected to combine with falling production from silver mining companies.  
<https://capital.com/will-silver-prices-go-up-in-2021>
- **New PV installations to reach 158 GW next year, says IHS Markit**
  - IHS Markit has shared its forecast installation figures for 2021, where they expect a 'wild ride' for the PV industry to install 158 GW of new generation capacity. This figure amounts to 34% growth on 2020 installations, driven by completion of delayed projects from this year, as well as a generally increased appetite for PV and renewables around the world.
  - Matt: 158 GW is projected to consume 127.5 Moz of silver.  
<https://www.pv-magazine.com/2020/12/18/new-pv-installations-to-reach-158-gw-next-year-says-ihs-markit/>
- **Silver Price Forecast - Silver Markets Dancing Around Top of Consolidation**
  - At this point in time, I have no interest in shorting the silver market, because quite frankly it is very strong. It will be choppy, but eventually it will show signs of bullish pressure. All things being equal, buying on the dips is by far the best way to trade this market.  
<https://www.fxempire.com/forecasts/article/silver-price-forecast-silver-markets-dancing-around-top-of-consolidation-690614>

### **Precious Metals Mining:**

- **Wheaton (WPM) Up 40% in a Year: What's Driving the Rally?**
  - Wheaton is benefiting from the strong rebound of mine production following the pandemic-induced temporary suspensions of some operations in the second quarter.
  - Wheaton is poised to gain from mine exploration and expansion activities by their operators.
  - Recently, the company entered into an agreement with Capstone Mining Corp. to purchase silver stream from the latter's Cozamin Mine. Per the agreement, Wheaton will purchase 50% of the mine's silver production until 10 million ounces have been delivered.  
<https://www.nasdaq.com/articles/wheaton-wpm-up-40-in-a-year%3A-whats-driving-the-rally-2020-12-23>
- **Nornickel Shuts Down Smelter in Nikel Town**
  - MMC Norilsk Nickel, the world's largest producer of Pd and high-grade Ni and a major producer of Pt and Cu, is shutting down a smelting shop in the town of Nikel in Russia's Murmansk region. It is the company's oldest production facility to date. Its shutdown is part of Nornickel's comprehensive environmental programme, which aims to significantly reduce the environmental impact at all production sites. With the closure of the shop, hazardous emissions into the atmosphere at the Russia's Norwegian border will cease.  
<https://apnews.com/press-release/newswire/business-products-and-services-precious-metal-markets-western-europe-environment-c6d19fc015d3554a4d8656e8de7c4bc5>
- **Re: Marathon Palladium (Pd/Au/Pt/Cu/Ag) Project: Generation Mining Announces Fully Subscribed Flow Through Financing Led by Eric Sprott**
  - Approximately 47% of the Offering will be subscribed to by a company controlled by Mr. Eric Sprott, making it the largest shareholder of the Company's common shares.  
<http://www.digitaljournal.com/pr/4922886>

### **E-Waste & Precious Metals Recycle Related:**

- **Why You Absolutely Must Reduce, Repair, or Recycle Your E-Waste**
  - 'Silicon Mountain' reveals an escalating environmental crisis fueled by misguided habits. Are you consuming electronics responsibly?  
<https://www.inc.com/entrepreneurs-organization/why-you-absolutely-must-reduce-repair-or-recycle-your-e-waste.html>
- **Precious Metals Recycling Market Is Uncertain**
  - Rather than recycling, the Tanaka survey found that most respondents said they either sell or exchange their old devices (40 percent) or keep them (26 percent). When it comes to the hardware of

smart devices, baby boomers are the least likely to know that parts of smart devices are made from recyclable materials compared to other generations.

<https://americanrecycler.com/8568759/index.php/news/metal-recycling/4643-precious-metal-recycling-market-is-uncertain>

## **Platinum**

### **• Platinum potential: how batteries could open the door to a mining rush**

- PGMs have long been earmarked as a potential game changer in sustainable development plans, particularly in areas such as emissions control and alternative energy sources. Attractive for their catalytic properties, harnessing them to improve battery performance could mark a significant step for electric vehicles, and even open the door for longer life batteries applied beyond mobility purposes. While the concept has not yet reached commercialisation, Lion Battery Technologies believes they're close.

<https://www.mining-technology.com/features/platinum-potential-how-batteries-could-open-the-door-to-a-mining-rush/>

## **Fuel Cells/Hydrogen Economy Related Articles:**

- **Hydrogen fuel cell-powered HY4 aircraft takes flight**
  - MAHEPA consortium demonstrates feasibility and advances toward liquid hydrogen tanks and scaling modular HY4 technology to new, emissions-free aircraft.  
<https://www.compositesworld.com/news/hydrogen-fuel-cell-powered-hy4-aircraft-takes-flight>
- **Toyota Doubles Down on Hydrogen With a New Mirai and Commercial Vehicles**
  - Toyota really believes hydrogen is the future, despite where almost every other carmaker is headed.  
<https://www.autoweek.com/news/green-cars/a35026252/toyota-hydrogen/>
- **Ballard: Optimizing Renewable Energy Storage With Hydrogen Fuel Cells**
  - Hydrogen fuel cells: Enabling long-term zero-emission renewable energy storage  
<https://blog.ballard.com/renewable-energy-storage?>
- **Californian hydrogen distribution test could lead to rapid H<sub>2</sub> fueling station expansion**
  - Matt: In previous weeks I sited a new H<sub>2</sub> extraction technology intended for use on H<sub>2</sub> stored in the existing natural gas pipelines in California. The hope is to use this technology for refueling stations, eliminating some 40-60% of the \$16.30/kg in retail H<sub>2</sub> costs. Getting retail H<sub>2</sub> down to \$8 is closer to exact parity with California's \$3.25/gal gasoline.  
[https://www.hydrogenfuelnews.com/hydrogen-distribution/8541742/?mc\\_cid=65fbf08d7c&mc\\_eid=70c1246d58](https://www.hydrogenfuelnews.com/hydrogen-distribution/8541742/?mc_cid=65fbf08d7c&mc_eid=70c1246d58)
- **Even with \$8,000 tax credit extended, fuel-cell lease prices won't change, automakers say**
  - A USA \$8,000 federal tax credit on qualifying hydrogen fuel-cell passenger vehicles has been extended through January 2022 though the latest economic stimulus bill passed by the U.S. Congress. The bill awaits signature by the outgoing President (Trump).
  - Combined with the \$4,500 rebate through the California CVRP, a program administered by CARB, helps ease the high sticker prices of the fuel-cell passenger vehicles.  
[https://www.greencarreports.com/news/1130716\\_even-with-8-000-tax-credit-extended-fuel-cell-lease-prices-won-t-change-automakers-say](https://www.greencarreports.com/news/1130716_even-with-8-000-tax-credit-extended-fuel-cell-lease-prices-won-t-change-automakers-say)
- **German gas provider builds cavern for hydrogen storage**
  - The hydrogen storage cavern will be built near Berlin at a depth of around 1,000 meters and measuring 500 cubic meters. It is scheduled to go into operation in spring 2022.  
<https://www.pv-magazine.com/2020/12/18/german-gas-provider-builds-cavern-for-hydrogen-storage/>
- **Nikola unveils cheap hydrogen production plan in Arizona**
  - Last April, a filing from Nikola predicted that the estimated per-kilo cost of producing H<sub>2</sub> would be about \$2.50. That figure was based on a 3.5 cents per kilowatt hour wholesale

electricity deal. That said, in this new deal with Arizona Public Service, the utility is proposing a much lower electricity rate of about 2.7 cents per hour.

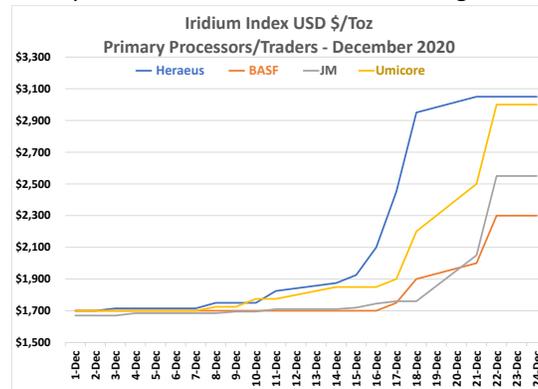
<https://www.hydrogenfuelnews.com/cheap-hydrogen-production/8541758/>

## Palladium

- **New (USA) Car Sales in 2020 Expected to Be Lowest Since 2011 Despite Late Surge**
  - The number crunchers at Edmunds estimate that more than 14.4 million new vehicles will be sold in 2020, which is actually stronger than they expected.  
<https://www.thedrive.com/news/38286/new-car-sales-in-2020-expected-to-be-lowest-since-2011-despite-late-surge>
- **European new car sales drop by 13.5% y/y in November - ACEA**
  - In November, new car registrations dropped by 13.5% year-on-year to 1.05 million vehicles in the European Union, Britain and the countries of the European Free Trade Association (EFTA), figures from the European Automobile Manufacturers' Association (ACEA) showed.  
<https://cn.reuters.com/article/europe-vehicleregistrations-idCNF9N28000Z>

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

- **Matt: Iridium Market Status This Week**
  - In December so far, we have witnessed +39% to +79% increases in Iridium fixes from the 4 primary producers.
  - Continued Anglo ACP event impact on supply, Spark Plugs, OLED, Water Treatment/BWTS, SAW/BAW Filter demands, plus new Green Hydrogen PEM Electrolyzer demands are impacting this metal dramatically.
  - Quarterly subscription reports on the Iridium available through PMCM LLC.



- **Ruthenium: KIST Develops Novel Catalyst for Efficient Hydrogen Extraction**
  - A chemical reaction is required for hydrogen extraction from ammonia. A ruthenium catalyst, which is a precious metal catalyst, is used to promote this reaction. Ruthenium is as expensive as 9.6 million won per kilogram and the price has led to an increase in hydrogen fuel unit cost.
  - The institute developed the novel and inexpensive catalyst by means of zeolite that has 2 nanometer pores. The catalyst, which has a fine amount of ruthenium particles in the pores, has increased the amount of hydrogen production 2.5-fold while using 60 percent less ruthenium.  
<http://www.businesskorea.co.kr/news/articleView.html?idxno=57344>
- **Catalyzing ammonia formation at lower temperatures with ruthenium**
  - Recently, scientists have reported ruthenium-a transition metal-as an efficient "catalyst" for ammonia synthesis, as it operates under milder conditions than traditional iron-based catalysts. However, there is a caveat: nitrogen molecules need to stick to the catalyst surface to undergo dissociation into atoms before reacting with hydrogen to form ammonia.

<https://phys.org/news/2020-12-catalyzing-ammonia-formation-temperatures-ruthenium.html>

- **Ruthenium: Johnson Matthey and thyssenkrupp renew partnership for world class collaboration in ammonia production**
  - After collaborating successfully for 20 years and working together to deliver 21 projects, Johnson Matthey (JM), a global leader in sustainable technologies, and thyssenkrupp, a technology provider for world-scale ammonia plants, have signed an agreement to renew their collaboration around ammonia process and catalyst supply.  
<http://www.digitaljournal.com/pr/4923143#ixzz6hNpr92cN>

## **BEV / LiB Battery Market News**

- **Toyota says electric vehicles are overhyped — RT Business News**
  - There is too much hype surrounding electric vehicles (EVs), one of the world's top automakers, Japan's Toyota, says, noting that the electricity needed to charge electric cars would strain grids and increase carbon emissions.
  - If all cars in Japan were electric, the country would be short of electricity in the summer, while the infrastructure for a 100-percent EV fleet would cost the equivalent of up to US\$358 billion, The Wall Street Journal quoted Toyota's President Akio Toyoda as saying at a press conference in his role as chairman of the Japan Automobile Manufacturers Association.  
<https://www.rt.com/business/510085-electric-vehicles-too-much-hype/>
- **Toyota solid-state tech; battery-price plunge; Mach-E, Mirai, Q5 PHEV all driven: The Week in Reverse**
  - Green Car Reports—for the week ending December 18, 2020.
  - Test drove (1) the 2021 Ford Mustang Mach-E, (2) the 2021 Audi Q5 plug-in hybrid, with 19 miles of electric range and 27 mpg, and (3) the Toyota Mirai hydrogen fuel-cell car, with a Lexus-like ride, engaging handling, & attractive styling.
  - Toyota is reportedly preparing a fleet of EV prototypes with solid-state battery tech, enabling twice the range, a 10-minute recharge, and perhaps, the economies of scale that Toyota looks for. But then Toyota CEO Akio Toyoda tempered all the excitement and buzz over that; he reportedly told the Japanese press that a greater emphasis on EVs—and a proposed ban of internal combustion vehicles—would worsen CO2 emissions.
  - Canoo revealed the Multi-Purpose Delivery Vehicle, an electric van that it says can fit 30% more cargo than gasoline or diesel vans the same size. It will start at \$33,000.
  - EV battery pack prices have fallen 13% in 2020, and their \$126/kwh on a volume-adjusted basis is far lower than what was anticipated just a few years ago.  
[https://www.greencarreports.com/news/1130711\\_toyota-solid-state-tech-battery-price-plunge-mach-e-mirai-q5-phev-all-driven-the-week-in-reverse](https://www.greencarreports.com/news/1130711_toyota-solid-state-tech-battery-price-plunge-mach-e-mirai-q5-phev-all-driven-the-week-in-reverse)
- **Exclusive: Apple targets car production by 2024 and eyes 'next level' battery technology**
  - At the heart of the car is a battery that features a “breakthrough” monocrystalline design. It would reportedly allow the company to add more active material to the power cell, thereby offering greater range. Apple is also exploring the possibility of using a lithium iron phosphate (LFP) battery chemistry.  
<https://mail.yahoo.com/d/folders/2/messages/ANHh89NLFgbZX-JByQmFgB-ESYI>
- **Why Car? Here's What We Think Apple Wants from 'iCar'**
  - So why iCar and why now? The answer is almost certainly Google's roaring success building an ecosystem around Android Automotive OS suggesting that the real battleground is likely not to be EV, but infotainment.  
<https://www.eetimes.com/why-car-heres-what-we-think-apple-wants-from-icar/>
- **Lithium Miners News For The Month Of December 2020**
  - Lithium prices were higher for the past month, boosted by record EV demand in Europe and China.

- Li-ion battery prices continue to fall in 2020, EV/ICE parity nears (Bloomberg hints at 2023 parity).
- Lithium company news - SQM signs long-term Li contract with LG Energy Solutions. Ganfeng Lithium Mahong Factory adds 50,000 tons of battery-grade Li hydroxide annual production capacity.
- IGO Limited buys 49% stake in Tianqi Lithium Energy Australia (TLEA), equating to 24.99% in Greenbushes plus 49% in Tianqi's suspended Kwinana lithium processing plant, for US\$1.4b. <https://seekingalpha.com/article/4396089-lithium-miners-news-for-month-of-december-2020>
- **Cobalt Miners News For The Month Of December 2020**
  - Cobalt spot prices were unchanged for the month and LME cobalt inventory was also unchanged.
  - BMI forecasts growth in the battery sector will drive cobalt demand, outweighing falling cobalt intensities in individual cells. Roskill-Cobalt demand set to roughly double by 2030.
  - Cobalt miner's news - China's GEM Co. Ltd and Glencore extend their long-term strategic cobalt partnership. China Moly acquires a 95% stake in the Kisanfu copper-cobalt mine, DRC.
  - First Cobalt Corp. to receive C\$10 million in public funding from the Govt. of Canada and Ontario. <https://seekingalpha.com/article/4396079-cobalt-miners-news-for-month-of-december-2020>
- **Copper bulls bet green agenda will push metal on towards record high Surge in sustainable energy projects sends metal to \$8,000 for first time since 2013 – Financial Times (subscription)**
  - Copper, the world's most important industrial metal, reached a seven-year high of \$8,000 a tonne on Friday having climbed more than 70 per cent from its March lows in recent months. The rally will receive further fuel, investors say, from a surge in demand for copper to wire the green economy: electric vehicles need around four times more wiring than those with combustion engines, while solar panels and wind farms need as much as five times that needed for fossil fuel power generation, according to industry estimates.
  - Matt: Obviously not part of the LiB chemistry, but typical 165 pounds of Copper in a BEV, 110 pounds in a Hybrid/PHEV <https://bretcrown.com/blog/copper-bulls-bet-green-agenda-will-push-metal-on-towards-record-high/>
- **LinkedIn: Commissioning the all electric 720 kWh Nikola Tre Prototype 01, Class 8 Semi Truck.**
  - Matt: 10,000 to 15,000 pounds of battery on board. Digs into the 80,000-pound payload too. Do you think this will tie up some Ni, Co, Mn, Li and others quickly? <https://www.linkedin.com/feed/update/urn:li:activity:6745686417751465984/>

Regards –