



## Weekly Precious Metals News Articles: December 18, 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 Bulls Take Heart From the Fed's Resolve as Dollar Buckles**
  - U.S. central bank pledges to maintain asset-purchase program
  - Congressional leaders pushing to finalize fiscal stimulus deal
  - Gold rose to a one-month high after the Federal Reserve reiterated its commitment to supporting the economy and optimism grew that a virus-relief package will soon be delivered by U.S. lawmakers.

<https://www.bloomberg.com/news/articles/2020-12-17/gold-bulls-take-heart-from-the-fed-s-resolve-as-dollar-softens>

- **World's most expensive Christmas tree: The pure gold Christmas tree valued at £1,300,000 is shown off by flower arrangement artist Shogo Kariyazaki, who helped create it in Tokyo**

- Merry Christmas everyone.

<https://www.dailymail.co.uk/news/article-2066484/The-26lb-gold-Christmas-tree-thats-worth-1-3million-sale.html>



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

- **Apple aims to make 30% more iPhones in first half of 2021 - Nikkei**
  - Citing unnamed sources, Nikkei said the company had asked suppliers to produce around 95 million to 96 million iPhones. That target would include the latest iPhone 12 as well as older iPhone 11 and SE models, but could be undermined by an industry shortage of key components, it said.

<https://www.reuters.com/article/apple-production-int-idUSKBN28POES>

- **U.S. crackdown on Huawei hands Japan a 5G lifeline**

Having lost the lead in consumer-facing handsets after missing the shift to smartphones, Japanese brands have also fallen behind Nokia Oyj, Ericsson AB and above all Huawei Technologies Co. in the buildout of 5G infrastructure. Those three manufacturers control almost 80% of 5G base-station market share. But Japanese firms have been handed an unexpected lifeline by the US-led crackdown on Huawei.

<https://www.japantimes.co.jp/news/2020/12/11/business/us-huawei-japan-5g/>

## **Silver**

- **Silver to move towards \$30 in 2021, outperforming gold – TDS**
  - “In 2021, silver is likely to capitalize on the post-COVID industrial recovery as over 60% of silver demand comes from industrial sources. Expenditures on green energy infrastructure, decarbonization, and electrification should all help silver as it is very much used in solar panels and virtually all electrical circuits. The intensity of silver use in the general economy is set to be sharply higher over the next decade, starting in 2021.”  
<https://www.fxstreet.com/news/silver-to-move-towards-30-in-2021-outperforming-gold-tds-202012141054>
- **Silver price rally rages on as precious metal hits \$26.00**
  - The rally in spot silver prices has continued on Thursday, with XAG/USD matching the November high and eclipsing \$26.00.
  - Soft US data is has exacerbated expectations for more Fed easing, sent US yields lower and is supporting precious metals.  
<https://www.fxstreet.com/news/silver-price-rally-rages-on-as-precious-metal-hits-2600-202012171502>
- **Silver Institute December 2020 Newsletter**
  - Physical Silver Investment Expected to Surge by 27 percent in 2020
  - Heraeus Gets License for Silver/Ruthenium Antibacterial Coating
  - Silver Oxide Compound Helps Keep Solar Panels Dust-Free
  - Global Silver Jewelry Market Impacted by Pandemic
  - Military-Grade Antibacterial Smartphone Uses Silver-Based Technology
  - Silver-Oxide Batteries Help Keep Mercury Out of Landfills
  - Habanero Peppers Produce Silver Nanoparticles in Eco-Friendly Way
  - Perth Mint Highlights The Simpsons TV Show  
<https://www.silverinstitute.org/wp-content/uploads/2020/12/SNDec2020.pdf>

## **Precious Metals Mining:**

- **Anglo American forecasts stronger production, lower costs for 2021**
  - Anglo American’s production, across all minerals, will increase by 14% in 2021, the miner of gold, platinum, copper, diamonds and coal said on Friday, while unit costs are expected to decrease by 3%.  
<https://www.reuters.com/article/anglo-american-outlook-idUSKBN28L1G7>
- **Putin: Nornickel should bear responsibility for Arctic fuel spill**
  - President Vladimir Putin said on Thursday that nickel and palladium producer Norilsk Nickel should bear responsibility for a major fuel spill at its power station in the Russian Arctic earlier this year.  
[http://www.reuters.com/article/russia-putin-pollution-norilsknickel-idUSKBN28R1LZ?utm\\_source=34553&utm\\_medium=partner](http://www.reuters.com/article/russia-putin-pollution-norilsknickel-idUSKBN28R1LZ?utm_source=34553&utm_medium=partner)
- **60Moz Sedibelo platinum expansion, construction of Kell beneficiation plant**
  - The predominantly shallow deposits will enable safe and sustainable mining activities for potentially more than 60 years. The approved expansion will be funded through Sedibelo’s existing cash resources. The first ounces from Triple Crown are expected to be extracted in 2023.  
<https://www.miningweekly.com/article/sedibelo-approves-60moz-platinum-expansion-construction-of-kell-beneficiation-plant-2020-12-11>

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

- **Will We Need To Mine Metals In The Future? | Wood Mackenzie**
  - Stricter environmental policies could revolutionise scrap availability and use.

- Today we recycle a fraction of the metal that we extract – despite the fact that most can be reused infinitely. Is that set to change? How much scrap could be recovered? And if all available scrap is recovered, is it possible to eliminate the need for the mining and processing of primary metal?  
<https://www.woodmac.com/news/feature/will-we-need-to-mine-metals-in-the-future/>
- **Our Phones Are Complicit in the E-Waste Surge: That Needs to Change, And Fast | Nasdaq**
  - A number of companies have begun developing eco-friendly solutions, from longer battery life to recycled materials, while green movements and government policies around the world are showing signs of change.  
<https://www.nasdaq.com/articles/our-phones-are-complicit-in-the-e-waste-surge%3A-that-needs-to-change-and-fast-2020-12-14>
- **Solar Panel Waste: The Dark Side of Clean Energy**
  - Tons of solar panels installed in the early 2000s are reaching the end of their lifecycles, posing a serious problem for the industry to contend with. Current solar panel disposal practices are far from being environmentally friendly.  
<https://www.discovermagazine.com/environment/solar-panel-waste-the-dark-side-of-clean-energy>
- **Zimbabwe plans to establish base metal refinery for platinum: Minister - Xinhua**
  - Zimbabwe to establish a base metal refinery in 2025 & a precious metals refinery by 2027 to process platinum from all the country's platinum mines, Mines Minister Winston Chitando said Thursday.  
[http://www.xinhuanet.com/english/2020-12/10/c\\_139579896.htm](http://www.xinhuanet.com/english/2020-12/10/c_139579896.htm)

## Platinum

- **SFA (Oxford) Podcast**
  - **Podcast: Blue skies of opportunity in PGM mining and refining**  
<https://sfa-oxford.buzzsprout.com/1121312/6891488>

## Fuel Cells/Hydrogen Economy Related Articles:

- **Toyota Charges Ahead Putting Two New Fuel-Cell Big Rigs (#3 & #4) to Work at Port of LA**
  - The trucks use the same (2x of the 128 kW) fuel-cell system found on the 2021 Toyota Mirai sedan revealed earlier this week. The new set up is smaller, but has the same storage capacity as previous systems. This version uses a more powerful lithium-ion battery to “smooth out” the power going to the electric motors. With a full load weight of 80,000 pounds, the truck can travel more than 300 miles, which is typically less than the trucks leaving the ports will travel.
  - An additional eight trucks (#5-#12) with fuel-cell drivetrains will be delivered in 2021 as part of the ZANZEFF program. Three of the eight trucks will go to United Parcel Service for its port operations while two of the eight trucks will go to Total Transportation Services, another prominent port operator. Toyota Logistics Services will also receive three additional trucks.
- **New Toyota Fuel Cell System Close to Being Available to Class 8 Makers**
  - The new fuel cell stack is the same as in Toyota’s 2021 Mirai passenger sedan that goes on sale this month. But it is double the size to handle the power needs of a Class 8 truck.
  - The powertrain will work with the Kenworth T680 chassis, a chassis built by Hino (Toyota’s heavy-duty truck subsidiary) and potentially equipment from other manufacturers.  
<https://www.ttnews.com/articles/new-toyota-fuel-cell-system-close-being-available-class-8-makers>  
<https://www.thedetroitbureau.com/2020/12/toyota-charges-ahead-putting-two-new-fuel-cell-big-rigs-to-work-at-port-of-los-angeles/>
- **Hyundai Motor to accelerate transition into smart mobility solution provider**
  - Hyundai Motor’s updated strategy aims to achieve three major directives:
    - Enhancing competitiveness of its automotive business through electrification;
    - Establishing a foundation for becoming a leading mobility service; and

- Securing initiatives for a hydrogen ecosystem.
- Four major business areas include: Electric vehicles; Urban air mobility (UAM); Autonomous driving technologies; and Hydrogen fuel cell systems.  
<https://www.greencarcongress.com/2020/12/20201211-hyundaismo.html>
- **New device separates hydrogen from natural gas when the two gases are blended in pipelines**
  - SoCalGas) today announced it will field test a new technology that can simultaneously separate and compress hydrogen from a blend of hydrogen and natural gas. At scale, the technology would allow hydrogen to be easily and affordably transported via the natural gas pipeline system, then extracted and compressed at fueling stations that provide hydrogen for fuel cell electric vehicles (FCEVs).  
[https://www.hydrogenfuelnews.com/new-device-separates-hydrogen-from-natural-gas/8541700/?mc\\_cid=c0de9ae04c&mc\\_eid=70c1246d58](https://www.hydrogenfuelnews.com/new-device-separates-hydrogen-from-natural-gas/8541700/?mc_cid=c0de9ae04c&mc_eid=70c1246d58)
  - Electrochemical compression of hydrogen is based on the following mechanism:
  - Hydrogen is supplied to the anode side of the membrane surface where a platinum-alloy catalyst splits the molecule into protons. The electrons are transferred via an external circuit to the catalyst layer on the opposite side of the proton exchange membrane (PEM).  
<https://hyethydrogen.com/technology/operating-principle/>
- **Hydrogen fueling infrastructure plan to receive up to \$115M from California Energy Commission**
  - Under the new H<sub>2</sub> fueling infrastructure plan, 111 new stations will be constructed by 2027.
  - Once deployed, the investment into the state's hydrogen fueling infrastructure will almost reach its goal for the construction of 200 public H<sub>2</sub> refueling stations.  
[https://www.hydrogenfuelnews.com/hydrogen-fueling-infrastructure/8541312/?mc\\_cid=c0de9ae04c&mc\\_eid=70c1246d58](https://www.hydrogenfuelnews.com/hydrogen-fueling-infrastructure/8541312/?mc_cid=c0de9ae04c&mc_eid=70c1246d58)
- **Ammonia Fuel Cells for Deep-Sea Shipping: A Key Piece of the Zero-emissions Puzzle**
  - The project will equip the offshore supply vessel Viking Energy, owned and operated by Eidesvik and on contract to energy major Equinor, with a 2-megawatt (MW) ammonia fuel cell, allowing it to operate for at least 3,000 hours annually on clean fuel. Following the completion of that phase, the project will ramp up to qualifying 20MW fuel cell solutions for oceangoing vessels.  
<https://www.marinelink.com/news/ammonia-fuel-cells-deepsea-shipping-a-key-483980>
- **NACFE Report Says Challenges Remain for Broad Fuel Cell Adoption**
  - Hydrogen fuel cell technology will likely roll out in heavy-duty trucks over the next five years, but hurdles remain before U.S. motor carriers will adopt them beyond small numbers of test vehicles, according to a new report.  
<https://www.ttnews.com/articles/us-fleets-cautious-about-adopting-hydrogen-fuel-cell-technology>
- **Green Hydrogen, The Fuel Of The Future, Set For 50-Fold Expansion**
  - Investment in green hydrogen production is set to exceed \$1billion a year by 2023 as the costs of both renewable power and electrolyser technology fall and governments introduce supportive policies, according to IHS Markit, which said before the announcement of the Green Hydrogen Catapult that there was already a pipeline of 23GW of electrolysis projects, up from current capacity of just 82MW.  
<https://www.forbes.com/sites/mikescott/2020/12/14/green-hydrogen-the-fuel-of-the-future-set-for-50-fold-expansion/>

## **Palladium**

- **China Leads Auto Industry Recovery as Sales Top Expectations**

- China's vehicle sales are likely to hit 25.3 million units this year, an industry body said on Friday, as the world's biggest vehicle market continued to lead the global auto industry recovery from lows hit during the COVID-19 pandemic.  
<https://money.usnews.com/investing/news/articles/2020-12-10/china-auto-sales-to-hit-25-million-units-this-year-industry-body>
- **Euro 7 Emissions Standards Might Spell Doom For Combustion Engine-Only Models**
  - Carmakers are reportedly worried that upcoming Euro 7 emissions standards (2025 intercept) will increase compliance costs to the point where it will no longer be profitable to build passenger vehicles without a plug-in hybrid system or fully electric propulsion.
  - One proposal would see NO<sub>x</sub> drop to 30 mg/km, which by today's standards would actually be below the margin of error seen on portable emissions measurement systems.
  - Come January, Euro 6d standards will enforce vehicles having to emit no more than 80 mg/km, on the test bench as well as in real world conditions – excluding the margin of error on portable emissions measurement units, estimated at 34.4 mg/km max.  
<https://www.carscoops.com/2020/12/euro-7-emissions-standards-might-spell-doom-for-combustion-engine-only-models/>
- **Chemists used crab shells to improve palladium catalysts**
  - Palladium-based catalysts are used to speed up cross-coupling reactions in which two fragments are bound together via atoms of carbon. Cross-coupling reactions with palladium-based catalysts account for about 17% of all reactions in medicinal chemistry. However, the majority of palladium-based catalysts are non-reusable.  
<https://www.chemeurope.com/en/news/1169179/chemists-used-crab-shells-to-improve-palladium-catalysts.html>

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

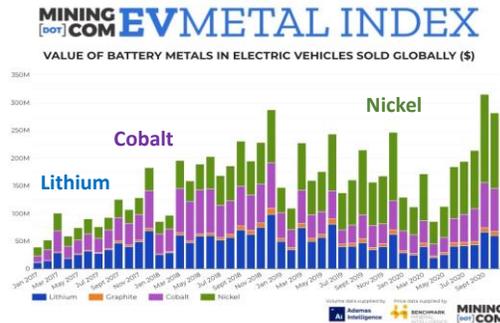
- **Iridium: OLED panel suppliers to see major gains from iPhone next year, says report**
  - Samsung Display is currently the main supplier of OLED panels for the iPhone. It is estimated that in 2021, Apple will ship 180 million OLED phones, of which nearly 80% will be supplied by Samsung Display (140 million units), with LGD to supply 30 million units. BOE may take 10 million units.  
<https://digitimes.com/news/a20201217PD217.html>
- **IBM Touts STT MRAM Technology at IDEM 2020**
  - At the IEEE International Devices Meeting this week IBM is rolling key research aimed at boosting AI and hybrid cloud technology. One of the more prominent efforts showcased is IBM's success fabbing the first 14nm node embedded Spin-Transfer-Torque (STT) MRAM (eMRAM).
  - "The circuit functionality was demonstrated with read/write tests having write pulses as short as 4 ns, and with much reduced write bias for pulse widths in the 10-20ns range. These and other performance metrics indicate great potential for this technology in mobile cache and similar applications," write IBM researchers in a paper being presented tomorrow at the conference.  
<https://www.hpcwire.com/2020/12/15/ibm-touts-stt-mram-technology-at-idem-2020/>
- **Ruthenium: Color-changing electrochromic glass coming to more smartphones in 2021**
  - A lot more smartphones from Chinese OEMs are going to employ electrochromic glass this year, including Vivo, Xiaomi, Meizu and Nubia.  
<https://www.bgr.in/news/color-changing-electrochromic-glass-coming-to-more-smartphones-in-2021-927424/>
- **Ruthenium: Upcycling: New catalytic process turns plastic bags into adhesives**
  - Converting polyethylene packaging into high-value products incentivizes plastics recycling.
  - The chemical process that Hartwig and his colleagues developed keeps many of the original properties of polyethylene, but adds a chemical group to the polymer that makes it stick to metal: something polyethylene normally does poorly.  
<https://www.sciencedaily.com/releases/2020/12/201217135231.htm>

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

- **EV Metal Index on course for record year**

- The MINING.COM EV Metal Index, which tracks the value of battery metals in newly registered passenger EVs (including hybrids) around the world fell back from the all-time high hit in September, but still recorded the third best month ever in October.

<https://www.mining.com/ev-metal-index-on-course-for-record-year/>



- **China Moly buys 95% of DRC copper/cobalt mine from Freeport for \$550m**

- China Molybdenum said on Sunday it had acquired a 95% stake in the Kisanfu copper/cobalt mine in the Democratic Republic of Congo (DRC) from US-based Freeport-McMoRan Inc for \$550-million.
- The Chinese company's takeover of the undeveloped Kisanfu project boosts its reserves in the DRC, the world's top producer of LiB cobalt, where China Moly operates the giant Tenke Fungurume mine.

<https://www.miningweekly.com/article/china-moly-buys-95-of-drc-coppercobalt-mine-from-freeport-for-550m-2020-12-14>

- **Tesla Model Y RWD Deliveries Reportedly Starting In January**

- The cheapest Model Y you can get is indeed that \$49,990 Model Y Long Range, which is \$12,000 more expensive than the cheapest Model 3.

<https://cleantechnica.com/2020/12/16/tesla-model-y-rwd-deliveries-reportedly-starting-in-january/>

- **China May Push Tesla Over Its 500,000 Vehicle Goal**

- Demand for Teslas in China could help push the company over its 2020 goal of selling 500,000 vehicles, according to one analyst.

<https://www.webpronews.com/china-may-push-tesla-over-its-500000-vehicle-goal/>

- **BASF and Eramet partner to assess the development of a nickel-cobalt refining complex to supply growing electric vehicle market**

- BASF and Eramet have signed an agreement to jointly assess the development of a state-of-the-art nickel and cobalt hydrometallurgical refining complex. Such a development would include a High-Pressure Acid Leaching (HPAL) plant and a Base Metal Refinery (BMR). The HPAL would be located in Weda Bay, Indonesia, while the location of the BMR will be determined during the feasibility study.

<https://www.basf.com/global/en/media/news-releases/2020/12/p-20-388.html>

- **'Europe's battery recycling quotas are blunt and a decade too late'**

- Last week, the commission said it wants to write into law minimum recycling quotas for batteries entering the EU market. Starting in 2027, batteries placed in electric vehicles (EVs) would need to have a declaration of their recycled cobalt, lead, lithium, and nickel content. Three years later, minimum recycled content quotas would be introduced. The suggested quota for cobalt would be 12%, for lead 85%, and for lithium and nickel the commission envisioned a 4% target. Five years later, the thresholds would rise to 20% for cobalt, 10% for lithium, and 12% for nickel

<https://www.pv-magazine.com/2020/12/16/europes-battery-recycling-quotas-are-blunt-and-a-decade-too-late/>

Regards –

**FROM PRECIOUS METALS  
COMMODITY MANAGEMENT LLC**

**Merry  
Christmas**

