Weekly Precious Metals News Articles: September 3, 2021

Distribution: If you no longer wish to be on this mailing list, send me a note. If others want to be added to distribution, again let me know.

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 moves lower with jobs data expected to provide the metal's next directional cue**
  - Gold futures moved lower Thursday, failing to find support even with the dollar steady and bonds yields edging down, as investors look to August U.S. employment data due Friday to determine the path forward for the Federal Reserve and bullion.
https://www.marketwatch.com/story/gold-futures-edge-higher-as-dollar-and-treasury-yields-slip-11630584675?siteid=msnheadlines
- **Gold Jewellery Demand in China Doubled During H1 This Year**
  - The surge in Chinese gold demand more than offset the dip in demand from India, which continues to be hit badly by the pandemic.
https://www.scrapmonster.com/news/gold-jewellery-demand-in-china-doubled-during-h1-this-year/1/80643
- **Is gold still an inflation hedge?**
  - The gold price has languished over the past year, but what is the outlook from here?
  - On balance, it's still worth maintaining a bit of exposure to gold as a 'real' asset with limited supply, but bear in mind that it will likely be a frustrating one to own with extended periods in the wilderness. For instance, having more than doubled in the three years following the global financial crisis, it gave back half of those gains over the following couple of years. So, although gold is often said to be a 'safe haven' asset, in terms of short and medium-term ups and downs it can be anything but – which is why investors generally limit exposure to a modest amount such as 5% of a portfolio.
https://www.charles-stanley-direct.co.uk/News_Features_Research/gold-still-inflation-hedge
- **Nano 'camera' made using molecular glue allows real-time monitoring of chemical reactions**
  - The device, made by a team from the University of Cambridge, combines tiny semiconductor nanocrystals called quantum dots and gold nanoparticles using molecular glue called cucurbituril (CB). When added to water with the molecule to be studied, the components self-assemble in seconds into a stable, powerful tool that allows the real-time monitoring of chemical reactions.
https://phys.org/news/2021-09-nano-camera-molecular-real-time-chemical.html

Semiconductor Related Articles (impacting Precious Metals electronics):

- **Chip shortage highlights U.S. dependence on fragile supply chain**
  - 75% of semiconductors, or microchips th,e tiny operating brains in just about every modern device, are manufactured in Asia. Lesley Stahl talks with leading-edge chip manufacturers, TSMC and Intel, about the global chip shortage and the future of the industry.

https://www.cbsnews.com/news/semiconductor-chip-shortage-60-minutes-2021-08-29/

- **Work Remains for Congress to Strengthen U.S. Semiconductor Supply Chain as SEMI Continues Engagement with Policymakers**

  One of the first orders of business for Congress when it returns in September should be to fund the CHIPS for America Act programs, which were authorized earlier this year in the fiscal year 2021 National Defense Authorization Act (NDAA). In April, the White House Supply Chain Report called for $52 billion in semiconductor incentives and research funding. In June, the Senate passed the United States Innovation and Competition Act (USICA), which included emergency appropriations of $39 billion to fund the incentive grant program at the Commerce Department, $12 billion for semiconductor research programs, and $2 billion for the CHIPS for America Defense Fund.

  The House has yet to act, the programs remain unfunded. SEMI encourages the House to move quickly to pass funding for these programs and ensure the Commerce Dept's incentive program is available to new and expanded facilities to produce semi manufacturing equipment and materials, as called for in the White House Supply Chain Report.
  https://www.semi.org/en/blogs/technology-trends/work-remains-for-congress-to-strengthen-us-semiconductor-supply-chain-as-semi-continues-engagement-with-policymakers

- **Global 200mm Fab Capacity on Pace to Record Growth to Meet Surging Demand and Address Chip Shortage**
  - Semiconductor manufacturers worldwide are on track to boost 200mm fab capacity by 950,000 wafers, or 17%, from 2020 through 2024 to reach a record high of 6.6 million wafers per month, SEMI announced today in its 200mm Fab Outlook Report. The spending increase reflects in part the global semiconductor industry's push to overcome the current chip shortage with 200mm fab utilization continuing at high levels.
    https://www.semiconductor-digest.com/global-200mm-fab-capacity-on-pace-to-record-growth-to-meet-surging-demand-and-address-chip-shortage/

- **Microprocessor Sales Will Continue Double-Digit Growth in 2021**
  - Microprocessor sales are maintaining strength in 2021 after climbing 16% last year in the midst of the global Covid-19 virus health crisis that drove up the world's reliance on the Internet during the pandemic. IC Insights' recently released Mid-Year Update to The McClean Report 2021 now projects MPU sales to increase 14% in 2021, which will lift the total microprocessor market to a record-high $103.7 billion, compared to a 9% increase that was expected in January.
    https://www.icinsights.com/news/bulletins/Microprocessor-Sales-Will-Continue-DoubleDigit-Growth-In-2021/

- **Semiconductor market is forecasted experience 20% or more revenue growth for the year.**
  - Top challenges to growth include economics, geopolitics, length and severity of pandemic – including the effectiveness of the vaccine roll out globally and the impact of corona virus variants:
  - Strong economic recovery is straining supply chains across the economy.
  - Impacts delivery of manufacturing equipment needed by companies to ramp production.
  - Trade and IP concerns remain, especially between China and the U.S.
  - Highest materials growth areas include metals/ precursors, cleans followed by CMP and Photoresists: Driven by 3DNAND, DRAM, and advanced Logic
    https://techcet.com/wp-content/uploads/2021/08/TECHCET-AdvisoryAlert-Impact-081121LS.pdf

- **Semiconductor shortages continue to vex commercial transportation industry with lead times exceeding 5 months**

- TSMC expects strong demand and potential shortages going into 2022, with Intel anticipating an industry squeeze for up to two years.
- "Connectivity, security, and integration are key elements of commercial transport today. Upwards of 17 compute modules are needed for a heavy-duty vehicle and everything from safety systems to engine control and telematics are impacted by these semiconductor delays," said Susan Beardslee, principal analyst of supply chain management and logistics at ABI Research.
https://www.digitimes.com/news/a20210831PR201.html

Silver

- **Is This a Healthy Correction of New Bear Market for Silvrer?**
    - Investors in the precious metals space have had to endure a painful 12-month stretch, with gold (GLD) down 18%, silver (SLV), and many miners down as much as 45% in the same period. This pathetic performance has been even more frustrating considering the backdrop of inflation readings at multi-year highs and ultra-loose monetary policy. However, while we have seen significant damage to the short-term charts for gold and silver during this lengthy correction, the long-term charts remain bullish, with minimal technical damage.
https://finance.yahoo.com/news/healthy-correction-bear-market-silver-141406103.html
- **Is The Silver Price Preparing For Another Run At The Elusive $30.00?**
    - The daily chart shows $24.00 has been an area of particular interest over the last year. As previous support, $24.00 was the catalyst for 20% rallies in August 2020 and April this year. Furthermore, a significant trend line from September 2020's low is seen at $22.85. This reinforces the strong support below the market. Additionally, the Relative Strength Index (RSI) is breaking out on the upside. The current reading of 47.86 leaves plenty of room for the price to run higher. However, for this to happen, the Silver price must first uncap the resistance of a descending trend line at $24.09.
https://www.investingcube.com/is-the-silver-price-preparing-for-another-run-at-the-elusive-30-00-commodities-silver/
- **Australia could install another 8.9 GW of PV by 2025 – pv magazine International**
    - Solar could supply 77% of Australia's electricity demand by 2026, according to a new report by the Australian Electricity Market Operator.
https://www.pv-magazine.com/2021/09/01/australia-could-install-another-8-9-gw-of-pv-by-2025/
- **Treasure explorers recover 61 tons of silver bullion in waters three miles deep**
    - Odyssey Marine Exploration said it has recovered more than 61 tons of silver bullion this month from a depth of nearly three miles. This recovery of bullion from the SS Gairsoppa, a 412-foot steel-hulled British cargo ship that sank in February 1941, consists of 1,574 silver ingots weighing about 1,100 ounces each or almost 1.8 million troy ounces in total, sets a new record for the deepest and largest precious metal recovery from a shipwreck. The silver has been transported to a secure facility in UK.
https://en.mercopress.com/2013/07/24/treasure-explorers-recover-61-tons-of-silver-bullion-in-waters-three-miles-deep
- **Op-Ed: Game changer — New nano disinfectant fights viruses for up to 7 days**
    - In a timely discovery, researchers at the University of Central Florida have invented a surface disinfectant which can work against viruses. This is a first, and it's called "cerium oxide", using silver nanoparticles and an oxidization process with both chemical and molecular properties.
    - Researchers say it has shown effects against coronaviruses and rhinoviruses. The disinfectant bonds with the viruses, "exploding" them by chemical/mechanical interactions. The disinfectant leaves no residue. The disinfectant, as yet unnamed, works on a variety of viruses. It also has applications against Golden Staph and other diseases.
https://www.digitaljournal.com/tech-science/op-ed-game-changer-new-nano-disinfectant-fights-viruses-for-up-to-7-days/article

- **Mexican researchers say they created face mask that neutralises Covid-19, World News & Top Stories - The Straits Times**
    - Researchers at the National Autonomous University of Mexico (Unam) have created a face mask using silver and copper nano layers that neutralise Sars-CoV-2, the virus that causes Covid-19, the university's official gazette said on Thursday (Aug 26).
    - Unam is calling the triple-layered antimicrobial face mask SakCu. Sak means silver in Mayan and Cu is the chemical symbol for copper.
    https://www.straitstimes.com/world/mexican-researchers-say-they-created-facemask-that-neutralises-covid-19
- **A 492% China Premium Shows Why Solar Firms Are Heading Home**
    - Shanghai-listed Xinjiang Daqo New Energy Co. now has a market cap of $23.5 billion, compared to a $3.97 billion valuation for New York-listed Daqo New Energy Corp. That's despite the two firms having almost identical assets, according to Robin Xiao, an analyst at CMB International Securities Corp.
    https://www.bloomberg.com/news/articles/2021-08-26/a-4-922-china-premium-shows-why-solar-firms-are-heading-home

Precious Metals Mining:

- **Impala Platinum Boosts Dividend as Miner Posts Record Profit - Bloomberg**
    - Full-year total dividend increases fourfold to 22 rand
    - Miner sees 'robust' medium-term demand from auto industry
    https://www.bloomberg.com/news/articles/2021-09-02/impala-platinum-boosts-dividend-as-miner-posts-record-profit
- **The world wants more PGMs, and Northam's Paul Dunne has a plan to deliver them**
    - "There are three metals that would be important for the hydrogen economy," says Dunne. "Definitely platinum in both generation and use; iridium for the generation of green hydrogen, and ruthenium in the use of hydrogen in the fuel-cell application." He adds another, rhodium, as crucial. "Guess where they are all found? South Africa."
    - Handily, the metals also predominantly occur in a type of mineralisation known as 'UG2'. UG2 is deeper than Merensky Reef which is more prized as a consequence. Or was. Hydrogen technology, however, has thrust UG2 resources, in which South Africa is abundant, to the forefront.
    https://www.miningmx.com/news/platinum/47247-the-world-wants-more-pgms-and-northams-paul-dunne-has-a-plan-to-deliver-them/
- **Sibanye CEO says SA is starting to trust business much more than govt**
    - Sibanye CEO, Neal Froneman, says the July unrest was not unexpected.
    - The company has been warning about community unrest for a long time, and he says confidence in government "to do the right things" is low.
    - "What is becoming very clear to us is that civil society is beginning to trust business much more than they trust government leadership," he added.
    https://www.news24.com/fin24/companies/mining/sibanye-ceo-says-sa-is-starting-to-trust-business-much-more-than-govt-20210827

E-Waste & Precious Metals Recycle Related:

- **MRFs face 'brunt of the negative impact' from battery fires - Resource Recycling**
    - Lithium-ion battery fires are affecting all types of waste management and recycling facilities. But the U.S. EPA recently concluded that the municipal recycling sector has it worse than others.
    - The report looked at the details of fires involving or suspected to involve lithium-ion batteries (LIBs) at 64 waste management facilities between 2013 and 2020. Details were gathered from news

reports, expert interviews and other sources. Of the 64, researchers found 23 were MRFs, 13 were transport facilities, 10 were landfills and the remaining 18 were a variety of other facility types, including e-scrap processors, scrap metal yards, waste-to-energy plants and more.
https://resource-recycling.com/recycling/2021/08/31/mrfs-face-brunt-of-the-negative-impact-from-battery-fires/

- **Tradition Vs. Technology In Auto Recycling - Auto Recycling World**
    - The time has come to spend a little money per month and ask several of the software companies in our industry to help you share your inventory with the people that need to buy it – in a way that they want to see it. Let me be more direct: your inventory must show up inside the estimate-writing platform that the body shops and garages use. I'm not going to name all of the businesses that can help you do this, but they are at our trade shows and advertising their services to you on a regular basis. It's time to change.
    https://autorecyclingworld.com/tradition-vs-technology-in-auto-recycling/
- **Sims expands into Mexico with new facility**
    - Sims Lifecycle Services has opened a processing center in Mexico, where the company has seen growing demand for ITAD and data center decommissioning services.
    - West Chicago, Ill.-based Sims Lifecycle Services (SLS) on Aug. 31 announced the new facility, which is located in Guadalajara, Mexico. The facility is the latest expansion for SLS, which operates six processing centers in the United States, as well as facilities in Europe, Singapore, Australia and India.
    - "We continue to see our data center and ITAD clients grow in Mexico, and this facility will help us better serve them," said Sean Magann, chief commercial officer for SLS, in a statement.
    https://resource-recycling.com/e-scrap/2021/09/02/sims-expands-into-mexico-with-new-facility/?utm_medium=email&utm_source=internal&utm_campaign=Sept+2+ESN
- **Sabin Metal Corporation | The leader in precious metal refinement, recovery and recycling.**
    - New website, new logo
    https://www.sabinmetal.com/

Platinum

- **Platinum and palladium prices hit by slowing vehicle production**
    - Both precious metals are used widely in the motor industry in the manufacture of catalytic converters, but demand has fallen this year as shortages of other vehicle components – particularly semiconductors – have constrained automotive production.
    - IHS Markit estimates that global auto production could fall by 7.1 million vehicles in 2021 as supply chain bottlenecks continue due to economic disruption caused by rising COVID-19 cases.
    https://capital.com/platinum-and-palladium-prices-hit-by-slowing-vehicle-production
- **WPIC: Platinum demand upside from higher loadings and rising production of heavy-duty vehicles**
    - The heavy-duty (HD) vehicle sector globally saw production volumes grow by 5% to c.4.36 million vehicles in 2020 according to the International Organization of Motor Vehicle Manufacturers (OICA). This unexpected growth contrasted with the COVID-driven light vehicle (LV) weakness and was principally driven by the 31% surge in Chinese HD diesel production. Over the first 6 months of this year, Chinese HD diesel production has risen by 20% to c.1 million units, while North American and European markets have experienced growth of 33% and 34% respectively, as infrastructure and construction focussed stimulus policies have spurred continued demand for HD vehicles. Positive HD production trends, plus the impact of tightening HD emissions regulations, are a key driver of automotive platinum demand growth.
    https://platinuminvestment.com/files/884932/WPIC_Platinum_Perspectives_August_2021.pdf
- **Sumitomo Chemical to Expand Production Capacity for High-Purity Chemicals for Semiconductors at its Ehime Works and in South Korea**

- Sumitomo Chemical's business of high-purity chemicals for semiconductors got its start in 1978, when the Company began the production of sulfuric acid and nitric acid for semiconductors at its Chiba Works in Japan. High-purity chemicals used in the semiconductor production process, mainly for precision cleaning, are manufactured by using ultra-high purification technology to reduce impurities down to a parts-per-trillion level in order to prevent foreign materials such as metal and organic impurities from affecting both quality and yield of semiconductors. https://www.sumitomo-chem.co.jp/english/news/detail/20210824e_1.html

Fuel Cells/Hydrogen Economy Related Articles:

- **Green Hydrogen Could be the Fuel of the Future. Here's Why It's Not Yet a Silver Bullet**
  - Facilities to produce this cleaner form of the gas have popped up across the globe -- in the United States, western Europe, China, Australia, Chile and South Africa, among other countries. The burgeoning global green hydrogen market is projected to be worth $11 trillion by 2050, by Goldman Sachs' estimates. But critics of green hydrogen say using solar or wind energy to produce another fuel right now is a waste of precious renewables, as the world struggles to transition away from fossil fuels. At the same time, plans to use blue hydrogen -- which is produced using fossil fuels -- are coming under increasing scrutiny. https://www.actionnewsnow.com/content/national/575193082.html?ref=082
- **The Hydrogen Standard Digital Magazine**
  - 28-pages https://view.publitas.com/thehydrogenstandard/hydrogen-standard-issue-final/page/1
- **Nikola Announces Strategic Agreements with Bosch for Fuel-Cell Manufacturing**
  - Nikola and Bosch Group companies have signed agreements for Nikola to utilize fuel-cell power modules using technology licensed from Bosch
  - The agreements allow Nikola to incorporate fuel-cell power modules suited to meet the needs of Nikola's vehicles, providing for competitive cost and performance advantages
  - Under the agreements, fuel-cell power module assembly will commence at Nikola's manufacturing facility in Coolidge, Arizona in 2023 alongside production of Nikola's Tre fuel-cell electric truck
  - Pursuant to the agreements, Bosch will provide key components to Nikola, including the fuel-cell stack, air compressor with power electronics and control unit with sensors https://nikolamotor.com/press_releases/nikola-announces-strategic-agreements-with-bosch-for-fuel-cell-manufacturing-130?
- **Exelon Generation to produce pink (or purple) hydrogen at Nine Mile Point**
  - Exelon Generation announced that it will be producing pink hydrogen (also called red or purple H2) using an electrolyzer powered by nuclear electricity as it has received a US Department of Energy (DOE) grant.
  - The DOE grant is meant to let Exelon Generation investigate the possibilities associated with on-site pink hydrogen production at the Nine Mile Point, New York nuclear plant. The company will be collaborating with Argonne National Laboratory, National Renewable Energy Laboratory, Idaho National Laboratory, and Nel Hydrogen. They will work together for the demonstration of integrated production, hydrogen storage, and normal plant use. https://www.hydrogenfuelnews.com/pink-hydrogen-exelon-generation/8548180/
- **Hino debuts fuel cell Class 8 | Commercial Carrier Journal**
  - Hino Trucks debuted Tuesday its Class 8 hydrogen at the 2021 ACT Expo in Long Beach, California.
  - In October 2020, Hino unveiled its Project Z – a development path to zero emissions Class 4 through Class 8 trucks, leaning on partnerships with technology leaders in advanced electrification drive systems. Hino itself is a subsidiary of Toyota.

  - Powered by a hydrogen fuel cell electric drivetrain, the Hino XL8 prototype is the first fruit of that effort. https://www.ccjdigital.com/alternative-power/article/15114316/hino-debuts-fuel-cell-class-8

- **Toyota to move commercial vehicle fuel cells from testing to production**
  - Starting in 2023, a dedicated line at the Toyota Motor Manufacturing Kentucky (TMMK) plant will begin assembling integrated dual FC modules destined for use in hydrogen-powered, heavy-duty commercial trucks. Toyota says the move will allow manufacturers to integrate fuel cell electric technology into existing platforms.
  - The dual fuel cell modules, which are a key component of Toyota's overall FC kit, weigh approximately 635kg and can deliver up to 160kW of continuous power. The FC kit also includes a high-voltage battery, electric motors, transmission and hydrogen storage assembly from top-tier suppliers. Toyota will also offer its powertrain integration expertise to help truck manufacturers adapt these emission-free drivetrain systems to a wide variety of applications in the heavy-duty trucking sector. https://www.enginetechnologyinternational.com/news/electric-powertrain-technologies/toyota-to-move-commercial-vehicle-fuel-cells-from-testing-to-production.html

Palladium

- **Palladium Price Analysis: Drops towards $2,400 on weekly support break**
  - Palladium takes offers to refresh intraday low, prints three-day downtrend.
  - Downward sloping RSI, failures to cross 100-SMA also strengthen bearish bias.
  - Bulls may refrain from entries unless crossing six-week-old falling trend line. https://www.fxstreet.com/news/palladium-price-analysis-drops-towards-2-400-on-weekly-support-break-202109020502
- **Low Car Inventory Expected Into 2022 As Microchip Shortage Worsens Yet Again**
  - The chip shortage was beginning to improve earlier in the summer, but industry analysts say the Delta variant of COVID-19 has hit chip factory employees in southeast Asia hard, forcing some plants to close and worsening the shortage.
  - Automakers are temporarily closing factories as the chip shortage continues, further limiting car inventory. U.S. dealers had just under a million new vehicles on their lots in August, 72 percent lower than the figures from August of 2019, automakers reported. https://www.msn.com/en-us/money/companies/low-car-inventory-expected-into-2022-as-microchip-shortage-worsens-yet-again/ar-AAO1LEP?ocid=BingNewsSearch
- **United States Mint 2021 Palladium Proof Coin Available**
  - The United States Mint (Mint) will begin accepting orders for the 2021 American Eagle One Ounce Palladium Proof Coin on Sept. 2 at noon EDT. Production of this coin is limited to 12,000, with orders limited to one per household for the first 24 hours of sales. https://www.pressreleasepoint.com/united-states-mint-2021-palladium-proof-coin-available

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

- **Ruthenium: World's First Green Ammonia Terminal Receives Large Governmental Grant**
  - With this public funding the project is on track to be the first in the World to pilot ammonia bunkering operations – taking the first step to enable a large-scale shift to carbon free fuel for ships.
  - The Norwegian government established the "Green platform Initiative" program to help lift exactly this type of innovative project. Ammonia is important for the green transition, especially for the shipping industry. We will decrease emissions, not development, says Sveinung Rotevatn, Norwegian Minister of Climate and the Environment.

https://maritime-executive.com/corporate/world-s-first-green-ammonia-terminal-receives-large-governmental-grant

- **Iridium: New approach creates an exceptional single-atom catalyst for water splitting**
    - A new way of anchoring individual iridium atoms to the surface of a catalyst increased its efficiency in splitting water molecules to record levels, scientists from the Department of Energy's SLAC National Accelerator Laboratory and Stanford University reported today.
    - It was the first time this approach had been applied to the oxygen evolution reaction, or OER –part of a process called electrolysis that uses electricity to split water into hydrogen and oxygen. If powered by renewable energy sources, electrolysis could produce fuels and chemical feedstocks more sustainably and reduce the use of fossil fuels. But the sluggish pace of OER has been a bottleneck to improving its efficiency so it can compete in the open market. https://phys.org/news/2021-09-approach-exceptional-single-atom-catalyst.html
- **Ruthenium and Platinum PVD: Emerging Memories Look to Displace NOR, SRAM**
    - MRAM and ReRAM are forecast to replace the bulk of embedded NOR and SRAM in SoCs, and even displace DRAM and NAND flash for some applications. The report expects total MRAM manufacturing equipment revenue will grow to more than one-hundred times its $10 million 2020 total to reach $1.1 billion in 2031, while standalone MRAM and STT-RAM revenues will grow to about $1.7 billion, or 42x+ 2020's standalone MRAM revenues. https://www.eetimes.com/emerging-memories-look-to-displace-nor-sram/#

Clean Energy General News (New Section)

- **Solar boom, pandemic curbs drive Australia's carbon emissions down 5%**
    - Australia's greenhouse gas emissions fell 5.3% in the year to March 2021 as coronavirus lockdowns reduced transportation exhaust and increases in solar and wind power cut emissions from electricity generation, government data showed on Tuesday. https://www.msn.com/en-us/news/us/solar-boom-pandemic-curbs-drive-australias-carbon-emissions-down-5-25/ar-AANUWSA?ocid=BingNewsSearch
- **This Periodic Table illustrates how we interact with each element**
  https://www.theladders.com/career-advice/this-periodic-table-illustrates-how-we-interact-with-each-element
- **RANKED: World's top 10 biggest copper mines**
    - JX Nippon and Mining holds a stake in top 2.
    - Top 10 represent just of 5Mt per annum, vs a 25Mt/annum global industry or 20%
  https://www.mining.com/featured-article/ranked-worlds-top-10-biggest-copper-mines/
- **Copper: ASEAN tightens its scrap import specifications**
    - Indonesia and Malaysia have raised the purity standards on their imports of copper and copper alloy scrap and reduced the thresholds for impurities. The overall objectives of the new guidelines are to facilitate the lawful importation of non-ferrous scrap, while protecting the environment from any hazardous contaminants in line with the United Nations Sustainable Developments Goals, specifically to ensure sustainable consumption and production patterns. The moves by these ASEAN nations follow the stricter environmental legislation standards imposed by China in November 2020. https://roskill.com/news/copper-asean-tightens-its-scrap-import-specifications/

BEV / LiB Battery Market News

- **BASF, Shanshan form cathode material JV**
    - German chemicals giant BASF and major Chinese producer of lithium battery materials Ningbo Shanshan on 31 August established joint venture BASF Shanshan Battery Materials to focus on the fast-growing electric vehicle industry. https://www.argusmedia.com/en/news/2249664-basf-shanshan-form-cathode-material-jv-correction

- **Nickel price soars to record in Shanghai on strong demand, low stocks**
    - Nickel prices in Shanghai soared to their highest on record Tuesday, supported by solid demand from industrial sectors and low inventories across the world.
    - The most-traded October nickel contract on the Shanghai Futures Exchange hit a record 149,870 yuan ($23,197) a tonne, up 21% year-to-date. Three-month nickel on the London Metal Exchange also touched its highest since July 30 at $19,810 a tonne, having risen 17% so far this year.
    https://www.mining.com/nickel-price-soars-to-record-in-shanghai-on-strong-demand-low-stocks/
- **Congo reviewing $6 billion mining deal with Chinese investors**
    - Democratic Republic of Congo's government is reviewing its $6 billion "infrastructure-for-minerals" deal with Chinese investors as part of a broader examination of mining contracts, Finance Minister Nicolas Kazadi told Reuters.
    - President Felix Tshisekedi said in May that some mining contracts could be reviewed because of concerns they are not sufficiently benefiting Congo, which is the world's largest producer of cobalt and Africa's leading miner of copper.
    http://www.reuters.com/article/us-congo-mining-exclusive-idUSKBN2FS11M?utm_source=34553&utm_medium=partner
- **The Battery Metal Supply Squeeze Is Far From Over**
    - "While not yet having material impact on internal combustion engine vehicle sales, increasing demand for battery metals to meet requirements for electric vehicle production is already starting to have substantial implications for battery metal supply," the South African firm said. In short, the world will need to expand supply in order to meet that rising demand.
    - Demand for a variety of critical metals needed for the transition to renewables will be significant. Demand for everything from copper to cobalt is set to skyrocket, the IEA explained its in report titled "The Role of Critical Minerals in Clean Energy Transitions."
    https://oilprice.com/Energy/Energy-General/The-Battery-Metal-Supply-Squeeze-Is-Far-From-Over.html
- **BASF and Shanshan to form a joint venture serving the largest battery materials market, China**
    - BASF gains access to Chinese CAM market, expanding its global footprint with an integrated, unique cathode active materials supply chain
    - Shanshan benefits from BASF's global automotive customer network strengthening competitiveness in the Chinese market
    - Partnership generates significant technology synergies and tailored solutions for a broad customer base
    https://catalysts.basf.com/news/basf-and-shanshan-to-form-a-joint-venture-serving-the-largest-battery-materials-market-china
- **China's GAC to start production of 1,000km range electric Aion LX**
    - The ultra-long range claimed by GAC Aion is due to the sponge silica-based anode battery technology which the carmaker unveiled at the 2021 GAC Tech Day back in April.
    - Its proprietary battery technology has created a 150kW battery that is 20% smaller by volume and 14% lighter by mass than the company's existing 650-kilometre battery, and has an energy density of around 280Wh/kg.
    https://thedriven.io/2021/07/16/chinas-gac-to-start-production-of-1000km-range-electric-aion-lx/
- **Lucid Air First Drive Confirms It As An Absolute Threat To Tesla**
    - This is a significant milestone as MotorTrend's Jonny Lieberman is the first person outside Lucid Motors to get behind the wheel of an Air electric luxury sedan (you can read the exclusive first drive review in full on the magazine's website).
    - He got to drive the 933-hp Lucid Air Dream Edition R, where R stands for Range—there's also a 1,111-hp Dream Edition P, for Performance. The R model promises a driving range of more than 500

miles (805 km) thanks to a 113-kWh battery, and Lieberman's experience confirmed that to be very accurate.
    - The story reads really well till the last sentence: "Then again, it has a starting MSRP of $169,000…" https://insideevs.com/reviews/528979/lucid-air-first-drive-motortrend/
- **Can the West Fix Its Growing Disconnect Between Battery Ambitions and Raw Material Supply?**
    - Outside of China, Europe and North America are the key regions developing significant lithium ion cell production capacity. Europe now has 778 GWh of capacity in the pipeline for 2030 — cell plants in production, under development, or planned — with North America's pipeline currently sitting at 499 GWh. There has been a notable uptick in investment into battery cell facilities in Europe and the USA since 2018 but this has not been matched by an increase in battery raw material mining and processing investment, leading to a growing disconnect between raw material demand and supply. https://www.benchmarkminerals.com/membership/can-the-west-fix-its-growing-disconnect-between-battery-ambitions-and-raw-material-supply/
- **New Lithium-Metal Battery Could Revolutionize Electronics**
    - Now, a team of scientists in Germany may have found the holy grail: a lithium-metal battery that reaches an incredibly high energy density of 560-Wh/kg with great stability.
    - The new battery uses a combination of cobalt-poor, nickel-rich layered cathode (NCM88) and a commercially available organic LP30 electrolyte, which, when working together, enable storage of high energy per mass and a largely stable capacity over many cycles, per the researchers. https://interestingengineering.com/new-lithium-metal-battery-could-revolutionize-electronics

Regards –