THE SILVERINSTITUTE

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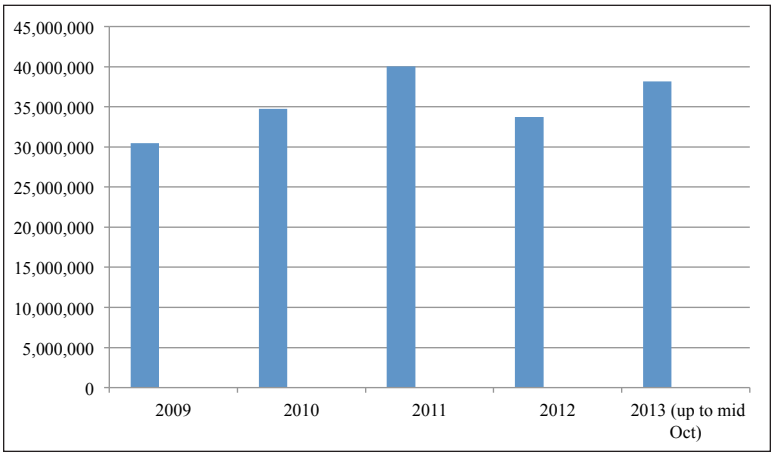
Silver News

Sales of American Eagle Silver Bullion Coins on Track to Break Record



"People see silver as an important part of their portfolios. They're buying in larger quantities than they used to buy." -- Terry Hanlon, President of Dillon Gage Metals

With two months to go in 2013, the U.S. Mint already has surpassed last year's sales of American Eagle Silver Bullion Coins and is on track to beat 2011's record.

Sales through mid-October totaled 36,954,500 compared to 33,742,500 for all of 2012. With sales averaging over 3.5 million coins per month this year, besting 2011's record-setting sales of 39,868,500 appears to be in reach.

In an interview with *Silver News* earlier this year, Richard A. Peterson, Deputy Director of the United States Mint, outlined several reasons for the coin's popularity. "The American Eagle Silver Bullion Coin enjoys a dominant market share worldwide. While the price of gold continues to trade at levels that puts gold bullion coins out of the reach of many investors, silver remains relatively affordable. Add to this the American Eagle Silver Bullion Coin's unique backing by the U.S. Government and its beautiful and uniquely American design and you can see why demand for these coins has continued to grow."

He noted that while investors have many others ways to invest in silver – silver-backed exchange-traded funds, silver mining stocks and others – many prefer the coins. "[The] one-ounce American Eagle Silver Bullion Coins allow investors and collectors who want to hold a physical form of precious metal in their investment portfolios a convenient and relatively cost-effective way to do so."

Terry Hanlon, President of Dillon Gage Metals in Dallas, concurs. "People see silver as an important part of their portfolios. They're buying in larger quantities than they used to buy." He says that many people prefer silver bullion coins to other forms of physical silver because they are issued by a government, which makes them accurate in weight, liquid and easy to sell in many different increments. "We can't get enough silver products to build up an inventory," adds Hanlon. "We can't keep up with demand, and not just in the United States. We sell a lot overseas, too."

Silver May be the Key to Bio-Batteries Made from Wastewater and Sewage

Recent research into alternative sources of electricity have shown that when bacteria touches iron oxide, the proteins on the surface of the germs produce small amounts of electrical current. Now, further studies show that by introducing silver oxide, the microbes can generate even more electricity.

This most recent study at Stanford University may help scientists and engineers in their quest for the production of so-called bio-batteries that can produce substantial amounts of electricity from wastewater, contaminants and sewage.

The researchers postulate that it should be possible, in theory at least, to connect bacteria directly to electrodes (the positive one is called an anode) that would then carry the electricity away in the normal fashion. During the process, microorganisms attached to the anode (often made of iron oxide) would start grabbing electrons from organic compounds dissolved in the wastewater to produce carbon dioxide and clean water. Harnessing these free electrons, however, has proved to be a challenge.

The Stanford team learned that when silver oxide is introduced to the area around the anode, the silver compound consumes electrons, literally pulling them out of the bacteria and sending them on their way. Why silver oxide works better than iron oxide is not fully understood; researchers suggest that it may be related to silver's extremely high electrical conductivity, the highest of any element.

Stanford's research titled, *Microbial Battery For Efficient Energy Recovery*, has been published in the *Proceedings of the National Academy of Sciences*.

OAO Moscow Exchange Broadens Market for Trading Silver, Other Precious Metals

The OAO Moscow exchange is introducing silver and gold trading with prices quoted in Russian rubles per gram. The effort will make it easier for smaller banks to trade the precious metals because transaction fees would be lower. Currently, most metals trading takes place on the over-the-counter market and is dominated by the country's largest banks, which charge higher trading fees. This limits trading to larger customers. The Exchange's move could make precious metals trading accessible to a larger group of traders, build liquidity and broaden the ability to hedge the metals.

The Exchange will also introduce swaps which are not available on the OTC.

Traders will settle contracts through unallocated accounts at the Exchange's National Clearing Center. The physical metal will be held in the form of bullion bars by nominated vaults.

Platinum and palladium contracts will start trading in the first half of 2014, according to Exchange officials.

A Place for Silver in the Growing "Slow Photography" Movement

There's a new trend gaining speed in the age of digital photography: so-called "slow photography" using old-fashioned silver-halide film.

The slow photography movement has been gaining traction in recent years in the same way that some audiophiles have rejected digital music because they believe that vinyl is truer to the original sound. To slow-movement photographers, silver halide films produce richer, more nuanced images than digital cameras.

Since the movement began several years ago (although some would say it never truly disappeared) websites such as The Impossible Project help newcomers find sources for what they term "analog instant photography" and what most others call Polaroid Instant camera photography. According to the website, about 300 million of these cameras are still around and functioning, so it's just a matter of finding them at garage sales, at thrift shops and in attics. The website also directs users to brick and mortar stores as well as other websites where they can purchase the once common instant film.

In 2008, the Impossible Project team saved the last Polaroid production plant for instant film in Enschede, The Netherlands.

In a recent Washington Post story, Impossible Project vice president Dave Bias suggested why people are attracted to the old technology."Our demographic is pretty young, so we're talking about a generation who grew up in digital, and they see our film as a way to escape." He adds: "But it's not all about nostalgia. For us, it's showing that film has a viable place in the modern world," he says. "People can have a real physical photo – something they can touch, something tangible."

Slow photo aficionados embrace the old Polaroid Instant Cameras. More than 300 million of these cameras are still around and functioning.

12th China International Silver Conference a Success

In early September, more than 400 delegates attended the China International Silver Conference in Kunming, China. The Silver Institute, along with China Chamber of Commerce of Metals, Minerals & Chemicals Importers and Exporters, the China General Chamber of Commerce, the Gems & Jewelry Trade Association of China and the China Nonferrous Metals Industry Association, hosted the conference, which was organized by the Beijing Antaike Information Development Co.

Delegates heard presentations from an international roster of noted speakers including Zhou Shijian, Senior Researcher of Sino-US Relations Research Center of Tsinghua University, who offered a presentation titled "Current Global Economic and Trade Conditions." He discussed the lingering effects of the 2008 financial crisis which is still weighing on the global economy, with some countries recovering faster than others.

Mitchell Krebs, President and Chief Executive Officer of Coeur Mining Inc., based in Chicago, Illinois, and a member of the Silver Institute's Executive Committee, spoke on "Global Silver Mining Resources," highlighting the opportunities and challenges facing the mining sector.

Cameron Alexander, Senior Analyst for Thomson Reuters GFMS and based in Perth, Australia, offered an "Analysis of Global Silver Market" which showed that there will be a modest recovery in industrial demand in 2013 driven by an improving economy and stock replenishment. He forecast that jewelry fabrication will return to healthy growth.

Stewart Murray, Chief Executive of London Bullion Market Association (LBMA) spoke on the "LBMA Good Delivery List," a timely presentation as more Chinese refineries are being added to the list.

Additionally, Giovanni Faoro, Chief Executive officer of IECO, and based in San Zeno di Cassola, Italy, spoke on "Advanced Technology for Production of Good Delivery Silver Bars." He discussed the Flameless Tunnel Process, which produces Good Delivery bars in conformity with the LBMA Good Delivery Rules while focusing on green technology.

Michael DiRienzo, Executive Director of the Silver Institute, who made a presentation on "The Future of Silver Industrial Demand," stated: "For twelve years the Silver Institute has served as a sponsor of this conference, and it is gratifying to see it grow not only in the number of attendees, but also in the strength and caliber of the program. We believe that the mutual sharing of ideas and information with our colleagues in China is leading to a stronger global silver market."

From left to right: Michael DiRienzo, Executive Director, The Silver Institute; Wang Jian, Vice Chairman of China Nonferrous Metals Industry Association; Shi Hongyue, Vice Chairman of Gems & Jewelry Trade Association of China; An Huimin, Deputy Party Secretary of China General Chamber of Commerce; Chen Feng, Chairman of China Chamber of Commerce of Metals Minerals & Chemicals Importers and Exporters.

No Manipulation of Silver Market: CFTC

The U.S. Commodity Futures Trading Commission ended a five-year investigation into claims of manipulation of the silver market and found no basis for the allegation. The case now is closed.

In their public statement, the Commission noted: "Based upon the law and evidence as they exist at this time, there is not a viable basis to bring an enforcement action with respect to any firm or its employees related to our investigation of silver markets."

The investigation was acknowledged by the CFTC in September, 2008, following public complaints about the differences in prices between silver futures and other silver products. Complainants said that when silver product prices increased, the prices of silver futures should have risen as well. They also alleged that large traders with short positions in the silver market were responsible for lower futures prices.

The CFTC stated the investigation used more than seven thousand enforcement staff hours reviewing and analyzing position and transaction data, including physical, swaps, options, and futures trading data, and other documents and information, as well as interviewing witnesses. The investigation also included an evaluation of silver market fundamentals and trading within and between cash, futures and over-the-counter markets.. The main focus was whether the silver futures contracts traded on the Commodity Exchange, Inc. (COMEX) were being manipulated.

For law enforcement and confidentiality reasons, the CFTC rarely confirms publicly the presence of an ongoing investigation. In this case however, because of the large interest expressed by the public through their Congressional representatives, the Commission deemed it appropriate to acknowledge their investigation.

Silver Helps to Produce More Hydrogen for Clean Energy Uses

"Water splitting," or artificial photosynthesis, is a way to convert the energy of sunlight into chemical energy to produce hydrogen and oxygen. (It's the opposite of a fuel cell.) The hydrogen can then be used for clean energy, especially in vehicles.

However, it's generally an inefficient method so scientists are using a zinc-oxide/silver photoelectrode -- which is very susceptible to sunlight -- to produce more hydrogen.

First, a laser is directed at a silver oxide film, which loosens silver particles. The silver enhances the light collecting properties of a zinc oxide array by scattering and then soaking light energy at different angles. The end result is that much more sunlight is absorbed which, according to a research team at National Taiwan University led by Hao Ming Chen, results in up to 200 percent greater production of hydrogen than without the silver particles.

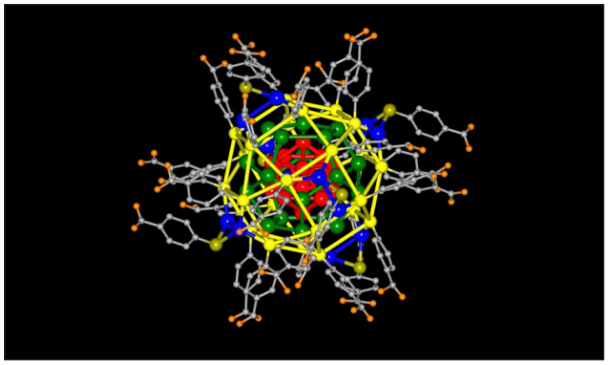
With a Dash of Sulfur, Silver Nanoparticles Take Giant Leap into the World of Medicine

Silver has found many uses in medicine as a medium to deliver drugs into patients, cell imaging and other applications. For all its positive attributes, though, silver nanoparticles have some drawbacks. The most critical is that it readily oxidizes, allowing it to degrade rather quickly once inside the body.

Scientists at the University of Toledo may have solved the problem by creating silver nanoparticles that are much more stable than had previously been thought possible.

The solution came about by accident. The researchers were measuring how silver interacts with light – silver is one of the world's most reflective materials – and they attached sulfur-containing molecules to silver nanoparticles as a way to aid in examining absorption levels. They discovered that the silver nanoparticles, which normally come in many sizes, were now all the same size. This uniform 'sizeness' led to stability in the nanoparticles' structures. In other words, the structure became compact, packed tightly with the same-sized, close-fitting atoms and therefore more immune to outside forces (oxygen and other elements) that would normally interact and degrade it.

"We've created stable silver nanoparticles in massive quantities and in a very pure form, using a less expensive substance than some of the traditional methods using gold," said Terry Bigioni, a chemist at the University of Toledo who helped lead the study. Gold has been traditionally used instead of silver because it was more stable, albeit more expensive. Now, silver nanoparticles have closed that usability gap. "Their purity is a huge advantage for biomedical applications."



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Researchers created silver nanoparticles (red and green) that are chemically stable because of the introduction of sulfur (yellow).

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