

Silver News

- An Interview with Courtney Lynn of Coeur Mining
- Silver-Coated Gold Nanoparticles Cause Glass to Change Color on Command
- The Staying Power of White House Silverware
- Mine Production Stagnates in 2015 As Silver Coin Demand Hits Record High
- Ceramic and Silver Tablet Cleans Water Cheaply and Easily
- China Lifts Import Ban of Silver Concentrates
- Silver Helps to Prevent Dental Implant Failures
- Kickstarter Project Wins Big for Silver Sock

An Interview with Courtney Lynn of Coeur Mining



Courtney Lynn

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Courtney Lynn, who was just listed in this year’s 100 Global Inspirational Women in Mining, published by the U.K. organization [Women in Mining](#), joined Coeur Mining as Treasurer in April 2013. Before coming to Coeur, she served as a Vice President within J.P. Morgan’s Global Corporate Bank, where she worked with and advised Metals & Mining and Retail clients on balance sheet funding, FX and rate hedging, equipment financing, treasury services and investments. She previously spent more than seven years in investment banking, most recently as a Vice President in J.P. Morgan’s and Bear Stearns’ Metals & Mining Groups, where she focused on capital markets financing and merger & acquisition activity in the precious and base metal subsectors. Ms. Lynn has been a member of the LBMA Silver Price Oversight Committee since April 2015. She holds Bachelor of Science degrees in Finance and Economics from New York University’s Stern School of Business. Following is an edited interview with Ms. Lynn.

Silver News: How did you enter the mining industry?

Courtney Lynn: My career started in investment banking where I covered mining companies for a number of years. One of the clients I covered was Newmont, which is where I met Coeur’s current COO, as he was a member of Newmont’s corporate development team. I kept in touch with him over the years, and after he eventually moved to Coeur, the position of Treasurer opened up, so I reached out to him to let him know that I was interested. One thing led to another, and I joined Coeur a few months later. It’s been a wonderful career move for me. I love being on the corporate side and seeing a mining company from the inside out rather from the outside in.

SN: What about the mining industry in particular interests you?

Ms. Lynn: I enjoy the various layers of complexity that we manage in the mining industry, particularly in silver and gold mining. In addition to our day-to-day mining operations, there is a heavy markets component to our business that we need to manage. The price of the product we make can change materially over the course

continued on page 2

of a few days. If you are manufacturing denim jeans, the price of your product doesn't change materially in a few minutes or hours because the Fed changed a word or two in their statement. In our business, that happens regularly. While this presents challenges, it also makes our jobs much more interesting.

SN: What have been your greatest achievements at Coeur?

Ms. Lynn: After our CEO Mitch Krebs took the helm in July 2011, he quickly recognized that he needed to be closer to investors and have access to a deeper talent pool if he wanted to build a best-in-class mining company. I joined the company in April 2013, shortly after it was announced that our corporate headquarters would be moving to Chicago, and was fortunate to be afforded a healthy amount of freedom in optimizing the Treasury function, and the sales of our silver and gold production in particular. I was able to try new things and test different strategies to see what worked and what didn't. This ultimately led to the sales strategy that we have been using for the last two years and also contributed to the hedging strategies that my boss CFO Peter Mitchell and I have worked together to develop. The experience that we gained from this allowed me to represent Coeur during important market discussions after it was announced that the silver fix was being discontinued. We had a seat at the table during a historic time in the silver and gold markets and were able to give the mining community a voice where it hadn't traditionally had one. It is likely that these things would have not been accomplished if Coeur had remained in Idaho and new blood hadn't been brought into the company. We have come very far since moving our headquarters, and I am proud that I was able to be an integral part of that progress and growth.

SN: What's important about the group Women in Mining?

Ms. Lynn: Despite the strong and growing presence of women in the workplace, we still remain the minority in most industries, particularly at the management level. Women in Mining offers a platform to recognize and celebrate women's successes in the mining industry, and I feel that this is very important to younger women who may not have access or exposure to female role models at work, particularly if they are working out of a small corporate office or a remote mine site. I have been fortunate to work with a couple of exceptional women over the course of my career, and that experience has been invaluable. It broadened the possibilities that I saw for myself, and through Women in Mining, I hope to be able to do that for someone else. I have a young daughter and another daughter on the way, so promoting women in my industry, and in the workplace in general, is something that is important to me for personal reasons as well.

SN: What message do you have for other women who want to enter the mining industry?

Ms. Lynn: Regardless of the industry that you decide to pursue, seek out opportunities to work for companies and managers who value and promote not only women, but diversity generally. An inclusive and open-minded culture attracts the best talent and improves your own chances for success. I've been very fortunate to work for Coeur, and Peter Mitchell in particular, who has been incredibly supportive of my work. This support and the collaboration of talented colleagues is what has allowed me to achieve a number of accomplishments since joining Coeur. Despite the accolades I have received for these accomplishments, I can tell you that it has been a team effort.

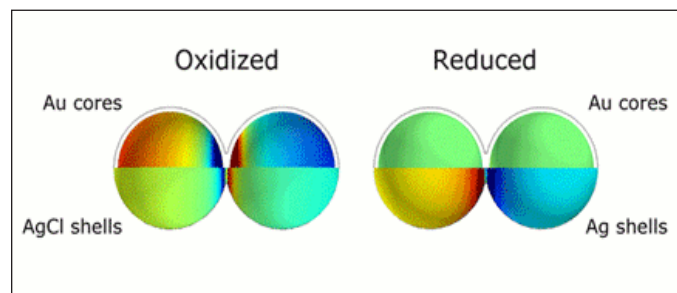
Silver-Coated Gold Nanoparticles Cause Glass to Change Color on Command

Researchers at Rice University are developing a method for building full-color displays using gold nanoparticles covered by silver and silver compounds that change hues in response to electrical current.

"Wouldn't it be interesting if we could create stained-glass windows that changed colors at the flip of a switch?" said Christy Landes, associate professor of chemistry at Rice and the lead researcher.

The team attached pairs of gold nanoparticles to a glass surface covered with indium tin oxide, the same conductor used in smartphone screens, and sealed it in a chamber filled with saltwater and a silver electrolyte. They applied a small voltage to the indium tin oxide and electroplated the silver to the gold nanoparticles. By later applying a negative voltage, the researchers caused a conductive silver 'drawbridge' to form. Reversing the voltage caused the bridge to disappear.

The method produces 'plasmons,' which are waves of electrons that flow across the surface of a particle. Each plasmon scatters and absorbs a particular frequency of light and even minor changes in the wave-like sloshing of a plasmon shift that frequency, causing a change in color. The greater the change in frequency, the greater the difference among the colors. "This is the first method yet demonstrated to produce dramatic, reversible color changes for devices built from light-activated nanoparticles," said Landes.



This image illustrates the markedly different colors of light that are scattered due to plasmonic shifts that occur when no metal bridges are present (left) and when they are (right). Click for animation.

The Staying Power of White House Silverware

While U.S. presidents change, the silverware used in the White House does not – at least not since the 1970s.

The first family's tableware is a pattern known as *King Charles*, produced by Gorham Manufacturing, which was founded in Providence, Rhode Island, in 1813. Gorham's first products were jewelry items but they soon moved to silver spoons, which were popular at the time as a replacement for pewter. The White House pattern is based on a 19th century *English Kings* design found in early American flatware. The current silverware is recast from 1894 dies and is replete with Rococo-type swirls and florid designs.

Forty years ago, the Nixon White House bought the 130-person setting for US\$21,600. It included 3,434 pieces and replaced a 90-person set that had been used since the Coolidge administration, according to the [Pittsburgh Post-Gazette](#). A White House curator said that the retail cost would have been more than \$100,000 but the wholesale price was about \$58,000. Gorham picked up the difference as a gift to the American people.

Previously, the White House had used a pattern called *Minuet*, from the International Silver Company, which had been in use since 1926.

During the George W. Bush presidency, Gorham's *King Charles* pattern remained in use at the White House, but the president used another Gorham design for dining aboard Air Force One. The association with Gorham stretches back to the 1860s; according to White House historians, Mary Todd Lincoln favored a Gorham pattern called *Josephine*.



This silverware pattern, known as *King Charles*, has been used at the White House since the 1970s.

Mine Production Stagnates in 2015 As Silver Coin Demand Hits Record High

Total silver supply is forecast to fall to 1,014.4 million ounces in 2015, down 3% from the previous year. At the same time, silver bullion coin sales reached a fresh record high in the third quarter of this year, totaling 32.9 million ounces, and were up 95% year-on-year for the quarter, according to the recent press release *Interim Silver Market Review*, which included provisional supply and demand forecasts for 2015.

The *Interim Silver Market Review*, produced by the GFMS team at Thomson Reuters, offered these highlights:

The decline in silver supply is expected to be driven by flat mine production, a 5% drop in scrap return, and net de-hedging of 12.6 million ounces. Mine production is slated to total 867.2 million ounces this year, up 0.3% from a year ago. This would be the weakest performance since 2002, when mine production fell by 2%.

The surge in silver bullion coin sales was triggered by a slide in silver prices in July and August. This was particularly evident in North America, where coin sales increased by 103% to a total of 23.6 million ounces in the third quarter. This surge resulted in an unprecedented shortage of current year silver bullion coins among the world's largest sovereign mints. (see [Major Mints Institute Allocations on Silver Bullion Coins as Demand Soars; October, 2015 Silver News](#))

Silver demand from the photovoltaics industry is forecast to increase by 17% to total 74.2 million ounces this year, just shy of the record 75.8 million ounces in 2011. Solar will make up 13% of total industrial demand, up from 11% in 2014 and just 1% a decade ago.

Silver demand from ethylene oxide producers is predicted to increase 49% to total 8.0 million ounces in 2015, the highest since 2010.

Total physical demand is forecast to contract by 2.5% in 2015, to 1,057.1 million ounces, primarily driven by a 12.9 million ounces drop in electronics demand. Demand from the electronics sector has been falling since 2011, largely owing to thrifting and the trend towards consumer electronics miniaturization.

Jewelry fabrication in 2015 is forecast to total 218.9 million ounces, a 2.5% decrease from last year's level. Jewelry fabrication has increased at a healthy pace in Thailand (14%), the United States (9%) and Italy (8%), while Chinese jewelry fabrication has dropped 25%. This sharp decline is largely attributed to offshoring of jewelry manufacturing to Southeast Asian countries and weaker domestic silver jewelry consumption.

The silver market is expected to be in an annual physical deficit of 42.7 million ounces in 2015, marking the third consecutive year the market has realized an annual physical shortfall. While such deficits do not necessarily influence prices in the near term, multiple years of annual deficits can begin to apply upward pressure to prices in subsequent periods.

Silver prices this year through November 13th averaged \$15.91/oz, which was 18.3% lower than in the same period in 2014. The GFMS team at Thomson Reuters forecasts silver prices to average \$15.51/oz for the full calendar year.

Additional information about [Interim Silver Market Review](#) is available [here](#).

Ceramic and Silver Tablet Cleans Water Cheaply and Easily

University of Virginia scientists have commercially developed the MadiDrop ceramic tablet, which releases silver ions into a water container to disinfect water and make it drinkable.

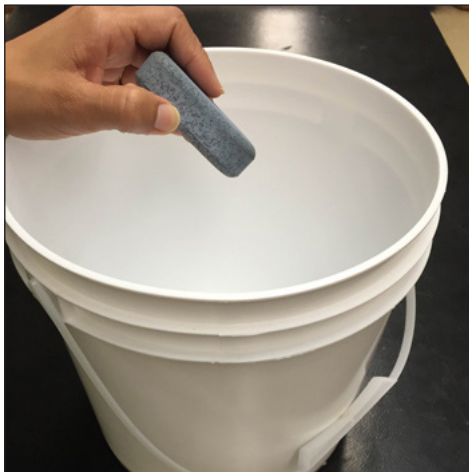
According to the [United Nations](#), 783 million people do not have access to clean water and almost 2.5 billion do not have access to adequate sanitation. In addition, 6 to 8 million people die annually from the consequences of disasters and water-related diseases.

Said Chief Scientist James Smith, “MadiDrop is a ceramic tablet that you drop into a water storage container. It gradually releases silver ions to disinfect the water; it doesn’t change the taste of the water.” In addition, the tablet continues to disinfect the water over time, so it does not get recontaminated.

Each tablet costs between US\$5 and US\$10 and can purify 528 gallons (2,000 liters) of water over six months. Disinfection takes only a few hours, Smith says. One limitation is that it does not remove dirt and other solids. An advantage of the tablet is its resistant to breakage, which makes it ideal to ship.

The company will begin production in January 2016 near the university in Charlottesville, Virginia. The first 200,000 units produced will be targeted for non-governmental aid organizations. The device has been field tested in several countries including South Africa and Tanzania.

The MadiDrop grew out of a U.S. National Science Foundation grant in 2007 to study the use of silver in ceramic filters.



This MadiDrop ceramic filter placed in any container can purify 528 gallons (2,000 liters) of water over six months.

China Lifts Import Ban of Silver Concentrates

China has ended its ban on imports of silver concentrate ore and refined concentrates, according to the Chinese Ministry of Commerce.

The change is due to the fact that these products – along with nine other commodities – are now in compliance with the country’s industrial policy. The Ministry noted that the products have high technological content, and do not belong to high-energy consuming and high polluting sectors.

After the revision, 1,862 commodities still fall under the import and export ban, but the Chinese government will continue to assess their status.

Silver Helps to Prevent Dental Implant Failures

Millions of dental implants are performed each year worldwide with few consequences, but infection is always a concern with any surgery. While implant surgeons and dentists prescribe antibiotics as a matter of protocol, they now have an additional weapon: silver.

Bacteria is not only a danger itself, but bacteria on an implant can also prevent the device from adhering to the jawbone, leading to mechanical failure.

Researchers at the Fraunhofer Institute for Manufacturing Technology and Advanced Materials (IFAM) in Bremen, Germany, and industry partners hope to mitigate these risks with a new implant coating, DentaPlas, that not only adheres better to bone – because of its physical properties – but also uses silver ions to prevent bacteria growth that could impair a permanent bond.

“We have given the DentaPlas coating a rough texture, which promotes cellular growth, in addition to combining it with a hydrophilic plasma polymer coating, which attracts moisture,” says Dr. Ingo Grunwald, project manager at the IFAM. Researchers have integrated silver nanoparticles into the thin plasma polymer coating, which is up to just 100 nanometers thick.

Adds developer Dirk Salz: “The DentaPlas system consists of three layers, with two plasma polymer layers surrounding a center layer of silver. Within this structure a biocide reservoir is formed, and the outermost layer releases the ions.” He says that researchers can tailor the silver concentration as well as the thickness of the layers and their porosity. This allows the silver ions to penetrate the outermost plasma polymer layer over the period of time deemed necessary to properly integrate the implant. When the silver reservoir is exhausted, no more silver ions are released.

So far, the new device has been tested on the lower jawbones of pigs, with a focus on checking the implants’ durability. The coating passed the rigors of being screwed into place using current dentals practices, the researchers say. Further testing is underway.

Kickstarter Project Wins Big for Silver Sock

If a web-based crowdfunding Kickstarter project is any indication, people want socks with silver.

Almost 1,500 backers of [Y Athletics'](#) SilverAir Odorless Crew Sock pledged \$104,069 to help produce the silver-laced socks. The company's goal was \$30,000.

The socks are a follow-up product to the company's SilverAir Shirt, which in 2014 garnered \$250,000 from Kickstarter contributors. "We created our SilverAir line after growing tired of buying athletic gear from major brands only to throw it away due to funky smells that don't wash out," said Sam Mazumdar, the company's CEO, in a prepared statement. "SilverAir not only solves this problem by using silver yarns to fight odor, but we're aiming to set a new standard in every way: the socks are incredibly comfortable and unmatched in performance. We are designing something our customers will never want to take off."

The company's shirt line includes a crew-neck, V-neck and long sleeved shirt. The sock line includes ankle and crew versions. The socks retail for US\$22 and the shirts from US\$55 to US\$65.



Click on the image to watch a video about the SilverAir Odorless Crew Sock

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