

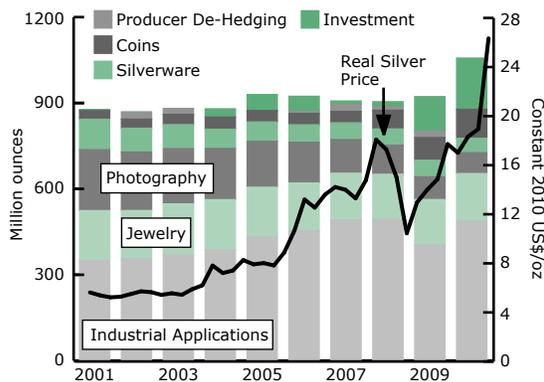
Silver News

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Silver Investment Pushed Silver Price Higher in 2010

Industrial Fabrication Demand Also a Factor

World Silver Demand



Source: GFMS

Thanks to a rally to a 30-year high of \$30.70, the annual average silver price jumped by 38 percent in 2010 to \$20.19, a level only ever beaten in 1980, according to the just-released *World Silver Survey 2011*, published by The Silver Institute. Increasing investor interest and a strong rebound in fabrication demand were the significant factors in the price rise, the Survey noted.

Global silver investment grew 40 percent last year to 279.3 million ounces, resulting in a net flow into silver of \$5.6 billion, almost doubling 2009's figure. Silver-based exchange traded funds (ETFs) in 2010 reached 582.6 million ounces, an increase of 114.9 million ounces over the total in 2009. The iShares Silver Trust accounted for almost 40 percent of the increase, with significant gains achieved by Zurcher Kantonalbank, ETF Securities, and the Sprott Physical Silver Trust.

Physical silver purchases also benefited from investor demand. Bullion bars accounted for 55.6 million ounces of the world investment total last year. Coins and medals fabrication rose by 28 percent to post a new record of 101.3 million ounces. In the United States, over 34.6 million U.S. Silver Eagle coins were minted, smashing the previous record set in 2009 at almost 29 million. Other key silver bullion coins reaching milestones include the Australian Kookaburra, the Austrian Philharmoniker, and the Canadian Maple Leaf, all of which posted record highs in 2010.

Fabrication Demand

Total silver fabrication last year grew by 12.8 percent to a 10-year high of 878.8 million ounces, chiefly through the recovery in industrial demand. Last year, silver's use in industrial applications grew by 20.7 percent to 487.4 million ounces. Jewelry posted a gain of 5.1 percent, the first substantial rise since 2003, primarily due to strong GDP gains in emerging markets and the industrialized world's improving economic picture. Photography fell by 6.6 million ounces, realizing its smallest loss in nine years, as medical centers deferred conversion to digital systems.

Supply

Silver mine production rose by 2.5 percent to 735.9 million ounces in 2010 bolstered by new projects in Mexico and Argentina. Gains came from primary silver mines and as a by-product of lead/zinc mining activity, whereas silver volumes produced as a by-product of gold fell 4 percent last year. Mexico eclipsed Peru as the world's largest silver-producing country in 2010. Peru is followed by China, Australia and Chile. Global primary silver supply recorded a 5 percent increase to account for 30 percent of total mine production in 2010.

Net silver supply from above-ground stocks increased to 142.9 million ounces in 2010, primarily due to higher scrap supply, a shift of net-producer hedging to the supply side, and a considerable rise in net-government stock sales. Last year, scrap supply saw a 14 percent increase over 2009 as gains in industrial and jewelry recycling exceeded an ongoing decline in recovery from photographic sources.

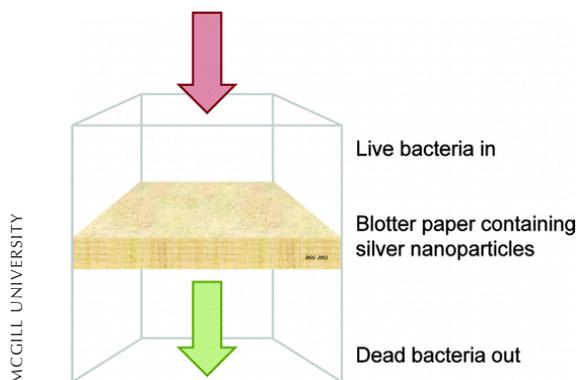
Net-government sales of silver rose to 44.8 million ounces, primarily from increased sales by Russia, with China and India remaining relatively silent for the second consecutive year.

The Silver Institute has published the *World Silver Survey* since 1990. The 2011 edition was researched and written by GFMS Ltd, the leading precious metals research firm. Copies can be purchased for US\$225 from the Silver Institute, 888 16th Street, Suite 303, Washington, DC, 20006, tel +1 202/835-0185; fax +1 202/835-0155, or from the Institute's web site at www.silverinstitute.org. You can also email your request to the Silver Institute at info@silverinstitute.org

Silver Imbedded Paper Filters Produce Emergency Drinking Water

Researchers at McGill University have found an inexpensive, fast way to provide clean drinking water in emergency situations using paper filters coated with silver nanoparticles.

The team, led by Prof. Derek Gray of McGill's Department of Chemistry, says that the portable filter apparatus mainly would be used after disasters to supply potable water and is not geared toward a long term solution to producing clean drinking water. Researchers coated thick, hand-sized sheets of absorbent yet porous paper with silver nanoparticles and then poured in live bacteria. Even at low levels of silver – 5.9 milligrams of silver per gram of paper – the filter kills nearly all of the bacteria and produces water that meets the standards set by the Environmental Protection Agency (EPA), according to Gray.



The research study *Bactericidal Paper Impregnated with Silver Nanoparticles for Point-of-Use Water Treatment* was published in the February 11, 2001 edition of the journal [Environmental Science & Technology](#).

Demand for Silver Driven by Industrial Uses: GFMS Report

The industrial uses of silver should rise sharply over the next five years to 666 million ounces by 2015 -- representing 60 percent of total fabrication demand that year -- a 36 percent increase over 2010's figure of 487 million ounces, according to *The Future of Silver Industrial Demand*, a report produced by consultancy GFMS Ltd on behalf of the Silver Institute. Industrial demand is the largest single component of silver fabrication demand.

"Although silver demand suffered after the global economic crisis that began in the latter part of 2008, by 2010 industrial demand had already recouped most of the lost output," the report noted. "In fact, although restocking of a (heavily) depleted supply chain accounted for much of the improvement last year, it is also clear that industrial demand resumed its long secular rise, a trend which is set to continue over the entire forecast period under review in this report."

Silver's use as an industrial metal is growing particularly in electronics and thermal applications. The report also highlights many new uses that rely on silver's antibacterial qualities, where the incorporation of silver makes the difference between an ordinary product and a unique one. Noteworthy in the report is the potential market impact of 11 recent applications that incorporate silver. These uses range from food packaging to radio frequency identification tags and autocatalysts, and taken together could exceed 40 million ounces of industrial demand by 2015.

The report noted that:

- Stronger silver industrial demand in the U.S. and Asia will be a key factor in driving growth in the global total through 2015. Healthy developing country demand, especially in markets such as China and India, will also be a critical factor.
- Much of the forecast growth will come from established applications such as silver's use in electrical contacts and in the photovoltaic market.
- Because of silver's unique characteristics, substitution by other materials is limited, thus making its price largely inelastic.
- Emerging end-uses that benefit from silver's antibacterial properties or incorporate silver's electrical and thermal conductivity are expected to boost silver consumption through 2015.

A free copy of *The Future of Silver Industrial Demand* can be obtained by clicking [here](#).

New Cathedral to Sport Solar Cells and Stained Glass

The first Roman Catholic Cathedral to be built in Canada in 50 years will also become the first worldwide to combine solar energy, stained glass, and silver.

The Cathedral of the Holy Family in Saskatoon will include solar-stained glass windows, a process in which the glass is painted and fired with metallic oxides, which then fuse onto the base glass. The painted glass is tempered and silver polycrystalline solar cells are soldered and embedded into the painted surface.

According to Toronto-based stained glass maker [Sarah Hall](#) the solar cells will not interfere with the patterns on the stained glass and will not be noticeable at eye level because the artwork is very large.

Hall, who has dubbed the project Lux Gloria, said that there will be 1,113 solar cells in the work. The 5,500-square-meter cathedral is scheduled to open in November. Watch the construction on this [video](#).



SARAH HALL STUDIO

The Holy Family Catholic Church, under construction in Saskatoon, will have large stained glass windows with embedded solar panels.

Silver Promotion Services Survey Says Retail Jewelry Sales Up in 2010

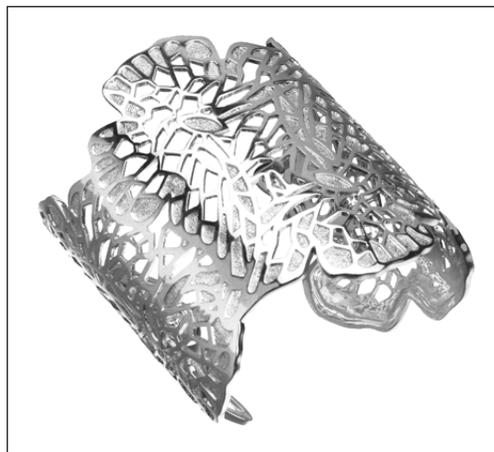
Jewelry sales increased last year over 2009, according to a survey of jewelry retailers conducted in early February by Nielsen/National Jeweler for The Silver Institute's [Silver Promotion Service](#) (SPS).

The survey, which tallied the responses of 340 retailers representing approximately 4,000 stores, offered the following primary findings:

- 87% of jewelry retailers said their silver jewelry sales increased in 2010
- 52% said their silver jewelry sales increased between 11 and 25%, and 28% saw an increase over 25%, for an average increase of 23%
- Retailers rated the following categories as giving them the 'best' maintained margin:
 - Silver jewelry 57%
 - Diamond jewelry 20%
 - Bridal jewelry 15%
 - Gold jewelry 4%
 - Platinum jewelry 4%
- Silver jewelry generated an average 36% of unit volume and 28% of dollar volume

SPS Director Michael Barlerin said: "We were all exceedingly gratified by the data that so strongly affirmed what we already knew on an anecdotal basis. What was somewhat of a surprise was not just silver's absolute growth and performance ratings, but that in all major categories the 2010 results exceeded the corresponding record numbers from 2009."

The study was the second one commissioned by the SPS providing year-over-year comparisons.



SPS

Eighty-seven percent of jewelry retailers said that sales of silver jewelry, like this ELLE Jewelry bracelet, rose in 2010, according to a recent survey.

Robotics Coin Features Niobium and Silver

The [Austrian Mint](#) has issued the 2011 edition of its niobium and silver bimetallic coin, this year featuring robotics.

The obverse of the new bimetallic coin features a robot in a humanoid form, reflecting the Vitruvian man of Leonardo Da Vinci. The reverse of the coin depicts a robotic lander on the surface of Mars. The Mars Lander is based on a design of the European Space Agency.

The niobium core of the 2011 edition has been oxidized prior to the striking. When the niobium core and the silver ring are placed into a coin press and then struck twice the metals fuse together and the oxidized surface of the reddish pink core takes on a shimmer that creates a rainbow effect on the surface of the coin's core. The flow of the metal during the striking process determines how the shimmer effect will finally appear and therefore each coin has a unique color.

The 25-euro coin is issued with a maximum mintage of 65,000 pieces and is struck in special uncirculated quality only. It has a diameter of 34 mm and contains 9 grams of 900 fine silver in the outer ring. The core consists of 7.15 grams of 998 pure niobium. Each coin is encapsulated, boxed and accompanied by a numbered certificate of authenticity.

The coin may be ordered online at www.eurocollections.com.



Instructional Videos About Silver Mining a Hit With Viewers

A Q&A With Hugh Clarke of Endeavour Silver

Endeavour Silver Corp., based in Vancouver, BC, is a silver mining company focused on the growth of its silver production, reserves and resources in Mexico. The company has produced videos shown on its [website](#) and [YouTube](#) aimed at teaching the public about silver production. Silver News Editor Larry Kahaner conducted a Q&A with Hugh Clarke, Vice President of Corporate Communications, about this unique way of getting the message out.

Silver News: How did you get the idea to produce videos about how silver is mined?

Hugh Clarke: I've known for decades that the public likes to be educated. Shortly after I joined the company in 2003 we published two brochures, *Silver Fundamentals* and *Silver Facts and History*. They quickly became very popular both in hard copy -- which we gave away at conferences -- and in electronic form on our website. For years, it was consistently one of our top downloads. We have our own in-house video capability so we thought, "why not produce videos?" The first one was a non-promotional educational video about how silver is mined. We tried to keep it as simple as possible. That was the genesis of it.

Silver News: What's been the response?

Hugh Clarke: Huge. I've been in this game a long time, and I've never experienced such a positive response from people. It's been overwhelming; it's been astonishing. I haven't yet seen the data for March but I know that our website hits will spike, and so have inquiries by phone and email. I had a goal of 10,000 views on YouTube, and we're at about 15,000. I think we'll get to 20,000 views.

Silver News: You have two videos up now: *How Silver is Mined, Parts 1 and 2*. What's next?

Hugh Clarke: In May we're going to do *Silver Facts and History* and in June we're going to do *Silver Fundamentals: Supply and Demand*. The critical factor is to establish the distribution networks and we've done that.

Silver News: How did you ensure the accuracy of the videos considering that mining is a complex subject?

Hugh Clarke: I had our own crews, the people who do the mining, take a look at it. I told them to make sure there were no factual errors and nothing came back from that. The one criticism we got from a letter writer was that the videos were too short.

Silver News: How much did it cost to produce the videos?

Hugh Clarke: I can't tell you that, except to say that it was not expensive. We had a great deal of footage already available, shot by a professional video team in Mexico, and our in-house video team here edited it and added the interviews of local experts. So, it didn't cost a lot.

Heraeus Building Singapore Facility for Silver Paste

The Heraeus Photovoltaic Business Unit is building a new facility in Singapore to produce silver metallization paste used in crystalline solar cell applications, according to company officials.

The new facility – to be in operation by the second half of this year --will be Heraeus's fourth manufacturing site of its kind. It already produces paste for the photovoltaic industry in the United States, Germany and China.



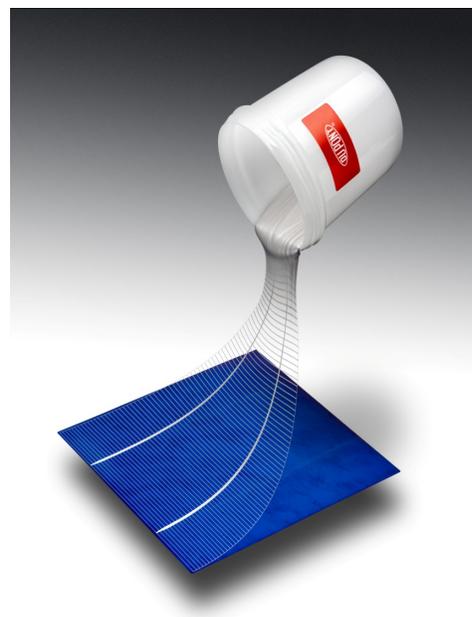
HERAEUS

Heraeus is building a facility in Singapore to produce silver metallization paste used to manufacture solar cells.

DuPont Rolls Out New Silver Pastes for Greater Solar Cell Efficiency

DuPont Microcircuit Materials is introducing a new series of frontside silver photovoltaic metallization pastes designed to deliver advanced efficiency and adhesion for solar cells. DuPont SolametPV17x series photovoltaic metallizations also will enable higher process reliability and yield for both cell and module manufacturers, company officials say.

Compatible with high-speed printing processes, and featuring improved contact and grid resistance, the SolametPV17 series is the latest offering to help the solar industry increase the efficiency of crystalline silicon solar cells.



DUPONT

DuPont Solamet photovoltaic metallizations boost the efficiency of photovoltaic solar cells.

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