

Silver News

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Q&A with John Ciampaglia, CEO Sprott Asset Management



“... we see interest in silver rebounding with growing signs that Central Banks have been too aggressive with tightening monetary policy,” says Sprott CEO John Ciampaglia.

Toronto-based [Sprott, Inc.](#) is a global alternative asset manager that describes itself as offering investors world-class precious metals and real assets investments. These investments include unique physical bullion trusts, mining ETFs, actively-managed equity strategies and highly-specialized private equity and debt strategies. Sprott has the capabilities needed to customize their approach to meet clients' needs through both public and private investment strategies, institutional limited partnerships, offshore funds and separately managed accounts.

For silver investors in particular, they offer the Sprott Physical Silver Trust (NYSE Arca: PSLV), Sprott Physical Gold and Silver Trust (NYSE Arca: CEF) and sub-advise the Ninepoint Silver Bullion Fund, which is available to Canadian investors.

We spoke with John Ciampaglia, Chief Executive Officer of Sprott Asset Management. Following are his edited comments.

Silver News: Tell us about your involvement with Sprott, Inc.

John Ciampaglia: I've been at Sprott since early 2010, and it's an interesting place to work because it's an entrepreneurial asset management shop and it's a boutique, so we focus almost exclusively on precious metals and mining-related investments. It spans everything from a suite of physical bullion funds that are listed on the New York Stock Exchange, to investing in equity or debt of gold and silver companies. I've been in the business about 25 years and I've watched it change dramatically, especially over the last few years.

SN: How has it changed?

JC: I think investors are a lot more knowledgeable today than they were when I entered the business. Their level of knowledge with respect to even general stock investing was in the early stages of development back in the early '90s when I began. Now, investors have an incredible amount of information available to them about investment choices. There

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are thousands of different products they can invest in. That's helped investors build more diversified portfolios. I think it's allowed fees in the industry to compress, as investors are more empowered than ever with information and choice.

SN: We've seen an increase in passive investing like index funds. How does that affect your business?

JC: The retail landscape over the last ten or so years has gradually been following in the footsteps of the institutional world. The institutional world has long advocated using both active and passive, and public and private investment strategies. Institutions eventually migrated to exchange traded funds (ETFs). We're seeing the exact same phenomena happen slowly on the retail side where many investors are taking a dual approach of combining active strategies and some passive strategies. We see investors building professionally-designed, managed portfolios.

The creation of ETFs – which are easy to buy and sell and are very convenient for investors to own – has allowed precious metals to proliferate within investment portfolios. Given the inconveniences of trying to own a large quantity of silver because of its sheer weight and volume, ETFs are a high value-added product offering for investors. The ETFs and our silver trust are valued by investors who want to get into gold or silver and do it in a simple, convenient and liquid way.

SN: How does the recent lower price of silver affect your business?

JC: The last few years have been tough for silver investors. There's generally been outflows from the silver ETFs, which is one proxy we look at in terms of gauging investor demand for silver. Another barometer, U.S. Mint silver coin sales, for example, were the lowest in 2018 since '07.

SN: The equity market has been volatile during the past year even hitting a record high. How does that affect silver ETFs?

JC: Last year, in the summer months, we saw silver get hit hard as the stock market was rallying to all-time highs. I also feel like silver got disproportionately impacted by concerns about the trade war hitting the industrial side of silver consumption. However, we see interest in silver rebounding with growing signs that Central Banks have been too aggressive with tightening monetary policy. We definitely have been receiving a lot more calls of late from all kinds of investors who are inquiring about precious metals and silver. If you're bullish about gold – and we're bullish for many reasons – I think you have to be more bullish about the price of silver going forward. As we've seen in 2010 and 2016, when gold starts to move, it's not uncharacteristic for silver to move at a multiple of two times or more.

SN: Can you discuss any future silver products?

JC: There's nothing imminent, but we're constantly looking at the market to see whether there are other opportunities. There could be possibilities on the mining side.

SN: Is there anything else you would like to add?

JC: One of the things that we're often asked by US investors is about the tax treatment of silver and gold. A lot of investors are not aware that precious metals are subject to collectibles tax which is higher than the capital gains tax rate. Sometimes investors don't know about the difference in tax treatment between different precious metals funds vehicles, so we try to educate the marketplace about that as well. We have a tax guide available on our [website](#) if investors would like to learn more.

The U.N. Sustainability Development Goals and Silver: A Backgrounder

This year the Silver Institute will launch a Silver Sustainability Initiative to illustrate how its members contribute to a better global society. The initiative will also spotlight how silver impacts our lives for the better.

This initiative dovetails with the United Nations Sustainable Development Goals (SDGs) agreed upon by 193 heads of state and governments at a special UN Sustainable Development Summit in September 2015. There are 17 SDGs which, according to the UN, are unique in that they cover issues that affect the whole of society and reaffirm an international commitment to end poverty, build a more sustainable, safer and more prosperous planet.

[For a backgrounder on the UN's efforts click here.](#)

The mining sector is ideally positioned to play a considerable role in delivering the targets set out in the SDGs. Unlike many sectors, mining is not linked to just one or two of the goals; operations have the potential to contribute to several at any one time. The International Council on Mining and Metals (ICMM), for example, has researched the link between mining and the SDGs at length, and state that this potential "is due to the multifaceted impacts (both positive and negative) that companies and operations can have on communities, ecosystems and economies. These, coupled with the fundamental importance of metals and minerals to modern life, the influence of mining on all of the SDGs becomes apparent. In addition, many mining and metals companies have acquired valuable experience about working in partnership with governments, civil society and development agencies in order to operate effectively in some of the world's most remote, environmentally-sensitive regions that also need assistance in building institutional capacity and governance. This knowledge and experience need to be captured and shared in new ways in order to unlock the potential that mining can bring to the ambitious, integrated global agenda represented by the SDGs."



The United Nations Sustainable Development Goals (SDGs) focus on poverty, hunger and healthcare.

Printing Technique Allows Silver to be Deposited to Fabrics Without Plastic Coating; Fabrics Stay Flexible Allowing New 'Wearable' Products

Printing metal inks onto fabrics usually requires that a plastic coating cover the metal before application. Now, scientists from Imperial College, London, UK, have found a way to print silver, gold and platinum inks onto natural fabrics without the use of plastic. This allows inks to sink into the fabrics instead of simply covering them.

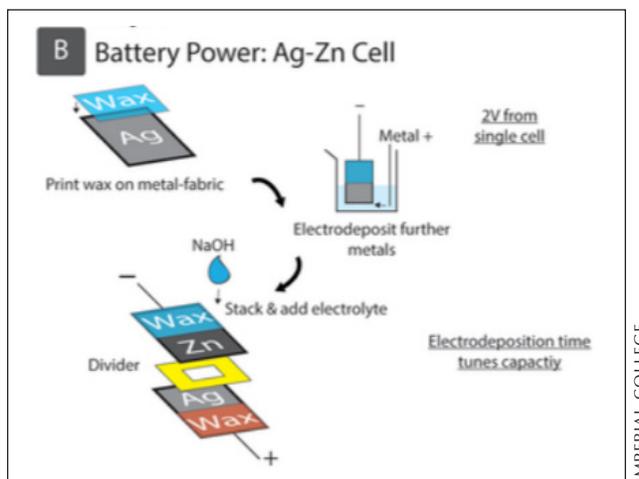
Although plastic coating has the advantage of being waterproof, it can also make the fabric material brittle. This new application process maintains a fabric's flexibility so it offers the potential to print batteries, antennas, sensors and other components into fabrics such as paper and cotton textiles. This method also opens possibilities for new types of 'wearables' that can be used for health monitoring and environmental monitoring such as air pollution or chemical spills that permeate the air with toxic fumes.

To apply the metals, the researchers covered the fabrics with nanoparticles of silicon then dipped them into a metal ion solution. This process, known as Si (for silicon) ink-enabled autocatalytic metallization or SIAM, allows the metals to penetrate the material as ions deposit onto the silicon.

In one experiment, the scientists were able to deposit silver and zinc onto paper, essentially producing a tiny silver-zinc battery capable of producing 2 volts.

"Fabrics are ubiquitous and some forms such as paper are ancient. With this new method of metallizing fabrics, it will be possible to create new classes of advanced applications," said Max Grell, PhD candidate in the Department of Bioengineering at Imperial College, in a prepared statement. He added: "The beauty of this approach is that it can also combine different technologies to serve a more complex application. For example, low-cost sensors can be printed on paper that can then transmit the data they collect through contactless technology. This could be particularly useful in the developing world, where diagnostic tests need to be conducted at the point of care in remote locations and cheaply."

The team has applied for a patent and is seeking industry partners. The next step will be to demonstrate the use of the new method in real-life applications, which will require prototype development, testing and optimizing.



By depositing silver and zinc onto paper, scientists were able to produce a low-voltage battery.

Silk and Silver Help Heal Broken Bones

Surgeons are always seeking new and safer scaffolds – structures that keep body parts such as bones, cartilage and ligaments in place while they heal – and researchers at the Indian Institute of Technology, Delhi, have come up with a silver and silk-based material that offers new possibilities, especially for healing broken bones.

The material consists of fibroin, a protein derived from silk, and silver nanoparticles. Fibroin is used to help develop bone cells from adult stem cells which makes it useful for scaffolding, and the silver provides bacterial protection because implants are prone to infection.

"To fight implant-related infections, we incorporated silver nanoparticles into fibroin, without compromising the biocompatibility and stem cell differentiation potential of silk films," scientist Neetu Singh told [India Science Wire](#).

The team produced the silver nanoparticles by the chemical reduction of silver nitrate, an often-used chemical process. The fibroin solution and silver nitrate were mixed together and exposed to light. When the solution changed from colorless to yellow-brown, this was an indication that the chemical reaction had occurred and silver nanoparticles were produced.

Researchers say that silk fibroin containing 0.5 percent silver particles has the same antibacterial power as 8 micrograms per milliliter of the antibiotic drug ampicillin when tested on the *S. aureus* bacteria, one of the most dangerous of all of the many common staphylococcal bacteria.

"We believe that these scaffolds may be a promising material for bone tissue engineering," said Singh. The team's research has been published in journal [Colloids and Surfaces B: Biointerfaces](#).

Silver Market Trends: 2019 Already Shows Positive Signs

Despite a lackluster price performance for silver last year, the Silver Institute expects the sentiment to be more supportive for the silver market in 2019 as the year has already proven to be good for silver investors.

For example, the US Mint has sold 12 percent more American Eagles in January compared to January 2018. In addition, the expected slowdown in the US FED rate hiking cycle should also benefit silver, which, in comparison to gold, has a very attractive price point based on the high gold to silver ratio of around 82.

Silver Institute officials offer the following insights on 2019 silver market trends:

Silver Demand

Silver demand from industrial fabrication, responsible for approximately 60 percent of total demand, is forecast to rise modestly in 2019. Silver demand from brazing alloys and solders as well as electrical and electric applications is expected to rise again this year. This is on the back of continued demand from the automotive sector, which uses an increasing amount of silver in applications, such as safety features, window defogging and infotainment systems, and for electric and hybrid vehicles. Growth is also forecast in silver's use in a variety of additional sectors, such as water purification, chemical applications, LED lighting, flexible electronics and screens, as well as anti-microbial applications in textiles.

Photovoltaic (PV) demand has been expanding considerably in recent years due to various countries stepping up the pace to diversify their energy-generating portfolio away from conventional fossil fuels and towards a higher share of renewable sources. Even with legislative changes in China, coupled with global overstocking and continued attempts at thrifting, PV demand will still be very supportive of silver usage, as many governments continue to provide incentives to install more solar power.

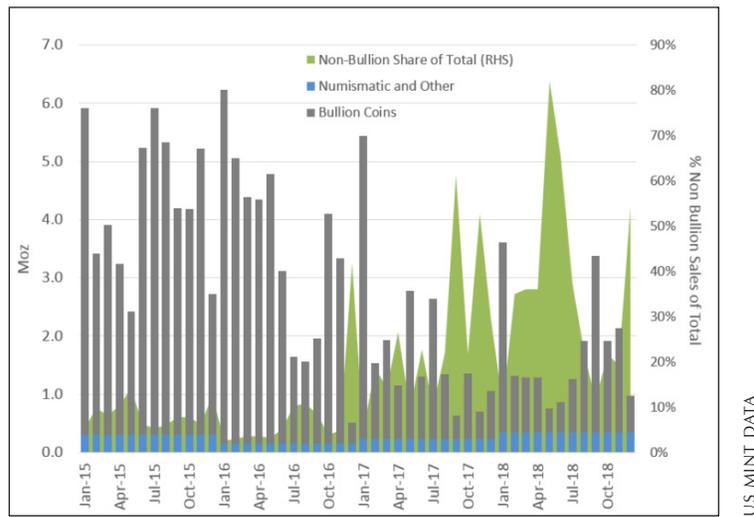
India is expected to continue to be one of the largest silver consumers in 2019. Silver imports reached nearly 225 million ounces last year, which was over 35 percent higher compared to 2017.

Jewelry demand is expected to record a solid year of growth in 2019, with Thailand set to be one of the driving forces behind the rise. In the United States, silver jewelry will remain a popular alternative to lower-carat gold items, driven by many issues, especially female self-purchases.

Exchange traded products (ETPs) are forecast to expand by 8 million ounces this year. Silver-backed ETPs are considered 'stickier' than other precious metal products, because a majority are held by retail investors, rather than institutional investors.

Silver physical investment demand is likely to increase by approximately 6 percent in 2019. Bullion coin demand has been strong in the United States during January of this year, and the Institute expects sentiment in Europe, which rose by 6 percent in 2018, and India to be supportive of global growth as the year continues. Bullion coin demand in the US fell last year, but non-bullion silver coins rose for the second consecutive year by 42 percent.

For more details, including forecast for the silver supply and price, see [Silver Market Trends – 2019](#).



US MINT DATA

Bullion coin demand in the US fell last year, but non-bullion silver coins rose for the second consecutive year by 42 percent.

Silver Helps Victims of 'Brain-Eating' Amoeba

Silver is often used as a carrier for drugs, because doctors can pinpoint a specific area of concern and use the metal to bring medicines to that targeted part of the body. For example, drugs often are piggy-backed onto silver pellets and 'shot' at the prostate gland to deliver cancer treatments.

Although it is not common, a brain-eating amoeba known as *N. fowleri* causes primary amebic meningoencephalitis (PAM), a brain infection that destroys brain tissue. The one-celled animal makes its way into the brain through the nose while the victim is in contaminated water in lakes, pools and even through municipal water supplies used by people for nasal irrigation to remedy colds or mitigate seasonal allergies.

Early symptoms include headache, fever, nausea and vomiting, and move on to stiff neck, confusion, seizures and hallucinations. All this can occur within three days of first contact.

Targeting the correct area of the brain to introduce anti-seizure drugs, which kill the amoeba, can be challenging, which is why researchers at Sunway University in Malaysia and the University of Karachi in Pakistan decided to bind the drugs to silver and aim it at the affected part of the brain.

They bound three anti-seizure drugs – diazepam, phenobarbitone and phenytoin – to silver particles between 50 and 100 nanometers in diameter and all three drugs worked as expected. In fact, diazepam worked twice as well when combined with silver than without the metal.

According to the U.S. Centers for Disease Control, only about 143 people in the country have been infected with the brain-eating amoeba since 1962 but the mortality rate is extremely high – only four have survived. Most US victims were infected in Florida and Texas.



CDC

Silver helps carry anti-seizure drugs to victims of a 'brain-eating' amoeba.

Silver Nanorods and a Smartphone App Detect Bacteria Faster than Current Methods

Nanorods made of silver – which range in size from 1 to 100 nanometers – are particularly sensitive to hydrogen sulfide gas produced by microorganisms such as bacteria and turn into black silver sulfide when exposed.

This dramatic change in color makes the nanorods ideal as sensors for live bacteria. When the black color shows up, it means bacteria are nearby. Researchers at the Indian Institute of Technology, Delhi, have taken this knowledge a step further by fitting a nanorod sensor in front of a small mobile camera connected to a smartphone with an app that detects color changes. When the color changes to a predetermined shade of black, the phone vibrates and gives off a red signal. The detecting device is small and portable.

“Observing visible changes in color on the sensor array, one can easily distinguish live and dead bacteria as well as antibiotic resistant and normal bacteria,” said research team leader Professor J.P. Singh, quoted in *India Science Wire*.

The team tested four bacteria, *E. coli*, *P. aeruginosa*, *Bacillus subtilis* and *Staphylococcus aureus* and found that the sensor could distinguish between live and dead bacteria within six hours, much faster than conventional methods that rely on culturing a suspected bacteria. In their study, published in the journal *Biosensors and Bioelectronics*, the researchers wrote: “This technique takes only 4 to 6 hours whereas the conventional methods need around 24 hours for the same test. This is a facile and inexpensive method that can be easily scaled up in the field of diagnostics.”



IIT

A research team at IIT has built a silver nanorod/smartphone app sensor that can detect bacteria faster than conventional methods.

Canadian Silver Coin Honors Civil Rights Pioneer Viola Desmond

In Honor of Black History Month, the Royal Canadian Mint has designed a 99.99% pure silver tribute to Canadian civil rights pioneer Viola Desmond (1914-1965). The coin will start shipping in June 2019.

On November 8, 1946, Desmond was arrested after she refused to sit in a segregated section of a Nova Scotia movie theatre. The legal challenge that followed became a starting point for the civil rights movement in Canada.

The retail price for the face value CAD\$20 coin is CAD\$149.95.

The 8,000-mintage coin features a reproduction of a photograph of Viola Desmond, whose signature is reproduced from a diploma issued by the Desmond Studio of Beauty Culture, a school she ran in Halifax. Double dates commemorate Viola Desmond's 1914 birth year and the year of her death in 1965. The obverse features the effigy of Her Majesty Queen Elizabeth II by Susanna Blunt.



The Royal Canadian Mint honors civil rights pioneer Viola Desmond with this silver coin.

Silver Ions Aid in Watching How DNA Reacts to Chemicals Method Could Lead to New Medicines

Studying how DNA reacts to drugs and chemicals is crucial to producing life-saving medicines. The challenge, however, is to observe these reactions in such a tiny environment. If scientists could amplify the reactions, it would go a long way to understanding how these interactions work.

Physics researchers at the University of Arkansas say they have found a way, using silver ions, to bend strands of DNA out of their regular double-helix configuration. When the DNA strands are bent out of their normal shape, they are easier to see using 'gel electrophoresis,' a technique available in most laboratories.

Jack Freeland, an honors physics student in his junior year, worked with Yong Wang, assistant professor of physics, and Prabhat Khadaka, a post-doctoral fellow, to create bent strands of DNA using a technique developed by Wang and colleagues at the University of California - Los Angeles, where Wang was a doctoral student, according to University of Arkansas officials.

When the researchers exposed the bent DNA to silver ions, they observed that the presence of the ions affected the ability of the DNA bases to pair up, an effect that was too small to be observed on non-bent strands of DNA. "In addition to metal ions, it is likely that our bent DNA amplifiers can be used to investigate the interactions of DNA with other chemicals, including organic molecules and reagents," the researchers [wrote in their paper](#). "In principle, it is even possible to develop our method into a convenient technique for screening DNA-targeting drugs... Our method is simple, sensitive, and cost-effective. We expect that the developed method will be useful for various applications."

The researchers have filed a patent application for their method.

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