THE SILVERINSTITUTE

Silver News

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Silver Delivers Strong Results for US Jewelers

Silver jewelry sales continue to deliver strong results for US jewelry retailers with 53% reporting that their sales increased in 2024, and 63% saying that their holiday season saw increases over the 2023 season, according to a survey commissioned by the Silver Institute.

Moreover, silver jewelry offered retailers the best sales margins (61%) over other categories including lab-grown diamonds (13%), diamond jewelry (9%), and bridal, gold, and platinum jewelry, all under 10%.

Other highlights of the survey conducted online by *The Jewelers Collective (TJC),* a leading jewelry trade magazine, from February 11 to March 28, 2025, included:

- 71% of retailers said they increased their silver jewelry inventory in 2024 by an average of 15%. This represents a 10% growth over the last survey, at 61% in 2022.
- Retailers said their silver jewelry sales, as a percentage of their overall jewelry sales, averaged 31% of unit volume. In 2022, this category was 28%.
- The average store growth for silver jewelry sales was 20% in 2024, vs. 14% in 2022.

In addition:

- The age groups buying the most silver jewelry are 20-40, followed by 41-50. Female self-purchase is the best-selling opportunity for silver.
- 83% said silver jewelry is essential to their business. In 2022, this figure was 88%.
- 92% of retailers say they are optimistic that silver jewelry sales will continue to grow for the next several years. In 2022, it was 88%.

For a complimentary copy of the survey click here.

Affordability	80%
Design options	52%
It's a precious metal	43%
Versatility	35%
Better craftsmanship than other jewelry	31%
Can look dressy or casual	28%
Multiple pieces can be worn together	28%
Easier to match with white gold and platinum	23%
It makes a great keepsake	14%
Other	5%

Most important reasons customers buy silver jewelry
Source: 2024 Silver Jewelry Sales Results

Silver Aids in Lubrication of Nanomachines

In any machinery, friction between moving parts is always a problem that needs to be addressed. When you get to nanoscale devices, it becomes an even greater issue as conventional lubricants such as oil no longer work because their particles are too large. As an added complication, even the slightest friction with nanomachines can cause immediate breakdowns as the devices cannot absorb or dissipate generated heat. Although some lubricants useful at nanoscale have been developed, they often require a lengthy 'break-in' period. By that time, damage to the moving parts may have occurred.

To combat these issues, a new class of 'nano lubricants,' sometimes called 'super lubricants,' is being developed by Chinese scientists using silver as an integral part. The technique introduces silver nanoparticles to boron nitride nanosheets. Boron nitride is a chemical compound with unique properties such as resistance to high heat, and lubricity. Boron nitride is often used in cosmetics to help with spreadability and texture.

In a prepared statement citing their research paper, the team led by Jinjin Li from Tsinghua University in Beijing, China, noted, "The achievement of superlubricity was attributed to the synergistic effect of silver nanoparticles and boron nitride nanosheets, in which silver nanoparticles were attached to enhance the load-bearing capacity of nanosheets. The silver-modified boron nitride nanosheets produce extremely low friction and wear, contributing to the development of lubricants with high load-bearing pressure and low wear rate." They said that the silver nanoparticles stayed attached to the nanosheets despite the stresses placed on them.

Non-Toxic Silver-Plating Method Developed

Silver plating is a crucial process for producing semiconductors, circuit boards and other electronic components as silver is one of the world's best electrical conductors. Unfortunately, the conventional method of silver plating relies on toxic materials like cyanide. Other non-cyanide methods exist, though, but they result in non-uniform plating and require additional chemicals that increase cost and complexity to the process, according to some researchers in South Korea.

These researchers may have developed a more environmentally-friendly method that uses a non-toxic phosphorus compound that produces a stable, ultrathin and uniform coating of silver.
The team leader, Ju-Yul Lee from the Energy & Environment Materials Research Division at the Korea Institute of Materials Science (KIMS), said in a prepared statement, "This technology not only addresses the environmental issues associated with conventional silver- plating processes, but also enables the production of high-quality coatings required for semiconductor and electronic component manufacturing…We expect this advancement to serve as a catalyst for innovation across industrial fields."

He added that this development applies not only to electrical applications but also to other sectors that need high-quality silver plating such as medical devices, optical sensors and precision machine parts such as ball bearings.

Idaho Ends State Income Tax on Precious Metals

Idaho has become the 14th state to eliminate state income taxes on silver and other precious metals. The bill, signed into law in March by Governor Brad Little, was part of a $253 million tax cut that lowered the overall rate from 5.695% to 5.3% and included the precious metals exemption.

For purposes of taxation, precious metals are investment-grade precious metals like silver, gold, platinum, and palladium in the form of coins or bars that meet certain purity standards.

Idaho currently has a sales tax exemption on purchases of precious metals, but this new law extends the savings to income tax connected with precious metals sales. Separately, later in the same month, Gov. Little signed the *Idaho Constitutional Money Act of 2025*, reaffirming silver and gold as legal tender.

Turning Nanosilver Particles into Better Cancer Trackers

Nanosilver particles come in many different shapes and sizes, and that can be a problem.

These particles are often used as contrast agents to track cancer cells in the body using X-Ray scans, but the varying dimensions and shapes make that task more difficult, according to associate professor of chemistry at Oregon State University Marilyn Mackiewicz, whose research team may have found a way to produce more uniform silver particles.

"Having silver nanoparticles of the same shape and size ensures they work effectively and reliably, making them more useful and efficient," she said in a prepared statement. "And the longer they can maintain that size and shape, the more valuable they are."

Marilyn Mackiewicz
Source: Karl Maasdam for *HealthImaging*

Their method to produce more uniform nanosilver particles relies on ultraviolet light, combined with oxygen and silver ions to form triangles of the same shape and size. The particles are then coated with fatty molecules which makes them more stable.

The goal is to imbed these triangle-shaped nanoparticles into contrast agents to allow better visualization of cancer cells. "What that allows us to do is to use these nanoparticles… inside of a human person or an animal, where we can image them without worrying about the materials becoming oxidized and causing toxicity," Mackiewicz noted.

Artist Uses Silver as His Medium

Artist Michael Sailstorfer's themes focus on the many forms of energy and his latest solo exhibition is no exception. His latest collection, AIR ELECTRIC, showing at the Carbon.12 gallery in Dubai, uses silver to turn electricity into his artistic medium. The work consists of a thin copper fabric, connected to an electric current, stretched over a wooden frame. A stainless-steel rod with a fleece cover tip is immersed in a silver electrolyte and used as a brush. When the brush touches the mesh, silver ions are combined with the copper to produce an 'abstract landscape' of blue shapes upon a sky-like background.

Michael Sailstorfer lives and works in Berlin, Germany. His works have been displayed at many galleries and exhibitions worldwide including the Pejman Foundation, Tehran, Iran; Kurhaus Museum Kleve, Germany; Bundeskunsthalle, Bonn, Germany; Kunstmuseum Stuttgart, Stuttgart, Germany; and Rochester Art Center, Rochester, New York. He also has had public installations in New York City, as well as Frankfurt and Saarbrücken, both in Germany.

AIR ELECTRIC turns electricity, silver and copper into an art medium
Source: Carbon.12

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