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# SILVER NEWS

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## Silver-Zinc Battery Being Readied for Laptop

In mid-2009 a major laptop maker will release the first computer designed to use silver-zinc batteries, according to Ross Dueber, chief executive of ZPower ([www.zpowerbattery.com](http://www.zpowerbattery.com)), a company that produces silver-zinc batteries.

The battery will afford the user more operating time and be environmentally friendlier compared to traditional lithium-ion batteries, says Dueber.

He notes that users can expect up to 40 percent more run time than traditional lithium-ion batteries. With recent improvements in battery cycle life, silver-zinc batteries achieve 200+ cycles at 100 percent discharge and thousands of cycles at intermediate discharge. He notes that over 95 percent of key battery elements can be recycled and reused because the raw materials recovered in the recycling process of silver-zinc batteries are the same quality as those that went into the battery's creation. In addition, Dueber says that silver-zinc batteries are safer than lithium batteries because they are non-flammable and not subject to flame-ups as reported for some laptop computer batteries.



ZPOWER

**The first silver-zinc battery for laptops is expected soon.**

“Today’s consumer has the ability to watch an entire movie on a palm-sized device -- but portable power technology has not kept up,” says Dueber. “Engineers admit that they are hitting the wall on lithium polymer and lithium-ion performance. Unstable lithium-ion batteries have resulted in a high number of product recalls by manufacturers of notebook computers. These market trends are creating a pressing need for a better battery.”

Camarillo, California-based ZPower, Inc. was previously named Zinc Matrix Power, but changed its name in 2007 to better support its marketing efforts.

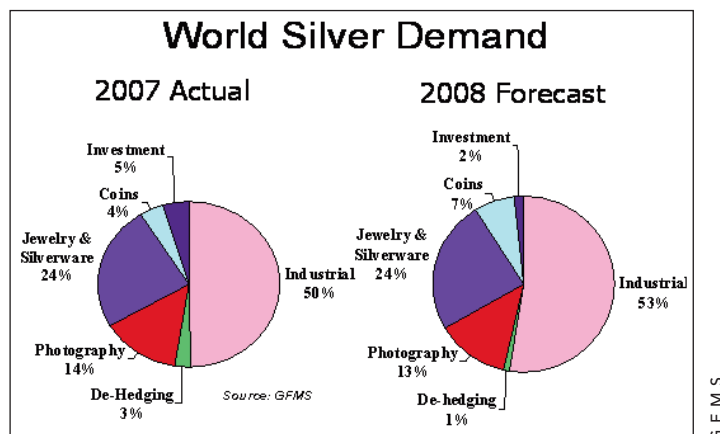
## Silver Demand Up This Year; 2008 Price to Average Over \$15: GFMS Interim Market Review

Silver Prices are expected to rally in the short term as investor interest returns, according to Philip Klapwijk, Chairman of GFMS Limited. Speaking in November at the annual New York Silver Dinner organized by The Silver Institute, Klapwijk presented GFMS's Interim Silver Market Review.

### Highlights of the Review include:

- Fabrication demand is projected to rise 1 percent this year. For jewelry, many consumers are buying silver at gold's expense. Indian demand has also surged in recent months on lower local silver prices.
- Mine production is forecast to rise about 5 million ounces (171 tons) or just under 1 percent this year.
- Increasing mine supply should be offset by lower scrap supply and government sales.
- A rebound in investment is expected within the next few months in contrast to a weaker 2007, and should drive the silver price higher again. Demand for silver-backed ETFs and, especially, bullion coins has grown.
- For the first ten months of 2008, the silver price averaged \$15.93, up 21 percent year-on-year, and will remain volatile in 2009.

The review is available for free on The Silver Institute's website: [www.silverinstitute.org](http://www.silverinstitute.org).



GFMS

## Silver Sanitizes Municipal Garbage Trucks By Samuel Etris, Senior Technical Consultant to The Silver Institute

UK-based T.P. Technology (<http://www.tarn-pure.com>), a provider of Tarn-Pure systems which sanitize water systems for hundreds of hospital and elder care centers, has provided a silver-copper sanitation system to clean about 100 Birmingham, UK, garbage trucks.

Garbage trucks accumulate huge colonies of bacteria, and normal hosing between runs is insufficient to sanitize them. This system treats the water used to wash the vehicles, which not only protects the truck from germs but also protects operators and drivers who may inhale water droplets infected with maladies such as Legionnaires Disease.

Currently, T.P. Technology supplies systems to sanitize garbage trucks at two sites in Birmingham where trucks are washed out after dumping their loads. In the UK, wash water must be conserved for reuse, so the collected water is run through a cyclonic separator to remove solids and a carbon filter to remove organic material, then into a storage tank. Normally untreated, tests of such stored rinse water reveal high levels of bacteria.

T.P. Technology's silver-copper ion generating systems are inserted in the line to the storage tank thus providing immediate antibacterial action which continues into the storage tank and into the wash water, which then sanitizes newly-emptied garbage trucks. Because antibacterial metal ions do not evaporate under even the hottest conditions, the recycling silver and copper ions exert almost permanent sanitation in the water until the bacteria have exhausted them; thus the system is continuously prevented from becoming saturated with bacteria.

Silver/copper ion sanitation systems have found wide use in sanitizing water within the United Kingdom. In Northern Ireland, a large supplier of packaged lettuce and leafy vegetables to major grocery store chains uses a spray of silver/copper ions to sanitize produce without using chlorine. Tests by UK's Leatherhead Food Research Association to meet European Union health standards have shown that not only is the lettuce free of bacteria following washing with silver-copper ions, but that the shelf life is extended by about two days.

## 7th China International Conference Draws Over 300 Attendees

More than 300 people attended The 7th China International Silver Conference (CISC) in the City of Haikou, in Hainan Province, on November 6 - 8, 2008. Attendees enjoyed the Welcome Dinner on the first day, followed by a full day of conference speakers and then dinner. There was a half-day session on the last day.

The Silver Institute worked with conference organizers, the China Nonferrous Metals Industry Association, on the

speakers program and agenda. Presentations on various aspects of silver were made by representatives from Barclays Capital, GFMS, International Assets, China Nonferrous Metals Industry Association, China General Chamber of Commerce, the China Chamber of Commerce of Metals Minerals & Chemicals Importers and Exporters (CCCMC), Academy Corporation, ScotiaMocatta, the CPM group, and other Chinese and Asian silver market participants.

## SI Gala Celebrates Sterling Silver's Renaissance Among Trend-Setting Designers

The Silver Institute hosted a campaign rollout in New York City designed to target the growing interest in sterling silver as a hip and affordable jewelry choice among fashion trendsetters.

The December 3rd event attracted more than 100 people from the consumer and trade media as well as cutting-edge designers and representatives from LAGOS, Robert Lee Morris, Scott Kay, Slane & Slane, Robin Rotenier, Thistle & Bee, ELLE, Zina, Leslie Greene, and Paz Collective. The event was hosted by the Silver Marketing Initiative (SMI), the jewelry marketing arm of The Silver Institute.

The star-studded fete was timed to dovetail with an increased use among jewelry designers – some of whom have never worked in silver – to take advantage of the white metal's emerging cachet among fashion-conscious consumers, especially those who are turning away

from gold. "Many style-conscious consumers are increasingly adding fine silver jewelry to their wardrobes with the same ferocity as designer shoes, handbags, and other accessories," said Michael Barlerin, Director of the Silver Institute's SMI. He added: "Sterling silver allows you to keep up with your favorite fashion trends by offering the wearer a range of looks from clean and sleek to antiqued or edgy. Although silver jewelry is often thought of as classic and everyday casual wear, sterling silver pieces embellished with diamonds, gemstones, and interesting finishes lend themselves to a more glamorous evening look."

The Silver Institute is planning to bolster its marketing initiative with a website [www.savorsilver.com](http://www.savorsilver.com) where visitors can learn about designers' unique points-of-view and link to their websites to see a more complete gallery of their work. During 2009, the website is expected to include a Press Room with "As Seen On" images of silver jewelry choices of celebrities and widely-known fashion influencers. The major jewelry trade shows, the jewelry equivalent of "Fashion Week," also will be covered along with the latest fashion trends. An editorial review board will vet designers, looking for those who exhibit inventive, unique and distinctive design direction. These selected designers will be named "Designers of Distinction" and join the original ten designers in the Designer Gallery section of the website.



(L-R) Michael Barlerin from the Silver Market Initiative, Roberta Seiler and Landon Slane of Slane & Slane jewelry and Michael DiRienzo, Executive Director of the Silver Institute ring in the holidays at the Savor Silver event to celebrate the launch of their new consumer website.



Jewelry designers Slane & Slane, who offer their sterling silver Feather Collection, will be featured on the new [www.SavorSilver.com](http://www.SavorSilver.com) website.

# Updated Silver Institute Website On Line

The newly revamped Silver Institute website is now on-line at [www.silverinstitute.org](http://www.silverinstitute.org).



The site features a new, detailed section on silver's uses, including the latest energy, biocide and electronics applications, as well as historical and scientific information about silver. Also included

is an information-rich section on investing in silver featuring investment options and financial planning.

The website includes a large 'Resources' section that points users to websites of government organizations, mints, associations, exchanges, news media and companies involved in silver refining, recycling and mining. Silver Institute members and their websites are also listed.

The website also features an extensive glossary of silver-related terms.

For those interested in data and statistics on silver, the website offers supply and demand information, historical prices and sources for current silver prices. Also featured are publications – many of them free to download - including Silver News (current and archived), World Silver Survey Summary, Silver Jewelry Report and more.

## Silver-Coated Ducts Significantly Reduce Airborne Microbes

Heating Ventilation and Air Conditioning Systems (HVAC) ducts that employ silver-based coatings reduced micro-organisms from 99 percent-100 percent on the duct surfaces and also reduced bacteria in the air by as much as 5 times than from ducts without the silver, according to research conducted by the Italian Ministry of Health and the University of Genova.

The results of the study "Silver Zeolite Antimicrobial Activity In Aluminum Heat Ventilation Air Condition Ducts," published in the *Journal of Preventative Medicine and Hygiene*, used Agion-treated ALPactive HVAC tubing ducts from ALP of Bergamo, Italy. ([www.alp.it/default.aspx?lingua=ing](http://www.alp.it/default.aspx?lingua=ing)) It was conducted over a five-month period.

Tests were carried out on samples of particulate collected from the Agion ALPactive ducts and the untreated ducts for different microorganisms including *L. pneumophila*, *E. coli*, and *Staphylococcus aureus* moulds and yeasts.

Scientific studies indicate there are many sources of pollution inside buildings and these pollutants may remain in recycled air, thereby exposing people to air containing fine dusts, moulds and bacteria. The growing use of air-conditioning systems in public and private buildings aggravates this risk, especially when these systems are not correctly installed or regularly serviced. The ALPactive system has already been installed in many food processing facilities, hospitals and public buildings in Europe and the Middle East and is available for sale worldwide, according to company officials.

## For Future Reference Silver Prices 1979-2008

2008	High	Low	Average
Nov	10.46	8.80	9.78
Oct	12.72	8.79	10.39
Sep	13.46	10.46	12.22
Aug	17.48	12.80	14.48
July	19.18	17.25	18.07
June	17.62	16.46	17.01
May	18.24	16.12	17.01
Apr	18.31	16.50	17.48
Mar	20.69	16.81	19.16
Feb	19.81	16.30	17.66
Jan	16.95	15.17	16.05

2007	High	Low	Average
Dec	14.8	13.83	14.37
Nov	15.5	13.96	14.66
Oct	14.38	13.25	13.57
Sep	13.79	12.19	12.91
Aug	13.12	11.47	12.28
July	13.36	12.47	12.93
June	13.76	12.21	13.09
May	13.53	12.81	13.15
Apr	14.06	13.29	13.74
Mar	13.53	12.64	13.11
Feb	14.69	13.33	13.95
Jan	13.51	12.13	12.83

Year	High	Low	Average
2006	14.85	8.82	11.62
2005	9.00	6.43	7.32
2004	8.21	5.51	6.67
2003	5.98	4.35	4.89
2002	5.11	4.22	4.60
2001	4.81	4.03	4.36
2000	5.55	4.56	4.97
1999	5.76	4.87	5.22
1998	7.26	4.62	5.51
1997	6.34	4.16	4.88
1996	5.82	4.68	5.18
1995	6.10	4.38	5.19
1994	5.78	4.57	5.28
1993	5.44	3.52	4.30
1992	4.32	3.63	3.94
1991	4.55	3.51	4.03
1990	5.35	3.94	4.82
1989	6.20	5.02	5.47
1988	8.06	6.01	6.53
1987	11.25	5.35	6.99
1986	6.32	4.85	5.49
1985	6.89	5.48	6.14
1984	10.17	6.25	8.15
1983	14.74	8.38	11.46
1982	11.30	4.81	7.93
1981	16.53	7.97	10.53
1980	50.35	10.20	20.66
1979	35.00	5.93	11.20

(COMEX settle)

### The Silver Institute El Instituto de la Plata

INCORPORATED 1971

A WORLDWIDE ASSOCIATION OF SILVER MINERS, REFINERS, FABRICATORS AND MANUFACTURERS

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