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Lab-Grown Diamonds? This New Paris Jeweler Says They're the Future



By Nazanin Lankarani

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Marie-Ann Wachtmeister, Courbet's artistic director, and Manuel Mallen, the company president, at their offices on Place Vendôme. Dmitry Kostyukov for The New York Times

PARIS — From a showroom perched above the elegant Place Vendôme, a bastion of jewelry tradition and home to venerable houses like Boucheron, Chaumet and Van Cleef & Arpels, [Courbet](#) is planning a mutiny.

Named for Gustave Courbet, the artist and political agitator who almost 150 years ago proposed moving the famous victory column from that legendary square, the jeweler is planning to shake things up this fall with its first collection, made in France with recycled metals and diamonds grown in local laboratories.

“We are signaling the coming of a new age on the Place Vendôme,” Manuel Mallen, co-founder of Courbet, said in an interview in the showroom. “It is not by accident that we chose this name.”

Few buyers shopping for carats on the Place Vendôme probably know that, in 1871, when a revolutionary government called the Paris Commune controlled the city, the column actually was pulled down. It was not a glorious success for Courbet, however, who was jailed and

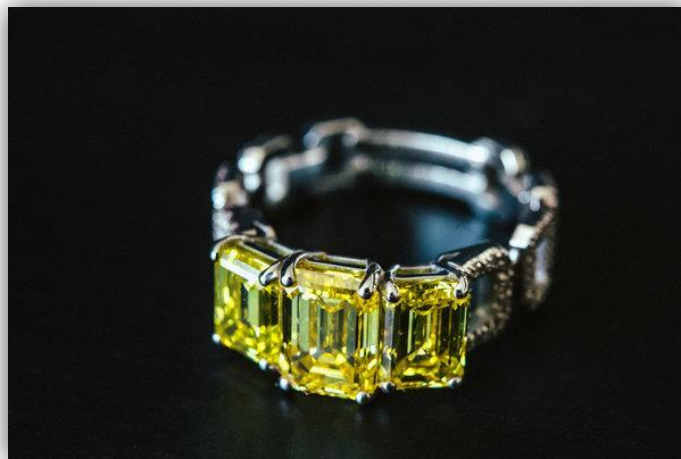
then forced to flee to Switzerland, where he died in exile in 1877 (The column had been rebuilt four years earlier).

Still, it is his disruptive legacy that resonates with the jeweler.

“The jewelry houses on the Place Vendôme know that their products have damaged the environment in one way or another,” Mr. Mallen said. “The time has come for change.”

The new house has good timing. In late July, the United States Federal Trade Commission amended its jewelry guidelines to say, as [the Federal Register reported](#) the change: “Lab-created products that have essentially the same optical, physical and chemical properties as mined diamonds are also diamonds.”

So lab-grown diamonds may now be marketed in the United States as real gemstones, as long as they “clearly and conspicuously convey that the product is not a mined stone.”



A ring of recycled white gold and three emerald-cut yellow laboratory-grown diamonds.

Dmitry Kostyukov for The New York Times

The F.T.C.’s decision should shatter the belief that lab-grown or man-made diamonds are not real, and is expected to erode the mining industry’s efforts to ostracize the gems. (This fall, De Beers, the mining company that has subtly criticized synthetic diamonds in its “A Diamond Is Forever” advertising, is planning to introduce Lightbox, a new jewelry label selling its own lab-grown diamonds. Some critics, however, say the move is actually intended to reinforce the image of lab-grown diamonds as cheap and of poor quality.)

While the trade commission’s jurisdiction is limited to the United States, its action could have significant repercussions globally. Few other countries have legislation or regulations on the issue, so they may follow the lead of the United States; in France, however, a 2002 decree required lab-grown diamonds to be sold as *de synthese*, or synthetic. Mr. Mallen said he was talking with French legislators about changing that rule.

Today, lab-grown diamonds represent 2 percent of the world's diamond supply; Citibank analysts [have said](#) that is expected to reach 10 percent by 2030.

But Mr. Mallen, an industry veteran who spent most of his career working at the jewelry houses of the Richemont group, was won over by lab-grown gems in 2015. A stone dealer who supplied the Place Vendôme jewelers invited him to visit a diamond laboratory in Antwerp, Belgium, and during the tour, Mr. Mallen recalled, the dealer said the process was the future of diamonds. "Coming from him, the statement stayed with me."

In 2017, Mr. Mallen founded Courbet with Marie-Ann Wachtmeister, a Swedish entrepreneur and jewelry designer whom he met three years earlier, while he was president of the jeweler Poiray.

"What appealed to me about Courbet," Ms. Wachtmeister said, "was the chance to create a high-end, ethical collection that stood for modernity."



Place Vendôme as seen from the building where the offices of Courbet are located in Paris.
Dmitry Kostyukov for The New York Times

Engagement rings will be the centerpieces of Courbet's collection, although it also will include a parure, which is a matching set of necklace, bracelet, ring and earrings. The collection, however, won't be ready until October because the diamonds are still growing, according to Courbet.

Courbet's diamond supplier is Diam Concept, a Paris company that creates diamonds using the plasma-enhanced chemical vapor deposition method. A small, defect-free diamond seed crystal — which can be mined or synthetic — is introduced to a heated mixture of hydrocarbon gas and hydrogen inside a reactor at low pressure.

Sales will be available online, with international shipping, and at the Place Vendôme store; a one-carat white-gold ring will be 6,200 euros, or \$7,200, which includes the 20 percent tax.

Diamonds have not been the only focus at Courbet. Its precious metals will be harvested from electronic mining, a recycling process that recovers gold and silver from sources like discarded mobile phones, laptops, televisions, refrigerators and electronic toys.

"Every mobile device contains trace amounts of precious metals," Ms. Wachtmeister said. "Today there is more gold above ground than under, and what is recyclable is enough to service the world's jewelry needs for 70 years."

Last December, a United Nations report warned that electronic waste poses a growing risk to the environment and to human health. In 2016, according to [the report](#), 44.7 million metric tons of e-waste were generated, of which only 20 percent, or 8.9 million metric tons, was recycled.

The seed, affected by the interaction of gases, then grows over a period of several weeks into a diamond that can be cut and polished just like one that has been mined.

Diamonds also can be grown using a high-temperature, high-pressure synthetic process that turns carbon into a diamond seed, mimicking the heat and pressure deep within the earth.



A ring in recycled yellow gold with a 2.5-carat white diamond, also grown in a laboratory.
Dmitry Kostyukov for The New York Times

“To grow ultrapure diamonds,” said Alix Gicquel, founder of Diam Concept and a physics professor at Université Paris 13, “you need sophisticated reactors and highly advanced scientific expertise. Those pose a serious barrier to entry in this industry.”

Ms. Gicquel, who was introduced to the science of growing diamonds at a conference in 1987, said she knew immediately that it would be the focus of her scientific life. “The method we have developed in 30 years are the least costly and most controllable means of growing diamonds,” she added.

Founded in 2016, Diam Concept operates its laboratory on the Paris campus of the National Center for Scientific Research, a prestigious public organization operating under the auspices of the French Ministry of Education and Research.

Whether produced by Diam Concept or either of the world's best-known diamond labs — the [Diamond Foundry](#) in the United States or New Diamond Technology in Russia — lab-grown diamonds, are about 30 to 40 percent less expensive than mined diamonds. (For example, Courbet said that one of its sample gems — a 1-carat emerald-cut gem of good color and clarity, which was not made in France — would be priced about €4,900 while a comparable mined diamond would be at least €7,200.)

At the moment, size continues to be a challenge for Diam Concept. “For now, we are able to produce up to 2-carat diamonds in a period of at least six to eight weeks,” Ms. Gicquel said.

Diamonds of 2 carats or less make up about 80 percent of all diamond sales, according to Courbet, but much larger stones are commonplace among Place Vendôme jewelers.

Despite the F.T.C.'s decision, industry observers say, it will take time and education for consumers to accept that lab-grown diamonds are real and to shed the fear that lab-grown stones may be sold as natural. “It is impossible to tell the difference between a mined and a lab-grown diamond without sophisticated analysis,” Ms. Gicquel said.

But rather than hoping to infiltrate the natural-diamond supply chain, many retailers, including Courbet, are laser-marking their stones to set their jewelry apart from conflict diamonds or the negative legacy of mining.

“We are proud to be different,” Mr. Mallen said. “What we expect is that everyone else on the Place Vendôme will also turn to lab-grown.”