SKYLounge

OSMIUM
Scarcity creates value

One-on-one with
Ingo Wolf
Founder & CEO
Osmium Institut Deutschland

PROPERTY INVESTMENT
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Outlook Dubai Expo 2021
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In conversation with Ingo Wolf,
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One-on-One with Ingo Wolf
1. Please tell us a bit more about Osmium and why has it gained so much traction in recent years?

Osmium has many outstanding characteristics that have only started to become widely known since the discovery of its crystallization. In its crystalline form, Osmium is completely harmless to one’s health, a trait not shared by its pre-crystallized form. It is also mesmerizingly beautiful.

The amazing thing is – Osmium itself isn’t new. It’s a precious metal that belongs to the Platinum Group Metals and can be found in the periodic table under the number 76. What is relatively new, however, is the process of crystallizing Osmium, which was developed over a period of 40 years and finalized in 2013. Due to the toxicity of its raw form, there were no significant uses for it in the past. Now that this has changed; the popularity of Osmium is increasing rapidly. The crystal structure of each single piece of crystallized Osmium is unique and many times more detailed than a biological fingerprint. Just like a fingerprint, it can be used as identification. What we’re left with is a precious metal with a unique crystal structure and the highest density of all non-radioactive elements. Thus, Osmium is unforgeable. Osmium is a precious metal with a value density so high that one could efficiently store and transport extraordinary value in the smallest physical volume. This is what makes Osmium so attractive for investors and what got it on the fast track so quickly.

Another outstanding characteristic is its incredible rarity. During the international Osmium symposium in Dubai this year, new numbers were discussed studying the world’s supply of Osmium. Resources and reserves. To summarize, it can be said that the presumed resources are somewhat higher than what was assumed in the past. On the other hand, it also became clear that the recoverable reserves are lower than initially expected.

The incidence of Osmium in the earth’s crust is interesting, because Osmium is mined together with platinum from a depth of 0 to 5,000 meters. With 10,000 tons of platinum ore, there is a yield of just one ounce of Osmium. There are about 17 cubic meters of Osmium available in the earth’s entire crust. It should be noted, though, that since Osmium is a byproduct of platinum, the amount that can actually be mined from these 17 cubic meters depends on platinum mining in the years to come. Recent technological advances have allowed mining to occur at depths of up to 5 km. However, under extreme temperatures near the earth’s mantle and extreme safety conditions, the technical challenges are enormous. So, there must always be a platinum price that makes mining at the necessary depths economically viable.

If electric cars conquer the world, platinum will no longer be needed in many sectors. This might cause the price of platinum to fall and mining at great depths might no longer be affordable. The result might be an early end to suppliers of raw osmium which could trigger an interesting phenomenon that has been nicknamed the “Osmium Big Bang”. If this happens, the price and value of Osmium could experience an interesting development. According to the latest calculations and in view of the development of the platinum market, it might only be possible to mine one cubic meter of Osmium. That corresponds to about 22 tonnes.

2. As we understand, Osmium can only be placed on the international market by your institute, please tell us a bit more about the role of your institute and how can one purchase Osmium?

The Osmium-Institut zur Inverkehrbringung und Zertifizierung von Osmium is the leading authority for certification and distribution of crystallized osmium. The tasks are carried out by a team of specialists who inform dealers, train processing companies, and provide information to interested parties. The Osmium Institute employs experts who can help confirm the authenticity of osmium and supply Osmium Verification Codes for private trade.

The Osmium Institutes are the point of contacts for the press and television for information about osmium and its uses. They maintain an FAQ and help answer all scientific and economic questions relating to osmium. The Osmium Institute Germany has the task of establishing an international network of regional institutes on all continents to facilitate local trade.

These pieces that pass the quality control are entered into the Osmium-World Database and then find their way into the market. The last point of security relates to the exclusive rights of procurement that the Osmium-Institutes have secured with many of the world’s sources of raw Osmium.

Another important task of the German Osmium-Institute is to build institutes all over the world to provide a local, customer-friendly point of contact in as many countries as possible. Currently there are more than 20 Osmium-Institutes on five continents, and the number is continuously expanding. Osmium can be purchased through the global online shop www.buy-osmium.com. State Institute Partners and Wholesale Partners in different countries are supplied by the German Osmium Institute and are direct points of sale to local clients.

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Its prices have experienced extremely low volatility and do not correlate with the behavior of other metals or any assets in general. Osmium is a perfect addition for every investor’s portfolio...
3. Since the start of the pandemic with all economic uncertainties, wealthy people started again to invest more in precious metals, this would be the right time to invest in Osmium with year-on-year growths none of its kind – wouldn’t you agree?

Personally, I believe it is always the right time to invest, not only in times of crisis and uncertainty. The pandemic was an important reminder of this, not just for institutional investors but for everyone. The pandemic shifted their focus back to precious metals as they have always been reliable tangible assets in the past. Of course, gold and silver have been relied on for centuries and people trust in their value. The Osmium market is currently not as liquid as the gold, silver, or platinum markets are, as it is still fairly new as a tangible asset. But its special characteristics make it very interesting for investors, especially now as the market is still developing.

There’s a good reason that Osmium is called the “next generation metal”: Osmium is seen as a long-term investment. If purchased now and held for a period of 15 to 20 years, the asset can be passed on to one’s kids, who would benefit from the long-term returns.

Currently one gram of Osmium costs around €1,500. Osmium is not traded on an exchange; the spot price is generated every day in Switzerland. Multiple factors are important here, the daily harvest rate (i.e. the amount of Osmium that can be used following the crystallization process) being one of them. But supply of raw osmium and demand for crystalline osmium are also crucial. Given the fact that Osmium will not be available forever and considering all the Osmium that is being manufactured into jewelry each year with growing demands, the demand will grow exponentially while the supply diminishes: if the demand remains the same or intensifies, the price will go up.

This is, of course, the development investors hope for too. It is also the reason why it is such a good time to invest in Osmium now. Its prices have experienced extremely low volatility and do not correlate with the behaviour of other metals or any assets in general. Osmium is a perfect addition for every investor’s portfolio: the fact that it cannot be counterfeited, its high value density, and the expected price development clearly speak for an investment in Osmium sooner than later.

4. A unique concept of authentication and certification for every purchased Osmium product makes it also “bulletproof” – if you can elaborate on that a bit.

Every piece of crystalline Osmium has such a unique structure that makes exact identification possible. After crystallization, each piece is scanned with high resolution microscopes at the German Osmium Institute. These 2D and 3D scans are entered into an international database which is also accessible to customs authorities in many countries around the world, including the US and Australia.

An eight-digit alphanumeric code is generated and assigned to each piece. With this Osmium-Identification-Code (OIC), proof of ownership can be provided at any time by entering the code into the database at www.osmium-identification-code.com.

Identification is possible by comparing the scan in the database with the real piece a buyer is looking at. This makes it possible to take Osmium across borders and at the same prevents theft as no one could resend Osmium without the assigned OIC.

If you purchase Osmium there is also another code assigned to your piece (or pieces), the Owner-Change-Code (OCC). With this code the possessor of the assigned piece can be changed multiple times (for example, if one wishes to store it in a bank or with a relative), whereas the owner can only be changed once. This makes it easy to resell Osmium to a jeweler or a private person – the OCC provides proof of ownership and the OCC provides the means necessary for an easy transfer of ownership. The transfer is possible at www.osmium-identification-code.com.

5. Finally: As the driving force, how does a usual day look like in your life?

For all of us working at the Osmium-Institute, our daily tasks include the analysis and purification of raw Osmium in preparation for crystallization, the post-cutting inspection and microscope scans, and the preparation of custom pieces for various partner companies in the jewelry market. My job is also to stay ahead of assurances that might emerge. With Osmium becoming increasingly popular in jewelry and luxury accessories, another interesting phenomenon is triggered to happen, the Osmium-thrustout. Should raw Osmium really run out in the near future, an unavailability would lead to a severe shortage.

Osmium does not, in most cases, return to the tangible asset market once it has entered the jewelry market. This is because Osmium from jewelry already has a fixed shape, and it is incorporated into jewelry along with other metals. If Osmium is removed again, it cannot simply be melted down, because this would cause it to lose its crystal structure and thus its fingerprint. In such cases, Osmium would be returned to recycling, which is a time-consuming and costly process. Naturally, customers therefore avoid recycling and keep the Osmium in the jewelry. As a result, hardly any Osmium flows from the jewelry market back into the tangible asset market and the Osmium investment sector loses a percentage of Osmium to the jewelry industry every year. So, if one day the Osmium BigBang is reached and raw Osmium can no longer be supplied, then the withdrawals from the jewelry industry will cause the total amount of crystallized Osmium to become smaller and smaller until it eventually reaches zero.

My main daily task as director of the Osmium-Institute is to provide customer service and doing scientific research as well as writing books. Customers who consider buying Osmium from a trading partner call the institutes because they want direct answers to the questions, they ask themselves before making the final decision to buy Osmium. They specifically call the German institute because they appreciate the scientific work we do. Part of my job is also to observe current events, be it political, economic, or societal, to be able to navigate this company through all storms that might rock our boat. Daily communication with sales partners is just as important as keeping up with fake news about Osmium on the internet. Visiting new State Institute Partners in their respective countries, supporting them in building a partner institute, talking to the press and making sure that our Ethical Sourcing guidelines are adhered to – all of this is part of my job and great fun, every day.

Mr. Wolf, we thank you for the interview.
OSMIUM
The World’s Rarest Precious Metal
Becomes the Unique Opportunity

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OSMIUM-INSTITUT
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What is OSMIUM?

The picture shows the availability of precious metals worldwide. The globally available amount of gold fits into a cube with an edge length of 22 meters. In terms of quantity, OSMIUM is the rarest of all precious metals in our earth’s crust, as there is 1,500 times less of it than gold and 2,500 times less of it than silver.

Crystalline OSMIUM is 35 times more precious than gold and has the highest value in terms of volume among all precious metals. 1 pure ounce of osmium = 31.1 g.

Crystalline OSMIUM has a steel blue color. Its unique bluish-silver to bluish-whitish reflection of light extends beyond that of a diamond. The light does not refract on the crystal surface and has a remarkable reflection. Osmium was toxic until 2014 when Swiss scientists discovered the possibility that they could crystallize osmium. The process is extremely complex and time-consuming with as many as 50 interdependent variables (temperature, pressure, gas content, etc.). If only one of these variables deviates, the crystallization process is unsuccessful.
OSMIUM is an element with atomic number 76 in the periodic table of the elements. It cannot be produced chemically/artificially.

Osmium is durable

Because of its durability, OSMIUM keeps its shine forever. For example, it is also resistant to hydrochloric acid. Its abrasion resistance exceeds all other substances.

Inimitable density

The crystalline OSMIUM has a purity of 99.9995%. In its crystalline form, osmium is completely harmless to the body and skin. Osmium has the highest density of all chemical elements and compounds, so it cannot be falsified by the conventional enclosing a heavy core in a bar.

If you were to place a less valuable core inside an osmium bar, this would reduce its specific density which would expose the counterfeit immediately. OSMIUM namely has the highest density of all elements which makes it inimitable.

- To counterfeit osmium is mission impossible!
- Gold can be counterfeited by simply coating tungsten bars.
- Osmium has the highest density of all substances.
- It is not possible to enclose a less valuable core inside osmium.

99.9995%

Osmium is solid

The crystalline OSMIUM has a value of 7.5 on the Mohs hardness scale and is as hard as tungsten and harder than silver and gold whose hardness is 2.7 and 2.5.
Osmium is certified

Every piece of osmium on the market is certified. The certification is carried out by the Osmium Institute in Germany. The certificate includes physical data and a unique record/code of osmium.

- Osmium without a certificate does not exist!
- Each piece of osmium has an accessible high-resolution photo online.
- The only institution in the world for osmium certification is the Osmium Institute in Germany.
- When buying or selling, you must always submit a certificate proving the authenticity of the osmium.

OCC - Owner Change Code

OCC is a unique, one-time code that we need if we decide to sell osmium. It is similar to a two-step security key when signing up for an online bank. The new owner then automatically obtains the unique (new) OCC code that he will need for any further sale of osmium.

- After the sale, osmium changes the owner, which is entered into the ownership database (OCC).
- The OCC serves the purpose of a one-time ownership change of osmium.
- Ownership changes upon registering in an online international database.
- Without an OCC entry, no sale or change of ownership is possible.

OSMIUM is irreplaceable

OSMIUM surface has a complex and unique structure. This means that each piece of osmium has its DNA record that cannot be confused with another.

- Each piece of osmium is listed in an international online database.
- OIC is a unique designation that is assigned to osmium and is not replaceable.
- Osmium cannot be melted and recrystallized.
- Crystallization occurs at a temperature of 3000 degrees Celsius, which melts all other elements.

OIC - Osmium Identification Code

Each piece of osmium is unique. Its surface structure has a 10,000 times more accurate record than a fingerprint. Each piece of osmium is assigned a unique code before being placed on the market. This allows owners and potential buyers to access the certificate in the online database at any time and from anywhere.

- The identification code consists of an eight-digit combination of letters and numbers.
- The recognition reliability of the crystalline osmium surface structure is approximately 10,000 times greater than that of fingerprint recognition.
- The certificate is issued exclusively by the Osmium Institute in Germany and cannot be falsified, as it is recorded in the online database.
EXCEPTIONAL PURITY

In its crystalline form, osmium shows a unique purity of 99.995%. In this form, it is also in no way harmful to health, body, and skin.

EXTREME RESISTANCE

Resistance against extreme pressures is higher with osmium than with any other element.

UNIQUE REFLECTION

Osmium has a magical luster that unfolds particularly upon reflection of sunlight and LED artificial light. Its high reflectivity mirrors light from the crystal structure in all directions.

MAGICAL SHINE

Osmium is known for its unique bluish-silver luster which blurs whilst luster which beats even the diamond.

IMPOSSIBLE TO COUNTERFEIT

Because of its unique characteristics, osmium is impossible to counterfeit and is, therefore, an exceptionally safe noble metal. Gold, on the other hand, can be counterfeited by simply coating tungsten bars at the density of the two elements is very similar.

HIGHEST DENSITY

Osmium has the highest density of all elements and compounds in chemistry. Therefore, it cannot be counterfeited by enclosing the heavy core in a bar.

EXCEPTIONAL RARITY

Osmium is not only the rarest noble metal but also the rarest non-radioactive element of all. It is a fact that there is 1,500 times less osmium than gold in the world.

STABLE PRICE GROWTH

Constant yield and tremendous potential for the future. Osmium is a precious metal of many generations.

THE GREATEST VALUE

Because of its rarity, osmium is reaching the greatest value among the precious metals.
Osmium is found in platinum ores and is so rare that approximately 10,000 tons of platinum ore will yield a mere 28 grams of osmium. Platinum is a rare enough metal, and yet when comparing global reserves, there are approximately 13,000 tons of platinum, as opposed to around 200 tons of osmium. In fact, Osmium is the least abundant stable element in Earth’s crust with an average mass fraction of 50 parts per trillion in the continental crust.
Osmium’s rapid upturn

Since its launch in 2014, the price of crystalline OSMIUM has been steadily increasing and is very stable.

The price of osmium changes once a day (every 24 hours). Namely, the price of osmium is not determined through the traditional precious metals trading system. It depends on the supply of crude osmium and the demand for crystalline osmium.

Opportunities
- Diversification and hedge against inflation
- Rare and limited supply
- Available in flat and cylindrical geometries in various sizes including Osmium Disk, Osmium Diamonds, Osmium Stars, Osmium Bars and Osmium Shapes
Our International Merchant Database

All our listed companies are certified and allowed to trade with Osmium. The trading structures are growing extremely well right now. Currently there are more than 20 Osmium-Institutes on five continents, and the number is continuously expanding. We are happy to announce that Osmium has made a lot of worldwide friends over the last few years.
The osmium crystallisation process and issuing of certificates of authenticity is entirely under the control of the Osmium-Institut zur Inverkehrbringung und Zertifizierung von Osmium GmbH. Certified osmium can initially only be bought from affiliated osmium institutes and partners who are certified to work with and sell osmium. As there is only one single entity controlling the crystallization process, there is only one place where osmium can be initially purchased. Exclusive delivery contracts for raw osmium have been negotiated with mining corporations. Only their products are processed into crystallized osmium.

No affiliated osmium institute will buy raw osmium from any other distributor. As part of the authentication process, every osmium piece is photographed, weighed and measured in Germany.

The chemical purity, which is at least 99.9995%, is determined per batch. The crystalline surface structure of every single osmium piece is an individual feature, just like a human fingerprint, but with a 10,000 times greater accuracy. Each osmium piece is assigned with an eight-digit alphanumeric code, the Osmium Identification Code (OIC). The OIC is entered into the International Osmium Database along with the information recorded as part of the authentication process. The OIC enables private individuals to verify the authenticity of purchased osmium by visual comparison with the photographs which are stored in the International Osmium Database.
The driving factors behind the demand for crystalline osmium are its uses as a value-dense tangible investment asset and as a jewelry metal. Many other potential applications exist due to the special properties of osmium; however, osmium has historically been too rare and too expensive for any of these applications.

Investors with a long-term perspective are therefore predominantly betting that, due to its rarity, osmium will become increasingly difficult to acquire for jewellers. In the future, private and institutional investors will supply the jewelry market with crystalline osmium.

**Purchase**

Crystalline, certified osmium is directly purchased from the Osmium-Institut zur Inverkehrbringung und Zertifizierung von Osmium GmbH, Germany, or one of its affiliated local osmium institutes.

**Delivery lead time**

Depending on order between 1 and 6 weeks.

**Product boxes**

Small investment tranches start at EUR 5000 (small box) and go up to between approx. EUR 125,000 per Investor Disk and EUR 1 million per Family Office package (8 Investor Disks).

The estimated market cap is $200 billion.

**Fees & other costs**

Costs for import duties, taxes, fees for storage and any other costs to be borne by buyer. Options for bonded warehousing are available.
Medium Edged Bars are rectangular bars of crystalline osmium. The dimensions of Medium Edged Bars vary from piece to piece, with differences in not only length and width, but also subtle differences in layer thickness. These differences in layer thickness are due to differing crystallization times, which affect the height of the crystalline structure, and in turn, the piece’s overall sparkle.

Investors may consider choosing Medium Edged Bars with large surface areas, as this allows more geometric freedom if ever one were to cut custom shapes out from the bar. Medium Edged Bars can also be exchanged for Big Round Bars from the Osmium Institute, free of charge.

Medium edged bars

Medium edged bar
€ 402,08 - € 17,263,12
Disks are circular pieces of crystalline osmium. These pieces vary in size and price, but due to their circular shape, all have highest value-to-edge length ratio. As Osmium is crystallized on circular substrates, large disks have no off-cut or processing surcharges added to their price. Circular osmium pieces with diameters smaller than 1 cm are known as “Osmium Diamonds.” Although the smaller disks carry greater production costs due to their being cut from larger pieces, Osmium Diamonds are immensely popular in the jewelry and luxury accessory industries. Larger than Osmium Diamonds are Osmium Coins; flat circular disks with an 18 mm diameter.

A Big Round Bar is the largest disk in which Osmium comes. A popular choice for investors looking for a secure means of securing value, Big Round Bars reach diameters of up to 5 cm.
Foil Boxes

Certified pieces of crystalline Osmium are transported in our high-quality Foil Boxes. The boxes have a black casing and two transparent foils between which the Osmium piece sits, making it appear to float freely.

Each box bears the Osmium Identification Code. The boxes combine elegance and security and can be used to transport varying sizes of crystalline osmium, from small diamonds to large disks.

Bar-Box  € 2,400 - € 60,000
Disk-Box  € 30,000 - € 1,200,000
Family-Office-Disk-Box from € 1,200,000
The assortment box was developed to be able to store and transport Osmium Diamonds, Stars, Triangles or Squares (each 3mm in diameter) with a high value density in a small space and without foil packaging.

Collectors and investors who wish to purchase new pieces each time will receive a new assortment box with their initial order and with each order after reaching 40 Osmium 3mm pieces, as the box can safely store 40 Osmium pieces in glass vials.

The Osmium Identification Code is applied to the vial to maintain clear ownership. You can purchase an assortment box for any amount starting at 500 Euros. The box is then filled with Osmium pieces until the desired amount is reached.

A special advantage is the automatic overfill - a surplus of osmium that ensures that the total value of the assortment box matches the customer’s order.
It is possible to order more vials following the initial purchase of an assortment box to add to one's investment.

The vials with the 3mm pieces (Diamonds, Stars, Triangles or Squares) are packed in an air-padded envelope and sent to the customer by normal (insured) mail.

This eliminates the usual amount of packaging and allows the investor to add to their assortment box with ease.
Assortment boxes can also be purchased fully stocked. The assortment box is fully prepared with 40 pieces (Diamonds, Stars, Triangles or Squares).

Because of the slightly different weights of the crystalline surfaces, there are also differences in weight between the pieces. For this reason, the price of each assortment box is unique.

In general, it can be said that high-priced assortment boxes contain slightly thicker objects and thus also have a higher sparkle grade.
Custom-made

The design and order of custom pieces is available to individual investors and production companies alike.

Almost any shape is possible. 3D objects are crystallized on carbon bodies. 2D objects are cut from flat bars, which can be bought from the Osmium-Institutes or from private investors.

It is worthwhile to briefly search the online global web store to find out whether private certified goods with an Osmium Identification Code are available for purchase.

Osmium should never be purchased without an Osmium Identification Code. If you would like to order a custom-made shape, please describe in detail your preferred osmium shape and we will contact you to discuss the order.