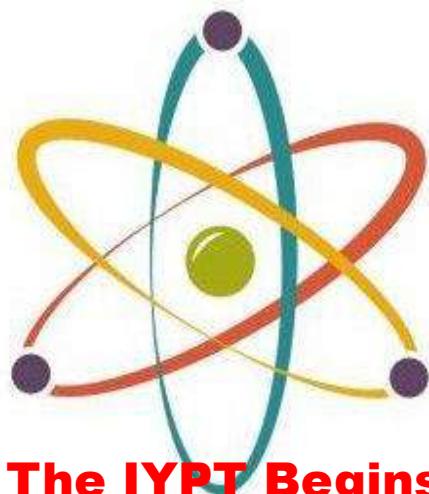


# The BULLETIN

OF THE NEW YORK MINERALOGICAL CLUB, INC



INTERNATIONAL  
YEAR OF THE  
PERIODIC TABLE  
**2019**

**The IYPT Begins**  
See page 6!

Volume 133 No. 1  
January 2019

**MODERN MARVELS:  
ROCKS**

**ANCIENT  
ZIRCON**

**INTERNATIONAL  
YEAR OF THE  
PERIODIC TABLE  
BEGINS**

**NOT SO ROUGH**

**MEMBERSHIP  
RENEWAL FORM**



**January 9, 2019  
2nd Annual  
Movie Night!**

*America's Oldest Gem & Mineral Club*  
Founded 1886 ♦ Incorporated 1937

# Bulletin of the New York Mineralogical Club

Founded 1886

♦ New York City, New York

♦ Incorporated 1937

Celebrating the International Year of the Periodic Table of Chemical Elements

Volume 133, No. 1

January 2019

**January 9<sup>th</sup> Meeting:  
2<sup>nd</sup> Annual Movie Night:  
“Modern Marvels: Rocks”**



Last year's Movie Night (*Pederneira: A Rainbow of Color*) was SUCH a success that we decided to have another such event this year. This year we will feature *Modern Marvels: Rocks!*

*From the Stone Age to the Space Age, our world has been built from rocks. Visit the Johnson Space Center in Houston to examine America's horde of moon rocks to determine how the planets were formed, and how old the solar system is. See how marble and granite are extracted, cut and polished. Do some blasting at a gravel pit, watch ore turn into steel and finally, learn how the geysers in Northern California harness heat from rocks to create energy for 85,000 homes.*

In keeping with the Movie Night theme, there will be some theater candy, popcorn and beverages available, a short video or cartoon during intermission and meeting room decorations relevant to the theme.

See you there!

## Preview of 2019 Events Planned for the New York Mineralogical Club

By Mitch Portnoy

The year 2019 will feature many events and activities for members of the New York Mineralogical Club, including educational lectures, benefit auctions, social activities and mineral & gem shows.

The United Nations has declared 2019 to be the **International Year of the Periodic Table** of Chemical Elements.

The actual opening ceremony will take place at UNESCO in Paris on the 29th of January 2019. The Club will acknowledge this special year with relevant actions throughout the year.

After the great success of last year's **Movie Night** in January, we decided to continue the "tradition" with a second movie night this year.

February's meeting will feature our highly popular "**Members' Showcase**" (which is a formal name for show and tell) where members make short presentations relating to the hobby; the meeting will also contain our annual **Chinese Auction!**

**Engaging lectures** will be an important part of most of the year's meetings. I know I am especially looking forward to hearing about Ethiopia by Prof. Juan Manuel Garcia Ruiz in June!

The first of the three **New York City Gem & Mineral Shows** will occur during the first weekend in March. (The other two occur in June and November.) Coming shortly after Tucson, we can certainly expect a wonderful selection of minerals, gems, fossils, lapidary arts, etc. from which to choose!

May's meeting this year (rather than June as in the past) will feature our **Annual Benefit Auction**. I can already promise you that the lots will be diverse and high quality. An early version of an illustrated auction catalog will be posted online in March or April.



The summer months are no longer an unused time period for the Club. We have a regular meeting in July and an **Open House** (party) out on Long Island in August. In addition, there will be a **Directors Meeting** in early July whose agenda is overall Club planning, but with a strong focus on the October banquet.

The theme of the **October 2019 Banquet** will be *labradorite* so be ready to see lots of sparkling blue on all of the banquet party materials and decorations.

And, since everyone liked the "less meeting, more party" motif from the 2018 banquet, there will again be lots of fun and games this year with the more leisurely meal pace as there will be no main lecture.

Paired with and occurring before the banquet itself will be a **Silent Auction**. (Its revenue help keep the individual banquet costs WAY down.) And once again, there will be a "**Buy it Now**" option available for each of the lots as this was proved to be both popular and efficient.

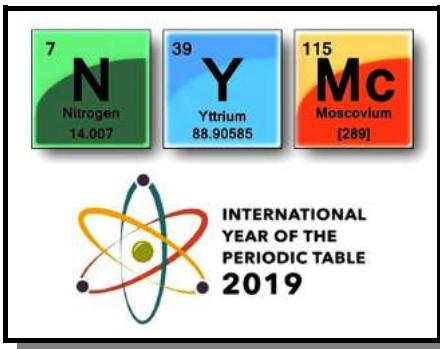
I hope to see everyone at all of these activities. *And remember, ideas and suggestions are ALWAYS welcome.*

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## President's Message

By Mitch Portnoy



The Club will acknowledge and celebrate the **International Year of the Periodic Table of Chemical Elements** in 2019 in many ways.

Every Bulletin will have an interesting graphic, article or diagram on this theme. I want to thank **Diana Jarrett** and **Vivien Gornitz** in advance as they have all agreed to use this topic for some of their regular column articles. And **Bill Shelton** has decided to write an entirely new series of articles under the summary title ***It's Elemental!***

I strongly encourage others to write IYPT-related articles during 2019!

I have designed a special set of note cards and a postcard (similar to the banner pictured above). Also, all members in good standing will receive a cancelled IYPT cacheted envelope at the January meeting.

I am trying to arrange a special lecture or two on this topic for the 2019 meetings; local speakers (like me) might have to get bumped to 2020.

### Question:

Does anyone have a Blu-Ray ready laptop that we can borrow later in the year?

### Send in Your 2019 Club Dues

It is time to send in your 2019 club membership dues! All memberships run from January 1 to December 31 of each year (with a few exceptions). If your mailing label says "2018", you owe your 2019 dues. Please take the time now to mail in your dues in order to prevent uninterrupted delivery of your bulletin. A handy form appears on page 12. Dues are \$25 for individual, \$35 for family. Mail to: Membership Coordinator, N.Y. Mineralogical Club, P.O. Box 77, Planetarium Station, NYC, NY 10024-0077.

Or Renew Online with PayPal!



## Club Meeting Minutes for December 12, 2018

Attendance: 53

President Mitch Portnoy presided

### Announcements & Proceedings:

- ◆ The meeting raffle was held.
- ◆ The death of member **Sidney Horenstein** (1936-2018) was announced. (Full New York Times Obituary will appear next month.)
- ◆ Remaining banquet souvenir folders were distributed (which include the remaining 2019 NYMC calendars).
- ◆ A website update was given showing the availability of the banquet videos.
- ◆ Members were encouraged to pay their dues for 2019.
- ◆ The various historical events occurring on the meeting date were announced.
- ◆ A game about sulfides was played with cactus glasses given as prizes.
- ◆ All the Club's merchandise was available for sale.
- ◆ The new set of Periodic Table note cards debuted.
- ◆ A picture (see p. 6) of a new Club cap (garnet colored with logo) was shown.
- ◆ Upcoming Club events were quickly thru mid-2019 were gone over.
- ◆ The evening's speaker was introduced expertly by Naomi Sarna.

### Special Lecture: Jeffrey Bilgore

#### "The AGTA Today"

The NYMC ended its 2018 series of meeting lectures with an engaging and informative presentation about the American Gem Traders Association (AGTA) by its president, **Jeffrey Bilgore**.

The AGTA was founded in 1981 by a group of three gem dealers who decided to create an organization whose members agreed to proudly follow an honorable code of conduct and business practices.

It has thrived since then and grown to include 1200 gem dealers, miners, jewelry manufacturers, designers and retailers, including some of the most famous and historic American companies.

Jeffrey named some of the many esteemed AGTA participants, several of whom are current members of the NYMC!

He continued with examples of important international, socially-conscious projects sponsored by his organization or its members.

His final two topics included an overview of their annual GemFairs™ and the importance of their Spectrum Awards for jewelry design and the gemstone arts.

We thank Jeffrey for such a colorful and enriching presentation about the AGTA!

## Members in the News

- ◆ A final collection of essays by **Oliver Sacks** – many never before published – will be available on April 23, 2019. This volume of essays, entitled *Everything in its Place: First Loves and Last Tales*, showcases Oliver's broad range of interests – from his passion for ferns, swimming, and the Periodic Table, to his final case histories exploring schizophrenia, dementia, and Alzheimer's.
- ◆ An extensive obituary about **Sidney Horenstein** appeared in the December 12, 2018 New York Times.

It with sadness that we report of the passing of **William O'Neill**, lifelong mineral collector and father of **Chris O'Neill**, on December 3 at age 99.

## Welcome New Members!

Augusto Castilto ..... Ridgewood, NY  
Aldon James ..... NYC, NY  
Carolyn Mutter ..... Piermont, NY  
*And Welcome Back to:*

Olga Gonzalez ..... NYC, NY

## Coming In February 2019

### NYMC Meeting Activity

#### Members' Showcase!

Show & Tell by the Members of the New York Mineralogical Club



Wednesday, February 13, 2019  
The Watson Hotel – 6:00 pm

## 5<sup>th</sup> Annual Chinese Auction



KEEP YOUR STICK	00001	00001	00001	00001	00001
NEVER USE STICKS	00001	00001	00001	00001	00001
ORANGE OR GREEN STICKS	00001	00001	00001	00001	00001
YOUR NUMBER IS	00001	00001	00001	00001	00001
00001	00001	00001	00001	00001	00001

## The World of Minerals

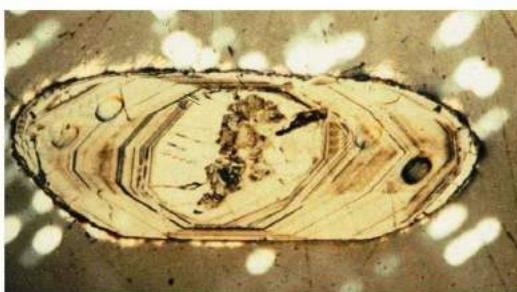
The *World of Minerals* is a monthly column written by Dr. Vivien Gornitz on timely and interesting topics related to geology, gemology, mineralogy, mineral history, etc.



### Zircon: Lifting the Veil of Time

Zircon,  $\text{ZrSiO}_4$ , sometimes takes the place of diamond in jewelry, thanks to its bright luster and brilliance. Lately, this role has been largely overtaken by cubic zirconia (CZ),  $\text{ZrO}_2$ , a man-made gem which is singly-refractive like diamond, but harder than zircon (H 8.5 CZ vs. ~7.5 zircon). Yet zircon is a lovely gemstone in its own right, occurring naturally in red, brown, green, and occasionally blue hues<sup>1</sup>. However, zircon's true scientific value lies in its ability to lift the veil of time on the Earth's earliest chapter—the Hadean, over 4 billion years ago.

Zircon appears in small amounts in many igneous, metamorphic, and sedimentary rocks. Its high formation temperatures, hardness, and survival through the ravages of metamorphism and weathering enables it to retain the distinctive oxygen isotope signatures of the magma from which it initially crystallized. Zircon also concentrates uranium and thorium, radioactive elements used in dating very old rocks. For example,  $^{238}\text{U}$  and  $^{235}\text{U}$  spontaneously decay into lead-207 and lead-206, respectively, at slow, well-defined rates. The rubidium to strontium and more recently, samarium to neodymium decay schemes provide additional dating information.



Zircon grain from the Acosta Gneiss, Slave Province, NW Territories, Canada. The crystal has been etched with acid to highlight the growth zones. These zircons have been dated to 4.03 By.

Until recently, the Earth's oldest record-holder was the 4.03-billion-year old Acosta Gneiss from northwestern Canada, from the Slave Terrane near the Great Slave Lake in Canada's Northwest Territories. Recall that the Solar System, however, is 4.55 billion years old, leaving a half-billion-year missing gap in the Earth's early history. In 2008, the Nuvvuagittuq Greenstone belt in northwest Quebec yielded even older dates of around 4.3 billion years for a terrestrial rock. Some researchers interpret these very old dates as the time when the original parent materials first crystallized, and later re-melted and recrystallized into younger, now-existing rocks. Even so, the 4.3 date implies the existence of a crust at that time.

The oldest-known Earth materials are tiny 4.4 billion-year old zircon grains from a younger quartz pebble conglomerate of the Narryer Gneiss Terrane, found in the Jack Hills of Western Australia. This date brings us closer to the time when the Moon and meteorites formed, but still leaves around 200 million years unaccounted for. The tiny zircon grains, however hold another treasure—minute gas bubbles whose oxygen isotope composition are indicative of rocks that has crystallized in the presence of water.

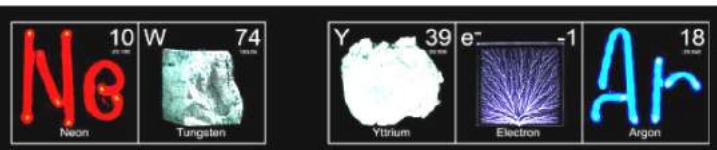
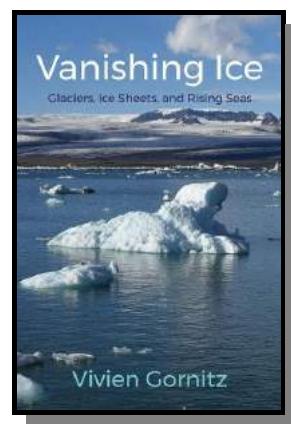
What was the source of this water? A popular theory maintains that comets, which have been described as "dirty snowballs," had delivered the water during an early heavy bombardment of the Earth. The oxygen isotope makeup of the zircons rules out this theory. More likely the Earth condensed and cooled from the debris of the early Solar System, which already contained large quantities of water (as, for example, in the carbonaceous chondrite meteorites).

Curiously, tiny graphite inclusion in slightly younger (i.e., 4.1 billion-year old) zircon grains from the Jack Hills conglomerate displayed carbon isotope ratios similar to those found in living systems (i.e., an enrichment of the lighter  $^{12}\text{C}$  isotope relative to  $^{13}\text{C}$ ). Does this finding push back the origin of life beyond the oldest-known fossil evidence—the 3.5 billion-year old Apex Chert from Western Australia, or suspected life at 3.8 billion years from the Isua rocks in Greenland? Clearly, more evidence will be needed to resolve this question. Yet one thing is certain. Zircon, a beautiful natural gemstone, can sparkle even more brightly with the light it sheds on the Earth's earliest history.

#### Further Reading

- Gornitz, V., 2002. Zircon—the genesis mineral. Bulletin of the New York mineralogical Club, June 2002, p.3.  
Prothero, D.R., 2018. Zircons: More precious than diamonds. *American Scientist*, 106:50-53.

#### Coming in June 2019



<sup>1</sup> Most blue zircon has been heat-treated.

## 7 New Minerals Created by Human Activity

By Claire Cock-Starkey

A recent study carried out by a team led by Robert Hazen of the Carnegie Institution for Science and published in *American Mineralogist* has shown that human activity is creating a boom in new minerals. Of the 5200 minerals officially recognized by the International Mineralogical Association (IMA), the study finds that 208 new minerals (4 percent of all minerals) have been created by human activity. The research supports the idea that we're in the midst of a new geological era—the Anthropocene—an epoch defined by the impact of human activity, rather than natural forces, on the geology and ecosystems of Earth.

The majority of minerals on Earth were created about 2 billion years ago, during what's known as the "Great Oxidation," when oxygen flooded into the atmosphere from photosynthetic bacteria. Since then, the rate at which new minerals have been created has slowed—at least until about 1700, when human industrial activity resulted in a sudden increase in the number of new minerals. These new minerals have been found in mines, shipwrecks, and even inside museum drawers. And it seems likely that as large dumps of human artifacts and technology decompose and react with the natural environment, many more new minerals will develop. Below are seven of the new minerals created by human activity.

### 1. Andersonite // Radioactive Mineral Found on Mine Walls

Andersonite (seen above) is named after Charles Alfred Anderson of the United States Geological Survey [PDF], who first recorded it in Jerome, Arizona. A rare sodium-calcium uranyl carbonate mineral that is generally found as a coating on mine walls, it's formed when water evaporates onto the stone surfaces of the walls and hits the dry air from the mine. Andersonite contains uranium and is mildly radioactive, emitting a fluorescent green-yellow glow under a black light. Found in mines in America, Iraq, Austria, the UK, and Argentina, amongst other places, its beauty makes it highly prized by collectors. A good sample can fetch up to \$500.



Andersonite, Repete Mine, Blanding, San Juan County, Utah

### 2. Chalconatronite // Discovered on Ancient Egyptian Artifacts

Chalconatronite is a bright-blue powdery mineral found as a corrosion product on ancient Egyptian bronze artifacts. It was first identified on excavated grave goods, and since then has also subsequently been found in various mines in arid areas such as Western Australia, Colorado, and elsewhere.



Chalconatronite, Bastenberg Mine, Ramsbeck, Meschede, Sauerland, North Rhine-Westphalia, Germany

### 3. Calclacite // Found Only in Old Oak Drawers

Calclacite is an obscure mineral formed only in old oak drawers at museums [PDF]. It was first noted in the 1950s in the oak storage cabinet of the Royal Museum of Natural History in Brussels. White and shaped in long, hairlike crystals, the mineral is an efflorescence (crystalline deposit) created when calcium-rich rock or fossil samples react with the acetic acid from the oak.

### 4. Abhurite // The Result of Shipwreck

Abhurite is exclusively formed on items made of tin after they come into contact with sea water, and has only been discovered where shipwrecks have spilled tin objects into the ocean. One such site is the SS Cheerful, which was wrecked in 1885 off the coast of St Ives in Cornwall while carrying a large cargo of tin ingots. When the wreck was recovered in 1994, many of the ingots were found showing evidence of abhurite. Other samples have been found at shipwrecks in Hidra, off Norway, where the deposit was found on pewter plates, and on ingots found at a wreck in the Red Sea.



Abhurite , Fundort: Shipwreck "Hydra", South Coast of Norway

### 5. Kornelite // Found in Copper Mines

Mines create an especially fertile environment for new minerals to form—the digging of the mine by humans changes the natural temperature and humidity, which can lead to new reactions on the tunnel walls. Kornelite, named after Hungarian geologist Kornel Hlavacsek, was first found in a copper mine in Slovakia and is formed from the oxidation of iron sulfides. It is very soluble in water, so specimens must be protected from contact with the air, since humidity can destroy the delicate crystals. Pale pink or violet in color, it grows as a crust in the form of a spray of needle-shaped crystals.



Kornelite, etc., Copper Queen Mine, Queen Hill, Bisbee, Warren District, Mule Mts, Cochise Co., Arizona

## New 2019 NYMC Postcards Available!

### New York City's Ancient Bedrock



### 6. Simonkolleite // Discovered on Slag Heaps

Simonkolleite is a colorless mineral named after German mineral collectors Werner Simon and Kurt Kolle. Formed of very small, colorless hexagonal crystals, it was originally discovered on zinc-bearing slag heaps at smelting sites in Germany.



Simonkolleite, Genna zinc smelter slag locality, Letmathe, Iserlohn, Sauerland, North Rhine-Westphalia, Germany

### 7. Tinnunculite // Formed from Bird Excrement

Tinnunculite is a carbon-bearing mineral named because it is often formed when the hot gases escaping from coal-burning mines in Russia react with the droppings of the Eurasian kestrel (*Falco tinnunculus*). It has also been found naturally occurring at a second location, in Russia's Mt. Rasvumchorr.



Tinnunculite, Power station, Sportgastein, Naßfeld valley, Gastein valley, Hohe Tauern, Salzburg, Austria

### New York City's Minerals



### And Later in the Year . . .

### New York City's Minerals



### New York City's Minerals



## The UN Proclaims 2019 the International Year of the Periodic Table of Chemical Elements



United Nations  
Educational, Scientific and  
Cultural Organization



- International Year
- of the Periodic Table
- of Chemical Elements
- 

On 20 December 2017, during its 74th Plenary Meeting, the United Nations (UN) General Assembly 72nd Session has proclaimed 2019 as the International Year of the Periodic Table of Chemical Elements (IYPT 2019). In proclaiming an International Year focusing on the Periodic Table of Chemical Elements and its applications, the United Nations has recognized the importance of raising global awareness of how chemistry promotes sustainable development and provides solutions to global challenges in energy, education, agriculture and health. Indeed, the resolution was adopted as part of a more general Agenda item on Science and technology for development. This International Year will bring together many different stakeholders including UNESCO, scientific societies and unions, educational and research institutions, technology platforms, non-profit organizations and private sector partners to promote and celebrate the significance of the Periodic Table of Elements and its applications to society during 2019.

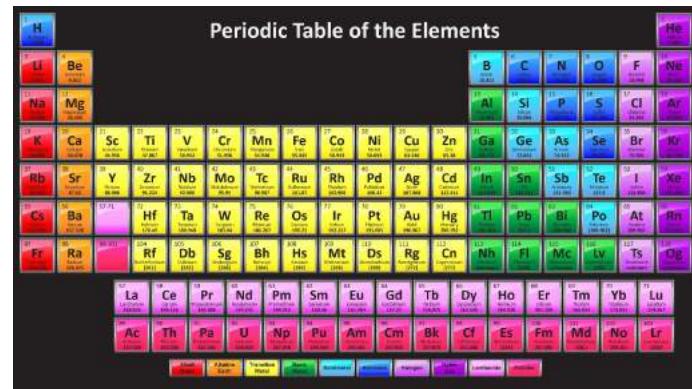
The development of the Periodic Table of the Elements is one of the most significant achievements in science and a uniting scientific concept, with broad implications in Astronomy, Chemistry, Physics, Biology and other natural sciences. The International Year of the Periodic Table of Chemical Elements in 2019 will coincide with the 150th anniversary of the discovery of the Periodic System by Dmitry Mendeleev in 1869. It is a unique tool enabling scientists to predict the appearance and properties of matter on Earth and in the Universe. Many chemical elements are crucial to enhance the value and performance of products necessary for humankind, our planet, and industrial endeavors. The four most recent elements (113, 115, 117 and 118) were fully added into the Periodic Table, with the approval of their names and symbols, on 28 November 2016.

The International Year of the Periodic Table of the Chemical Elements will coincide with the Centenary of IUPAC (IUPAC100). The events of IUPAC100 and of IYPT will enhance the understanding and appreciation of the Periodic Table and chemistry in general among the public. The 100th Anniversary of IUPAC will be on the UNESCO Calendar of Anniversaries on 28th July 2019.

“As the global organization that provides objective scientific expertise and develops the essential tools for the application and communication of chemical knowledge for the benefit of humankind, the International Union of Pure and Applied Chemistry is pleased and honored to make this announcement concerning the International Year of the Periodic Table of Chemical Elements” said IUPAC President, Professor Natalia Tarasova.

Chemical elements play a vital role in our daily lives and are crucial for humankind and our planet, and for industry. The International Year of the Periodic Table of Chemical Elements will give an opportunity to show how they are central to linking cultural, economic and political aspects of the global society through a common language, whilst also celebrating the genesis and development of the periodic table over the last 150 years. It is critical that the brightest young minds continue to be attracted to chemistry and physics in order to ensure the next generation of scientists, engineers, and innovators in this field. Particular areas where the Periodic Table and its understanding have had a revolutionary impact are in nuclear medicine, the study of chemical elements and compounds in space and the prediction of novel materials.

The IYPT is endorsed by a number of international Scientific Unions and the International Council for Science (ICSU). The IYPT will be administered by an International Steering Committee in collaboration with the UNESCO International Basic Sciences Programme and an International Secretariat, to start operating in early 2018. In addition to IUPAC, IYPT is supported by the International Union of Pure and Applied Physics (IUPAP), the European Chemical Sciences (EuCheMS), the International Astronomical Union (IAU) and the International Union of History and Philosophy of Science and Technology (IUHPST).



## And Coming Soon!



## 20 Cool Facts about the Periodic Table

By AT Author

To classify information about the properties of all known elements present on earth a framework was created known as the Periodic Table. Every box on the periodic table comprises information regarding each element's chemical symbol, name, and atomic mass. This periodic arrangement of elemental information was not as easy as it is today.

Although Dmitri Mendeleev has taken the most credit for the development of the periodic table, there were several other scientists all across Europe who made vital contributions which ultimately helped Mendeleev construct the Modern Periodic Table.



The Periodic Table has continued to take shape 75 years into its inception.

1. Dmitri Mendeleev, known as the “Father” of the Periodic table was known to be a cranky professor teaching at the University of St. Petersburg.
2. Mendeleev arranged the elements in the order increasing atomic weight.
3. Metals are the most common elements found in the Periodic table.
4. The Periodic table was last edited in the year 1958.
5. The metals are always placed to the left of the periodic table.
6. The element that shares properties with some non-metals and metals is called Metalloid.
7. The reason why some elements are at the bottom and aren't attached to the rest is to save space and let the table be as wide.
8. Technetium was the first 1st element to be made artificially.
9. The periodic table has room for 118 elements.
10. Many consider the Table as a “clean sheet” as it has several valence electrons above each column.
11. Since argon did not fit in Dimitri’s column, it was initially denied as an element.
12. The names of the elements at the bottom of the periodic table are named after famous personalities. (Ex: Bohrium–Niels Bohr)
13. The periodic table has only two liquids.
14. Diamonds are made of carbon.
15. J is the only letter that does not appear on the Periodic Table.
16. Elements are, in fact, invisible.
17. If you search for how to memorize the periodic table on Google, you will find more than 121,000 results.

18. With an atomic weight of 1, Hydrogen is the lightest among all the elements on the periodic table. That is the reason it is located on the left corner of the table.
19. Ever wondered why it is named the periodic table? That's because the rows on the table are called periods.
20. The heaviest natural element on the periodic table is Uranium with an atomic weight of 238.

Source: <http://www.alignthoughts.com>

## Mineral News

*The Mineral Collector's Newsletter*

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All in full color!

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*For the collector, interior design professional  
For your office or home.*



32" x 24" x 18" from Mexico

(mounting and table included)

**\$3,400**

(Comparable specimens sell for \$5,000 - \$10,000)

Available now before American Geode  
sends it to auction in the spring.

Contact [charles@americangeode.com](mailto:charles@americangeode.com) for details

## Rock Used as Doorstop for 30 Years Identified as Meteorite Worth up to \$100,000

*Central Michigan University geology professor Mona Sirbescu said that she knew “within seconds” that the rock was special.*

By Carol Kuruvilla

One man's trash turned out to be the universe's treasure.

A Michigan university professor discovered that a 22.5-pound chunk of stone that's been used as a doorstop for over 30 years is actually a meteorite that could be worth \$100,000.

Central Michigan University geology professor Mona Sirbescu said that she knew the rock was “something special” as soon as she saw it.

“It’s the most valuable specimen I have ever held in my life, monetarily and scientifically,” Sirbescu said in a press statement from the university.

A man from Grand Rapids, Michigan, who told the university he wanted to remain anonymous, brought the rock to Sirbescu for examination earlier this year. This is apparently something that happens quite frequently to Sirbescu, who is part of the university’s department of earth and atmospheric sciences.

Usually, the rocks people bring her turn out not to be meteorites.

“The answer has been categorically ‘no’ — meteor wrongs, not meteorites,” she said jokingly.

But Sirbescu said she knew “within seconds” that this rock was special.



The meteorite was reportedly found on a farm in Edmore, Michigan, in the 1930s.

The unidentified man told the professor the meteorite was passed on to him in 1988, when he bought a farm in Edmore, Michigan. The farm's previous owner told him it was a meteorite that he and his father saw come down on their property in the 1930s. Sirbescu noted to the Detroit Free Press that the account of the rock's origins had been passed down without eyewitness confirmations.

The man told Sirbescu that he kept the rock for the next 30 years, even after moving away from the farm. He reportedly used the meteorite as a doorstop and sent it to school with his children for show and tell.

This January, southern Michigan experienced a meteor flash that showered fragments of space rock all over Livingston County. The man read stories of people finding and selling the meteorites and began to wonder how much the one he had at home was worth, CMU said in its press statement.

The man contacted Sirbescu, who identified the rock as a meteorite composed of about 88 percent iron and 12 percent nickel. The professor sent a slice of the rock to a colleague, Catherine

Corrigan, a geologist at the Smithsonian Institution in Washington, D.C.

Corrigan confirmed to HuffPost that the rock was indeed a meteorite. She added it wasn't too surprising to hear that it had been used as a doorstop for so long.

“The fact that it was used as a doorstop is actually not at all uncommon,” Corrigan told HuffPost in an email. “Iron meteorites are heavy (pure, iron nickel metal) and tend to be great for such things.”

But from a scientist's perspective, Corrigan said it's not ideal. Leaving meteorites exposed to the elements isn't great for their preservation. In fact, she said the Smithsonian keeps many of its iron meteorites in special enclosed containers to prevent them from oxidizing.



CMU geology faculty member Mona Sirbescu holds the 22.5 pound meteorite used as a doorstop for decades.

The owner is considering selling the meteorite to a museum or collector, and has promised to give 10 percent of the sale to Central Michigan University, the university said.

Sirbescu said this is the sixth-largest meteorite on record to be found in Michigan. She said it will likely be called the “Edmore meteorite.”

She also said she felt excited to play a role in identifying the meteorite.

“Just think, what I was holding is a piece of the early solar system that literally fell into our hands,” she said.

Source Huffpost.com Science from 10/05/2018

### New Set of Note Cards Now Available!



Available at meetings, shows or by mail order

## Topics in Gemology

*Topics in Gemology* is a monthly column written by Diana Jarrett, GG, RMV, based on gemological questions posed to her over the years by beginners and experts alike. Contact her at diana@dianajarrett.com.

### A Little Rough Around the Edges

Today's jewelry aficionados are a knowledgeable and demanding set. Many of the most enthusiastic devotees enjoy collecting pricey brands and uber-luxe jewels. But these modern sparklers are a far cry from the traditional jewelry styles of their elders.

#### Natural is Better

Millennials are heady trendsetters and use their wardrobe and accessories as an expression of their hyper-personal style. Diamonds, emeralds and other colored gemstones may still find their way into a modern woman's jewel box but you can bet it won't resemble the classic jewelry types of the 20th century.

An imaginative form of gemstone jewelry trending now is a migration to the rough hewn look. In their natural form, diamond and gemstones are lumpy stones. Sometimes when in pristine condition, the crystals exhibit flat facets that terminate into attractive geometric forms. No matter in what condition they are found, today's jewelry fans take a shine to the natural shape.



Rough Crystal Fancy Yellowdiamond ring, Courtesy: Diamond in the Rough

#### A Stone by Any Other Name

Here are some of the most innovative stone variations utilized by today's daring designers:

**Raw**—often defines both uncut natural condition stones—but this also means diamonds or other stones polished into 'rough hewn' shapes that fit into jewelry.

**Sliced**—these interesting stones have been thinly sliced, sometimes with rustic faceting on the top. Other slices are simply that; top and bottom are flat cuts which help with viewing the stone's special traits in its natural state.

**Rough or Crystal**—these stones are mounted in jewelry just as they were found in the ground.

**Cubed**—some imaginative designers use diamonds especially rough cut into squared forms and mounted in their collections. The surfaces remain rough. The squared-up shape mimics that of some diamond crystals found in nature.

**Native Cut or Rose Cut**—jewelry artisans and collectors alike adore this form of off-symmetry cutting; often in a variation of the rose cut, these charming stones remind one of the earliest cutting processes.

#### Expert Assessment

Prominent Los Angeles-based jewelry appraiser Charles Carmona thinks he knows why the delightful stones are taking off. "They are

almost like a new gem material. They're nothing like the faceted white diamonds or colored gemstones found in traditional jewelry," he notes. "They are still diamonds or gemstones with their intrinsic value," Carmona points out. But, he says they seem like "an entirely new gem species used in jewelry giving it a rustic look. The free-form shapes lead to new creativity."

#### Designers Weigh In

Creative jewelry designer, Nina Nguyen, owner of Nina Nguyen Designs, has been an early influencer in adding gem slices to her innovative collections. She reports, "I don't think sliced gemstone and raw diamonds will reach their pinnacle anytime soon." Consumers experience them as an entirely new item, according to Nguyen. "Raw or slices have been so popular over the last few years, they have created an entirely new category in the jewelry industry." But she predicts these stone types also have staying power, which is good for merchants who promote them. "Due to their natural beauty and timelessness, slices are one of those trends that have come and will stay around like skinny jeans!"



Dawn Gold Necklace, stalactites slices, Courtesy: Nina Nguyen

#### Keeping Pace

These very modern jewelry options offer alternatives for women seeking creative adornment that complements their taste and lifestyle today. The Millennial customer is a strong demographic for this type of jewelry. They are social, but not formal. These jewelry pieces work especially well for their fluid lifestyle and will age seamlessly with them.

In this burgeoning category, not every consumer has become aware of their availability, however. The niche requires momentum to stay enticing to consumers. So, new collections are finding their way into the marketplace each year. "I love working with raw & organic stones so I'm constantly searching for interesting materials for my next collection," Nguyen reports.

Jewelry artist and co-founder of Variance, Nicole Rimedio finds the learning curve to be as individual as the customer. "Some people don't know how to think about our jewelry but others understand it right away," Rimedio finds. "They see it, gaze at it for a bit, and tell us it's what they've been looking for." That gives credence to the philosophy that many of us don't know what we want until we see it. She also discovers that many women "appreciate their mother's ring but they're ready for something new and different."

## Polished and Still Rugged

Artist Rimedio employs her own custom technique to achieve a rough hewn result with her gemstones. "There's a perception that we use rough stones in our jewelry. For most of our stones, we cut and polish them in our studio," she explains. The gems are sought after for their individual appeal. Recognizing distinct internal inclusions is part of their allure. "Because we highlight the natural inclusions and formations," she says, "the stones look rough and uncut. It's a compliment really, since we want the stones to retain their natural integrity."

## Who Wears these Pieces?

Not every woman is ready for such unexpected gemstone treatments. But the core fan base is definitely growing as women recognize how it highlights their own individuality. Rimedio sees a few types of customers who gravitate to these charmers.

"The person with a nice jewelry collection yet wants something different tends to be pleasantly surprised how complimentary our jewelry is with more polished pieces." Not all devotees embraced jewelry previously, though. "There's the woman who has decided she doesn't like jewelry because it is *too polished* for her but changes their mind when they discover our aesthetic."

## Read All About It

Nguyen watches her fan base grow as customers reveal a sense of wonder in the natural world thanks to her new collections. Marketing has been key to the learning process for consumers new to the niche. Nguyen finds it essential to promote these iconoclastic collections. "Having great marketing material really helps educate the consumer about our stones. I would say the number of people who appreciate [our collection] is small but increasing rapidly."

## Appraisers Track Trends

As consumers continue to collect these special jewels, appraisers like Charles Carmona see more of them pass through his lab for valuation. "Due to the nature of the diamonds used in these artistic lines, for instance," he says, "there is not as great a chasm in clarity and color grades for instance. So in that respect they become easier to research for purposes of valuation."

It takes a while for these or any new jewelry type to turn up in a gem laboratory for evaluation. But seeing these pieces come in as Carmona does more frequently today signals a greater market interest and a consumer's ever-broadening appreciation for a jewelry type that is as fascinating as it is unique.



Blue Agate ring Courtesy: Variance Objects

## New Jersey Garnet

By Bill Shelton

You may recall that New York has designated garnet as its state gem. In my next article, you will see Connecticut has chosen garnet as its state mineral. (New Jersey has a state rock, basalt, but it is unrelated to my article.) If a mineral collector were asked to select the best, most important locality for minerals in New Jersey, many will agree on Franklin, including Franklin Furnace, Sterling Hill and Franklin mine. This very small area has a rich history and among many treasures known from here we find **garnets**.

I looked at Mindat.org and noticed some interesting facts. Almandine is listed from four counties and includes Franklin mine and Sterling mine. Andradite is listed for four counties and includes Franklin mine and Sterling mine. Grossular is listed for only one county and includes Franklin mine and Sterling mine. Pyrope seems to be absent completely. Spessartine is listed for one county and includes Franklin mine. Uvarovite was listed for Sterling Hill but has been recently deleted. All of the species are referenced on Mindat.org for your convenience and confirmation.

Long ago, Dana, 1974, called the six species named above *varieties* of garnet; the understanding of a species was not equivalent to the current definition. The varieties have essentially the same names as the modern species and were distinguished from one another based on the chemical composition. If we look at the analysis below, we see that this example is a perfectly good member of the modern species andradite. He designated it as andradite and noted the manganese present was not the normal expectation for this material.

Si	33.72%
Al	7.97%
Fe	17.64%
Mn	16.70%
Ca	25.88%
Total	101.91%

Andradite, generally speaking, has the ideal formula of "lime-iron garnet" as Dana indicates. He also notes ordinary, manganesian and yttriferous types. The analysis above clearly shows this is a manganese-rich example. Later in his discussion, he includes more categories. They are simple-as topazolite, colophanite, melanite dark green and calderite. Under manganesian, he lists rothoffite, polyadelphite and aplome. His third and final category is yttriferous. Then, polyadelphite, the only one of importance here, is analyzed as we see below. There are two examples.

Si	34.83	35.47
Al	1.12	3.10
Fe	28.73	28.55
Mn	8.82	5.41
Mg	1.42	2.13
Ca	24.05	26.74

It is clear that all three Franklin garnets are andradite; it is also obvious that they are noticeably enriched with manganese which is not part of the ideal composition for andradite, a calcium iron silicate.

With regard to color, Dana lists five choices; they are black, brown, yellow, red and green. The description for polyadelphite claims "massive brownish-yellow kind, from Franklin, N. J. The same locality affords another in dark green crystals, containing still more manganese." Deer, Howie and Zussman, 1997, say "the name polyadelphite has been applied to a manganiferous variety of andradite with a yellowish brown to liver-brown color." Palache, 1935, analyzed a sample where the color was given as brownish black. He also says "yellow, green brown massive garnet that is "somewhat manganiferous" is polyadelphite. So, we may guess about what color or colors were supposed to be present – as you can see there are quite a few choices.

DHZ also report a 5 cm dodecahedral crystal of calcian spessartine from Sterling Hill with a high water content (2.57%). Gaines et al, 1997, notes a 13 cm dodecahedral crystal at Franklin that is labeled as andradite. Palache notes "bright red dodecahedrons to 3 inches on the edge of ...dodecahedron" from the Noble mine nearby. At Balls Hill, black crystals to "23 inches around a central section" are recorded. At Double Rock, dodecahedrons to "several inches in diameter" are present. Additionally, we can also compare all analyzed pieces to the ideal content of andradite as given on webmineral.com.

CaO	33.11
Fe <sub>2</sub> O <sub>3</sub>	31.42
SiO <sub>2</sub>	35.47

You can compare them for yourself and see that the ideal numbers do vary with the sample analyzed but still fall in the range of what we will consider to be andradite. Bayliss, 2000, equates polyadelphite with "Mn-Al-rich andradite, Dana, 6<sup>th</sup> Ed, 437, 1892. " You might find samples available for sale labeled as polyadelphite or andradite. A proper label, by modern standards will use the latter term. I like to see the old term as a element of history and would be inclined to add it to my label for a sample of this material.

Next Month: Connecticut Garnet

## Markle Wears Herkimer Diamonds to Wedding!



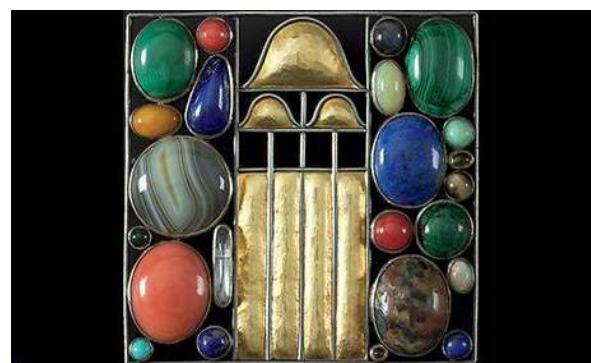
Source: [www.newyorkupstate.com](http://www.newyorkupstate.com) from October 17, 2018

## Neue Galerie Exhibition: Wiener Werkstätte Jewelry

Through January 21, 2019

**Focus: Wiener Werkstätte Jewelry** brings together a selection of miniature jeweled masterworks by the leading artists of the Wiener Werkstätte (Viennese Workshops), including the firm's co-founders Josef Hoffmann and Koloman Moser. It also includes examples by Carl Otto Czeschka, Maria Likarz-Strauss, Dagobert Peche, and Max Snischek. These wearable works of art were among the most coveted designs produced by the Wiener Werkstätte and many were made only once. An impressive array of Hoffmann's square brooches, which have been favorably compared to Gustav Klimt's canvases, are a highlight of the presentation. This show offers a unique opportunity to view Wiener Werkstätte treasures, which are of the highest quality and extremely rare.

**Focus: Wiener Werkstätte Jewelry** is curated by Janis Staggs, Director of Curatorial at Neue Galerie New York.



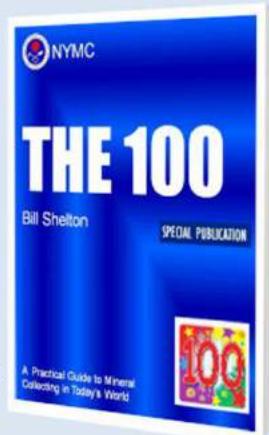
Josef Hoffmann (1870-1956) – Brooch (1907)  
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## 2019 Club Calendar

Date	Event	Location	Remarks & Information
January 9, 2019	2 <sup>nd</sup> Annual Movie Night	Watson Hotel, Manhattan	Modern Marvels: "Rocks"; Popcorn & Candy; International Year of the Periodic Table Begins
February 13	Meeting at 6:00 pm	Mezzanine A & B Watson Hotel, Manhattan	Annual Members' Show & Tell; 5 <sup>th</sup> Annual Chinese Auction
March 13	Meeting at 6:00 pm	Watson Hotel, Manhattan	Special Lecture: Diana Singer – "What Makes Good (Jewelry) Good?"
<b>FIRST Wednesday</b> April 3	Meeting at 6:00 pm	Watson Hotel, Manhattan	Special Lecture: Howard Heitner – "Color in Minerals"
May 8	Annual Benefit Auction	Mezzanine B & C Watson Hotel, Manhattan	100+ Diverse Lots; Bring Friends! Illustrated Catalog Available on NYMC Website!
June 12	Meeting at 6:00 pm	Watson Hotel, Manhattan	Special Lecture: Prof. Juan Manuel Garcia Ruiz: "Hydrothermal Mineralization in Dallol, Ethiopia"
July 10	Meeting at 6:00 pm	Watson Hotel, Manhattan	Special Lecture: Eric Rampello – "The Joys of Quartz"

## 2019 Show & Event Calendar

Date	Event	Location	Remarks & Information
January 2019			<b>United Nations</b> <i>International Year of the Periodic Table of Chemical Elements Begins!</i>
Late Jan - Feb 17	Tucson Gem & Mineral Shows	Scores of locations in Tucson, Arizona; America's largest mineral & gem "show"	
February 23 - 24	Albany Gem, Mineral and Fossil Show & Sale	New York State Museum, 222 Madison Ave, Albany, NY	Co-sponsored by the Capital District Mineral Club and the New York Academy of Mineralogy
<b>March 2 - 3</b>	<b>Spring NYC Gem, Mineral, Jewelry &amp; Fossil Show</b>	<b>Ballroom, Watson Hotel, New York City</b>	<b>25+ High Quality Dealers; NYMC Booth; Lecture on Both Days; Wholesale Section</b>
March 9 - 10	Annual Gem, Mineral & Fossil Show	Old Bethpage Village Restoration Old Bethpage, New York	Island Rockhounds, sponsor
March 9 - 10	Leidy Micromount Symposium	Advent Lutheran Church, Richboro, Pennsylvania	Contact: Don McAlarnen - (610) 584-1364; donmcalarnen@outlook.com
April 3 - 7	NJ Mineral, Fossil, Gem & Jewelry Show	NJ Expo Center, Edison, New Jersey	Special "Poop" exhibits; Presented by Eons Expos
<b>May 31, 2019 &amp; June 1-2, 2019</b>	<b>EFMLS Convention &amp; Orange Co. Mineral Show</b>	<b>Monroe, New York</b>	<b>Orange County Mineral Society, sponsor</b>
June 22 - 23	Summer NYC Gem, Mineral, Jewelry & Fossil Show	Ballroom, Watson Hotel, New York City	25+ High Quality Dealers; NYMC Booth; Lecture on Both Days; Wholesale Section

*For more extensive national and regional show information check online:*

**AFMS Website:** <http://www.amfed.org> and/or the **EFMLS Website:** <http://www.amfed.org/efmls>



# The New York Mineralogical Club, Inc.

Founded in 1886 for the purpose of increasing interest in the science of mineralogy through the collecting, describing and displaying of minerals and associated gemstones.

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**Dues:** \$25 Individual, \$35 Family per calendar year. **Meetings:** 2nd Wednesday of every month (except August) at the Watson Hotel, 440 West 57<sup>th</sup> Street between Ninth and Tenth Avenues, New York City, New York. Meetings will generally be held in one of the conference rooms on the Mezzanine Level. The doors open at 5:30 P.M. and the meeting starts at 6:45 P.M. (Please watch for any announced time / date changes.) This bulletin is published monthly by the New York Mineralogical Club, Inc. The submission deadline for each month's bulletin is the 20th of the preceding month. You may reprint articles or quote from this bulletin for **non-profit usage only** provided credit is given to the New York Mineralogical Club **and permission** is obtained from the author and/or Editor. The Editor and the New York Mineralogical Club are not responsible for the accuracy or authenticity of information or information in articles accepted for publication, nor are the expressed opinions necessarily those of the officers of the New York Mineralogical Club, Inc.

**Next Meeting: Wednesday Evening, January 9, 2019 from 6:00 p.m. to 9:00 p.m.**

**Mezzanine Level, Watson Hotel, 57<sup>th</sup> Street & Tenth Avenue, New York City**

**Special Event: 2<sup>nd</sup> Annual Movie Night – Feature: "Modern Marvels: Rocks"**

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