# Tucson Virtual 2022

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*SUMMARY*

*After the Tucson 2022 Virtual Show, I am still asking lots of questions and trying to internalize and understand what happened in this event. The answer is complicated and multifaceted.*

*The qualitative and quantitative leap in the pieces offered has been overwhelming, something not easy to get accustomed to when comparing to the quality and rarity of mineral specimens that Fabre Minerals usually offers. One reason is the new "Jordi Fabre Collection (duplicates)" section.*

*Another factor to highlight is the trajectory of Fabre Minerals, which seems to have reached a peak with this Tucson virtual show. And it is at the Tucson show where it all began, where he conceived what has now hatched and where Jordi reaches the top, mineralogically speaking. And to be fair we must recognize the great human team behind Fabre Minerals, always guided by the lighthouse that is the indefatigable Jordi, with new additions -new blood- to being us up to date in these modern times, such as the inclusion of videos for most specimens. The passage of time is inscrutable except for those little treasures, objects of desire, the minerals.*

*Will you join me in this socio-mineralogical adventure?*

*All photos by FM & Joaquim Callén©*

*RESUMEN*

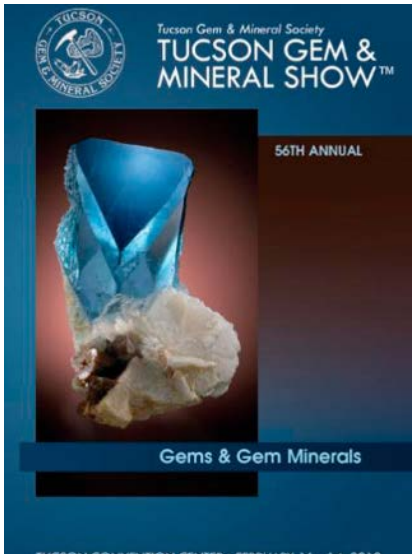
*Finalizada la Feria de Tucson Virtual 2022 uno se plantea aun muchas preguntas e intenta interiorizar y comprender qué ha pasado en esta edición. La respuesta no es sencilla, siendo probablemente multifactorial.*

*El salto cualitativo y cuantitativo en las piezas ofrecidas ha sido abrumador, algo nada sencillo acostumbrados a la calidad y rareza de ejemplares minerales que habitualmente ofrece Fabre Minerals. Una de las respuestas que lo explicaría es la nueva sección 'Colección Jordi Fabre (duplicados)'.*

*Otro factor a destacar es la trayectoria de Fabre Minerals, que parece haber llegado a su cúlmen coincidiendo con esta Feria de Tucson (virtual). Y es en la Feria de Tucson, donde empezó todo, allí se gestó lo que ahora ha eclosionado y donde Jordi llega a la cima, mineralógicamente hablando. Y justo es reconocer el gran equipo humano que hay detrás de Fabre Minerals, siempre guiados por el faro de Jordi -infatigable- con nuevas incorporaciones -savia nueva- aportando un plus acorde a los tiempos actuales, como han sido la inclusión de muchos vídeos en la mayoría de ejemplares. El paso del tiempo es inexorable excepto para esos pequeños tesoros objetos de deseo, los minerales.*

*Me acompañan en esta aventura socio-mineral?*

*Todas las fotos son de Fm y Joaquim Callén©*





Cover letter for the 2022 Tucson Virtual show, announcing the opening hours: opening at 4:30 p.m. (CE) on Monday, January 24 and ending on Wednesday, February 2, continuously. With the photos visible in the cover letter we already get an idea about the Show and the level of specimens that would be seen in it... quite a good looking appetizer.

But all that glitters is not gold. The work behind a show of this type is enormous, and this edition can be considered memorable not only because of the level of the pieces but because of the personal challenges facing those who were behind the show, starting with Jordi, who suffered from a visual problem caused by that inescapable COVID that prevented him from being 100% effective. The challenge was gigantic in the face of such a situation but with the show finally over, and with everyone getting their necessary rest, we can conclude that the show was a success in every way. I'm not going to show the widgets that are normally needed to follow this type of show, since they are the same as for previous such events and basically consist of a laptop in my case and a smartphone, each with their respective chargers for both AC power and DC current in the vehicle as well as a transformer from 12 V DC to 230 V AC also for the vehicle because I often need to move about.

As in the previous show reports and following the same structure, we begin with a screenshot of the Tucson 2022 Virtual Show homepage.


This is the appearance of the FM web page at the beginning of the show. As with the previous virtual events, two sections appear that we are already getting used to, La Caja Fuerte (The Safe) and El corazón de Tucson Virtual (The Heart of Virtual Tucson), but attention! In addition to these already classic sections where specimens are offered grouped geographically, either by country (the majority) or by continent or specific region (Spanish fluorite), with the present show a new section opens before us, the "Jordi Fabre Collection (duplicates)".

It is time to talk about this new section entitled "Jordi Fabre Collection (duplicates)". The story is explained very well by Jordi himself in:

https://www.fabreminerals.com/specimens/FAB-Fabre_duplicates_mineral-specimens.php.

Fifty years of dedication to the same activity, always related to the world of minerals, cannot be described merely with the simple phrase "sale of minerals" or "seller of minerals" because behind that simple expression there is an arduous work that few can imagine and very few have come to know first hand. That is why, as Jordi explains, one of the things he has always been excited about would be to have a sales page for his own minerals on the Fabre Minerals website. Well it seems that time has come and what better time to premiere than with this edition of Tucson Virtual 2022!

Jordi Fabre and Gail Spann back in 2010. It seems that Gail needs concentration for her hunts. Those damned flies...


The illustrious trio, John Rakovan, John S. White and Mark Mauthner in animated meteoric conversation...?

And what about the hosts of Casa Vicente, here in 2012, and the noise, and noisy dinners, and subsequent parties that were held there. The paellas that were tasted there are already part of the history of Tucson.

We begin this mineral tour of the Tucson show with page 1 entitled "Jordi Fabre Collection (duplicates), Bob Noble Thumbnail Collection, Carles Curto Collection (duplicates), USA and Canada". We must recognize that we started strong and with the greatest surprise of the show, the Jordi Fabre Collection (duplicates). This novelty is not the only noteworthy thing, since the texts that accompany each of the specimens in this collection were written in Jordi's own handwriting, with details about each of the pieces that we did not know until now, something that is always appreciated and that magnifies, if possible, each of the pieces offered. Finally, note that all the pieces offered in this section -and in many others- were observed in 3D thanks to the insertion of videos, a notable improvement that helps when choosing a piece, in addition to the already magnificent high-quality photographs that we are used to.

Pyromorphite. San Andrés mine, Espiel, Córdoba, Andalusia, Spain (±1985). Size: 4.2 × 3.1 × 2.7 cm. The largest crystal measures 0.5 × 0.4 cm. Fine and elegant, one more of the highly desirable pyromorphites from the San Andrés mine. This is one of the earliest sharp crystals found there. It has a general appearance and, above all, a slightly different color from what was found later. Of course, the first piece had to be a Pyromorphite from the San Andrés de Espiel mine, Córdoba, since one of the great sensations in Jordi's room in a Tucson Show of the remote past was the display of this type of specimen, and they caused a sensation. The history of that mine and those finds would make a novel... which is beyond the scope of this review.

Quartz (smoky variety). Pereña de la Ribera, La Ribera region, Salamanca, Castilla y León, Spain (1993). Size: 6.1 × 4.7 × 1.6cm. 'Pereña' is a mythical name in Spanish mineralogy since, when pegmatites were distributed, Spain was apparently absent because it has very few, and for this reason, although tiny (compared to those from other countries), the Pereña de la Ribera pegmatite, with its heliodor beryls, smoky quartz and many other species, is quite famous, so I was very happy to be able to get this from Manolo. I took this piece with extra-flat Quartz and very intense smoky color, almost black, with good transparency and luster. And it is that color which provides good evidence for the generous amount of radiation the Quartz received.

Chalcopyrite pseudomorphed by Malachite, with Dolomite. Azcárate quarry, Eugui, Esteríbar, Navarra, Spain (03/1993). Size: 7.4 × 4.6 × 4 cm. The largest crystal measures 2.2 × 1.4 cm.
A classic, the Eugui chalcopyrites in Dolomite, partially or totally pseudomorphed by Malachite. I kept this one because the Dolomite which hosts the Chalcopyrite is more crystalline than usual in this association in Eugui.


Dolomite. Azcárate quarry, Eugui, Esteríbar, Navarra, Spain (2002). Size: 5.3 × 3.4 × 3.1 cm. The largest crystal measures 2.1 × 2.1 cm. Because of their transparency, these are considered, together with those of Brumado, Brazil, the best dolomites in the world. That transparency in some cases can be overwhelming, as can be seen in this exemplary, very well formed specimen which, curiously, is not from the golden age of the Astu-rreta quarry, when Engineer Córdoba extracted wonders from the El Pozo area, but it came out later, from the upper levels of the Azcárate quarry.

To learn more about the Azcárate quarry, see one of the great FMF threads written by Frederic Varela: (in spanish language)
https://www.foro-minerales.com/forum/viewtopic.php?p=58364#58364

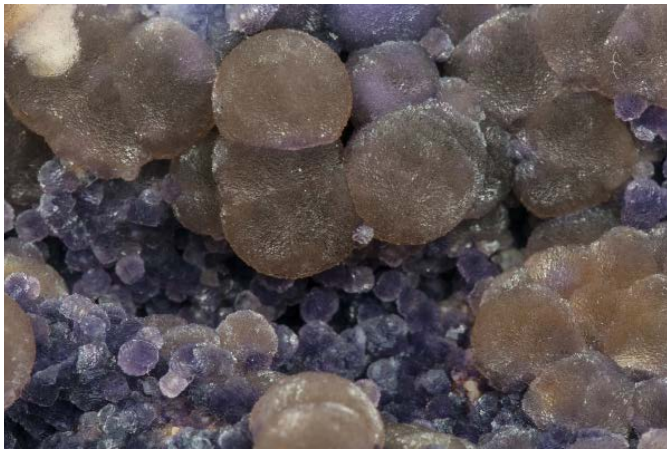
Fluorite with Quartz. Level 75 of the Josefa-Veneros vein, La Collada mining district, Siero, Oviedo region, Asturias, Spain (±1974). Size: 3.3 × 3.3 × 1.8 cm. The largest crystal measures 0.4 × 0.3 cm. The Josefa-Veneros vein, for which we are so grateful, with all its specimens always having that extra 'something' that makes them very recognizable and elegant. In this case the Fluorite is with relatively large crystals of Quartz, which is not so common there. All honor to the Josefa-Veneros vein, an evocative name, and seeing this piece transports us back to difficult times in Fluorite mining.

Fluorite, Baryte. Berbes mining district, Ribadesella, Asturias, Spain (±1984). Size: 7.4 × 4.7 × 3.7 cm.

Who would have thought when we went to Berbes to field collect or to buy pieces from the local diggers, that this locality and its fluorites were going to be at the top of the world fluorite ranking? In this piece you can see the reasons for its fame: the transparency of the crystals, the color zoning between sky-blue and purple, and the associated very white Baryte. This type of specimen can be considered an icon of a splendid era, of a small paradise called Berbes in Asturias where nature has concentrated some of what are probably the most beautiful Fluorites ever found. There is much literature on Asturian fluorite but a reference that can be considered indispensable would be the book "La Fluorita. Un siglo de minería en Asturias" ("Fluorite. A century of mining in Asturias") whose authors are M. Gutiérrez Claverol, C. Luque Cabal, J.R. García Álvarez (R.I.P.) and L.M. Rodriguez Terente.



Fluorapatite with Ferberite, Siderite and Calcite-Dolomite. Minas da Panasqueira, Village of São Francisco de Assis, Covilhã, Castelo Branco, Cova da Beira, Portugal (±1994). Size: 6.4 × 5.4 × 4.8 cm. The largest crystal measures 1.7 × 1.3 cm. This is a serious piece. The bluish Fluorapatite has a fascinating crystallography. The crystals are very aerial and are associated with a combo of Ferberite, Siderite and Calcite or Dolomite. I do not recall seeing many more Panasqueira fluorapatites with this crystal habit (if I have seen any others at all).


Globular fluorite. Buxières-les-Mines, Moulins, Allier, Auvergne-Rhône-Alpes, France (2004). Size: 7.1 × 5.1 × 4.9 cm. The largest crystal measures 0.7 × 0.6 cm. The fluorites from Buxières-les-Mines attract attention for their globular appearance and for the luster and transparency of the multitude of small crystals that make up the globules. It stands out for its two colors, the typical brown from there and the violet in some areas that reminds us of the lavender color of the not very distant Provence.

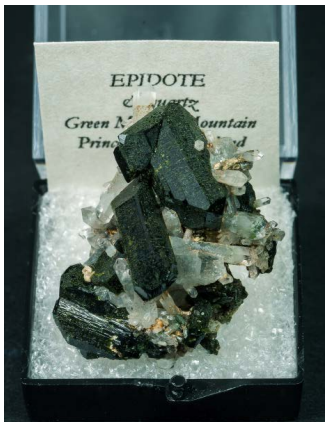
Raquel Alónso-Pérez, curator of the Mineralogical and Geological Museum of Harvard University, is responsible for the access, teaching, research, public education, and continued development of the Earth Sciences collections. She received her degree in geology from the University of Granada, Spain, and her Ph.D. in Earth Sciences from the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland. Her teaching strengths are optical mineralogy and gemology and her research interests are geology and mineralogy of gem deposits. Raquel is a fervent attendee at shows like the one in Tucson.

Pyromorphite. Des Farges mine (Mine Les Farges), Ussel, Corrèze, Nouvelle-Aquitaine, France (±1975). Size: 5.8 × 4.1 × 2.6 cm. The largest crystal measures 1.2 × 0.9 cm. A sensational piece (or at least it seems so to me) in which the Pyromorphite has large crystals and very nice color zoning: brown on the body of the crystals and yellow on the terminations. This specimen is a floater, very perfect, and it has luster, unlike others with this color association that are usually more matte. It is the fruit of a time in my life when, due to my great passion for the pyromorphites of Des Farges, I constantly ran around to the homes of former miners of that mine, and sometimes, as in this case, with pleasant surprises. A mine that produced lead and silver and that ceased activity in 1981.

Vanadinite (arsenical variety). Touissit, Jerada Province, Oriental Region, Morocco (1991). Size: 8.4 × 6.8 × 2.2 cm. The largest crystal measures 0.8 × 0.4 cm. This is one of the first arsenical vanadinites I had. When the Touissit mine was active they were not very common and I remember they were expensive. Later, with the mine already closed, more arsenical vanadinites were found in old workings or in primitive diggings in areas further north of Touissit. In any case, it's a good piece, with a much more intense color than the most recent ones and with some lighter color zoning that gives it a curious appearance. The piece is a floater and does not have any damaged crystals.

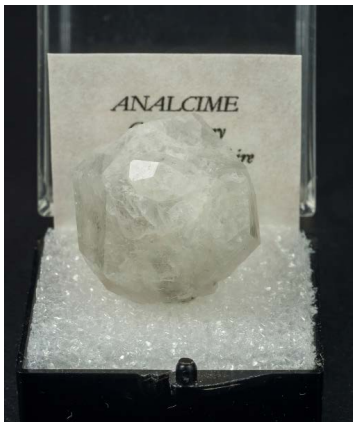
Bob Cook, with El Maestro "rondinaire" and his wife Merle, in 2012.

Next we continue with pieces from the Bob Noble thumbnail collection, Carles Curto collection (duplicates), USA and Canada, to complete the highlights that were seen on page 1.





Epidote with Quartz. Green Monster mine, Prince of Wales Island, Ketchikan District, Alaska. Size: 2.9 × 2.5 × 1.7 cm. The largest crystal measures 1.8 × 1 cm. Epidote crystals, some of them doubly terminated, with faces and edges well defined, translucent, lustrous, and with a very deep green color, on matrix, with water-clear Quartz crystals.




Analcime. Croft quarry, Croft, Blaby, Leicestershire, East Midlands, England. Size: 2.3 × 1.9 × 1.9 cm. Trapezohedral floater crystal with very well defined faces, between transparent and translucent, lustrous and snow-white. The locality from which it comes is unusual, still an active quarry.

In the Tucson Main Show, as in the vineyard of the Lord, you can see everything.



Cuprite. Rubtsovskoe mine, Rubtsovsky District, Altai Krai, Russia. Size: 2.1 × 2 × 1.5 cm. The largest crystal measures 1.9 × 1.7 cm. Floater group of octahedral Cuprite crystals, one of them dominant and very aerial, with slight curvatures on the edges, translucent, lustrous and deep red, almost black. Faces, edges, vertices... crystallography in its purest form.


Rutile (twinned). Diamantina, Jequitinhonha, Minas Gerais, Brazil. Size: 1.3 × 0.9 × 0.3 cm. Double floater twin and complete very sharp Rutile crystals, rich in crystal forms, translucent, lustrous and with a deep red color in transmitted light. This type of twin is reminiscent of Diaspore crystals from Turkey, also known as "V" twins, or cerussites from Morocco in the Touissit mining area.

Quartz (smoky variety). Mooralla, Southern Grampians County, Victoria, Australia. Size: 3.3 × 2.8 × 1.8 cm. The largest crystal measures 1 × 0.9 cm. Complete doubly terminated crystal of Quartz (smoky variety), on matrix, transparent, lustrous, with very deep and uniform smoky tones.

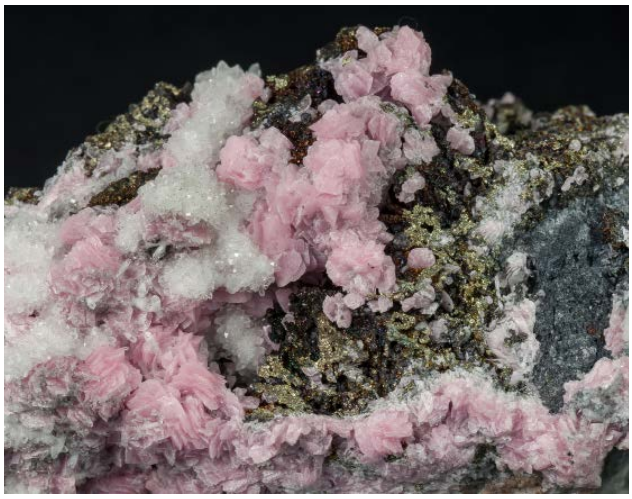
Millerite with Calcite. Cambrian colliery, Clydach Vale, Rhondda Cynon Taf, Wales / UK. Size: 6.7 × 6.5 × 3.8 cm. The largest crystal measures 1.2 × 0.1 cm. Centered growth on matrix of very shiny acicular Millerite crystals. The specimen comes from a known locality but one from which there are few quality specimens. Mining was inaugurated in 1870, and the property was transferred to Cambrian Collieries Ltd in 1885. In 1918 the workforce was 4,033, with the number 3 workings ceasing in 1936 and the rest towards the decade of the sixties.

Trilithionite (lepidolite variety) with Orthoclase. Virgem da Lapa, Jequitinhonha, Minas Gerais, Brazil. Size: 4 × 3.9 × 3.3 cm. The largest crystal measures 3.3 × 1.8 cm. Group of Trilithionite crystals (variety lepidolite) with a prismatic shape, lustrous and with very deep and uniform color, in an Orthoclase matrix. Trilithionite belongs to the Polithionite-Trilithionite series in the Mica group.

Dravite with Muscovite. Sar-e Sang, Koksha Valley, Kuran Wa Munjan, Badakhshan Province, Afghanistan (±2011). Size: 4.0 × 5.6 × 2.3 cm. The largest crystal measures 1.2 × 1.1 cm. Isolated Dravite crystals with a flattened bipyramidal habit, with perfectly defined crystal forms, translucent, lustrous, and of a beautiful brown color with orange tones, on a Muscovite matrix.

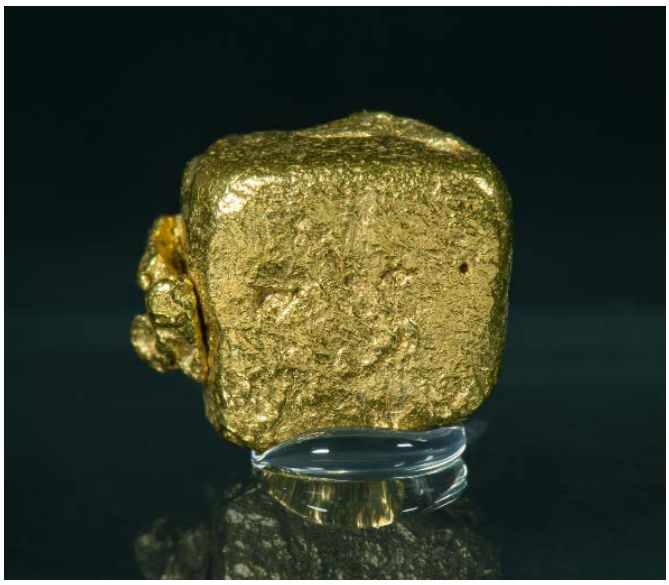
Silver. Endeavor mine (Elura mine), Cobar, Robinson County, New South Wales, Australia. Size: 6.2 × 4.7 × 0.8 cm. The largest crystal measures: 4.8 × 0.3 cm. Dendritic growth of extremely elongated Silver crystals, with good terminations and, as a whole, a very attractive aesthetic as is usually the case with pieces from this locality. An old Australian classic of excellent quality.

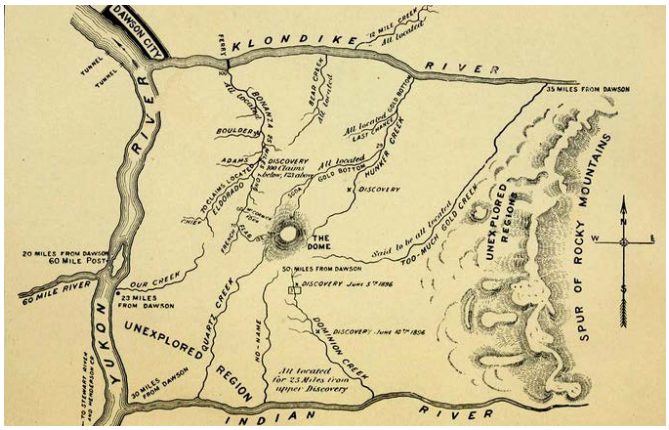
Calcite pseudomorphed by sand. Rattlesnake Butte, Jackson County, South Dakota. Size: 9.3 × 6.7 × 4.5 cm. The largest crystal measures 7.6 × 3 cm. Group of Calcite crystals totally covered by inclusions of sand, with one of them clearly dominant and all of them doubly terminated. They are composed of a prism with curved edges and a poorly defined terminal rhombohedron. An American classic of which it is currently very difficult to obtain good specimens as the area in which they are found has been declared a National Park.



Rhodochrosite with Quartz, Chalcopyrite and Pyrite. Champion mine, Cinnamon Pass, Lake City, Hinsdale County, Colorado. Size: 6.6 × 4.4 × 3.5cm. The largest crystal measures 0.2 × 0.2 cm. Groups of sharp rhombohedral crystals of Rhodochrosite with an intense color, in matrix, with small Quartz crystals and Chalcopyrite and Pyrite coatings. This specimen, an old American classic, comes from the Bob and Jeanette Barnes collection. Thanks to the "recycling" of old collections we can obtain specimens that otherwise would be very hard to get.

Sphalerite with Galena and Chalcopyrite. Commodore mine, Creede District, Mineral County, Colorado. Size: 8.4 × 6.4 × 2.8 cm. The largest crystal measures 1.2 × 1 cm. Druse of twinned Sphalerite crystals with very well defined faces and edges, translucent, very lustrous and with dominant orange tones, with yellow reflections. On matrix, with small Galena crystals and twinned crystals of Chalcopyrite. An American classic from a locality from which it is very difficult to obtain good specimens at the moment.






Gold. Dawson mining district, Yukon Territory, Canada. Size: 0.7 × 0.6 × 0.2 cm. Weight: 1.1 grams. Isolated floater crystal of cubic-shaped gold, with unusually well-developed crystal forms for this area and with skeletal growths in some of the faces. A Canadian rarity, as we see on the old map on the left. The Dawson mining district has yielded neither more nor less than 12 type locality (TL) minerals among the 146 species that have been described from there.

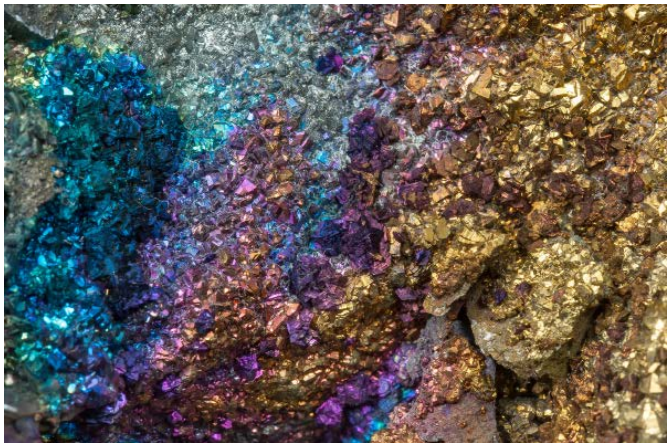

If there is an icon in Tucson, it is none other than the saguaro cactus, as we see in the image on the left in 2010. On the right the already extinct 'Smuggler's Inn Show' in 2007.

We start here page 2 where we will see the sections on Spain, Spanish Fluorite, France, Europe (except Spain, Portugal and France), and the former Soviet Union.

This world of minerals, although international, is still just a small circle of people, where the relationships that unite many of them go far beyond what are simple human interaction via business. Affectionate and friendly bonds are inalienably established. In June 2022, Eloïsa Artola Quer, wife of Joaquim Callén, left us. The tandem she formed with Joaquim is well known by all and the results can be seen in some of the photos in this review itself. May this serve as a little tribute to Eloïsa, that the light of her smile and the passion she had for minerals does not stop enlightening us. In memoriam, R.I.P.

Quartz with Albite. Orellana reservoir, Orellana la Vieja, Vegas Altas Region, Badajoz, Extremadura, Spain. Size: 6.9 × 6.6 × 5.4 cm. The largest crystal measures 4.4 × 1.1 cm. Group of Quartz crystals with Albite, very aerial, translucent and shiny. From a little-known locality and from which not many specimens are seen and which reminds us of Alpine fissure type specimens due to its layout and geometry.

Siderite with Galena. San Valentín cut, Sancti Espiritu, Sierra Minera de Cartagena-La Unión, Murcia, Spain. Size: 11.7 × 9.9 × 4.4 cm. The largest crystal measures 2 × 1.8 cm. Druse of Siderite covering Galena crystals. Siderite appears as spheroidal growths of small rhombohedral crystals, with curvatures on their faces and edges, a satiny luster and uniform brown color. The specimen comes from the Miguel David Martínez collection (No. 794). It was previously in the collection of Mariano Guillén.



Chalcocite with Pyrite. Las Cruces mine, Gerena-Guillena-Salteras, Sierra Norte Region, Seville, Andalusia, Spain (01/2020). Size: 12.5 × 10.5 × 8.7 cm. The largest crystal measures 0.6 × 0.5 cm. Very sharp Chalcocite crystals that form very well defined twins, shiny and metallic grey. On matrix with Pyrite microcrystal coatings, with bright luster and very lively iridescent metallic tones. This very unusual specimen comes from one of the last finds before the definitive closure of the open pit mine. Samples from this find have been analyzed. This specimen has been reviewed, photographed and published by the magazine 'Paragenesis', on page 74 of its 01/2022 edition. This deposit is one of the most recent currently exploited in the well-known Iberian Pyrite Belt (FPI) and the specimens of Chalcocite that have been found there are of a very high quality, with some remarkable pieces.

Fluorite (octahedral) with Quartz. Gloria mine, La Hortezuela, Hornachuelos-Espiel, Guadalquivir region, Córdoba, Andalusia, Spain. Size: 4.9 × 4.1 × 3.6 cm. The largest crystal measures 4.2 × 3.2 cm. Two profiled octahedral Fluorite crystals with small very marked cubic polycrystalline recrystallizations. They are translucent, shiny and uniform green in color, with coatings of small water-clear Quartz crystals. Of good quality and size for a deposit from which it is not common to see specimens like this.

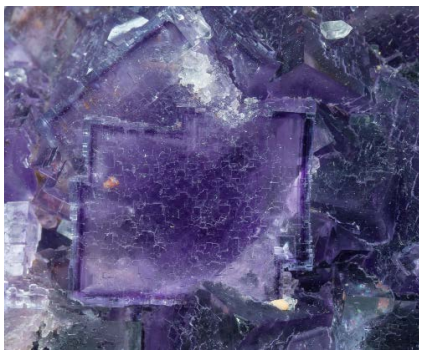
The Calléns, Joaquim and Elo, with Jordi and Mario Pauwels at the 2011 show.


I give him a stone...I remember the Earth...a happy man, 2020.

Bryan Swoboda filming at the Westward Look in 2013 for BlueCap Productions.


Fluorite. La Viesca mine, La Collada mining district, Huergo, Siero, Oviedo region, Asturias, Spain (2018). Size: 9 × 5.7 × 3.9 cm. The largest crystal measures 0.4 × 0.4 cm.

Very aerial growth of Fluorite crystals with the cube clearly beveled by the crystal forms of the rhombododecahedron, transparent, with good luster and a uniform blue color with fine violet hues, and Pyrite microcrystal coatings. The Viesca mine has ceased its extractive activities, so the specimens available in the market, although they do still exist, are going to gradually decrease, so those who have managed to get hold of a representative piece like this specimen are lucky.


Fluorite with Baryte. La Cabaña, Berbes mining district, Valdelmar, Berbes, Ribadesella, Asturias, Spain. Size: 22.5 × 15.8 × 5.7 cm. The largest crystal measures 2.5 × 2 cm.

Druse of very sharp Fluorite crystals, transparent, with good luster and distinct geometric color zoning, which varies from lilac to intense violet, and with a very aerial group of white lamellar Baryte crystals. A high quality specimen.



From left to right, in Tucson it sometimes gets a little cool, so much so that the water can reach freezing point as at the 2011 show. The Main Show is quite a show year after year, as in 2006 at the Collectors Edge stand. And someone known by everyone for the fantastic show review articles given to us show after show by Thomas P. Moore of Mineralogical Record.

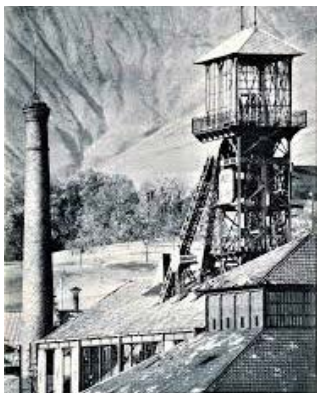
Pyromorphite with Baryte. Mine Des Farges, Ussel, Corrèze, Nouvelle-Aquitaine, France. Size: 7 × 4.7 × 3.8 cm. The largest crystal measures 0.9 × 0.5 cm. Pyromorphite crystals with very well defined faces and edges, some with very sharp and deep hopper terminations, many of them doubly terminated. They are lustrous, with the characteristic greenish brown color in Des Farges and are on a group of very sharp white Baryte crystals. Unquestionably a color contrast beauty.

Fluorite. Puy-Saint-Gulmier, Saint-Ours, Riom, Puy-de-Dôme Department, France. Size: 7.1 × 5 × 5.2 cm. The largest crystal measures 3 × 2 cm. Group of Fluorite crystals with a cubic shape and polycrystalline forms on some of their faces, between transparent and translucent, with the particularly intense and uniform blue color characteristic of Puy-St-Gulmier, and sitting on the characteristic matrix of crystalline Fluorite with lilac tones. The color is really exceptional, memorable.

Two enthusiastic women with amazing capacities. On the left Gail Spann and on the right Eloïse Gaïllou, curator of the mineralogy museum of the École des Mines in Paris. I will not tire of repeating that the future of mineralogy is undoubtedly associated with the presence of women, both at an institutional and collecting level.

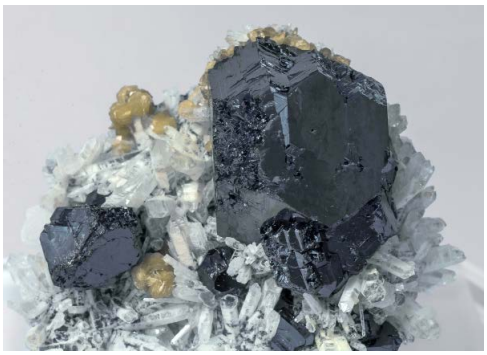
Fluorite. Bois le Duc, Foisches, Charleville-Mézières District, Ardennes, France. Size: 13.4 × 7.7 × 5.1 cm. The largest crystal measures 4 × 2 cm. Fluorite crystals, on matrix, with the forms of the rhombododecahedron and the cube, translucent and uniform green in color with areas of intense violet. The specimen, from an unusual locality, comes from an old French collection. Getting quality pieces from French localities is not an easy task, so we appreciate this type of specimen, very rarely seen in international mineralogical circles.

Siderite with Quartz. La Mure coal mines, Matheysine-Trièves, Grenoble, Isère, France. Size: 12.4 × 6.1 × 2.5 cm. The largest crystal measures 1.7 × 1.2 cm. Lenticular and very flattened crystals of Siderite with the typical curvatures and undulations in specimens from this locality. They are lustrous and have a very light and uniform brown color, in a matrix with Quartz crystals. An excellent French classic from around some old coal mines located down the slope of Senepi mountain. Work officially began in 1806 until it was closed in 1997. Six layers of coal were exploited in Carboniferous sediments deposited on mica schists and covered by Triassic and Jurassic sediments that as a whole have been deformed by the alpine orogeny in the form of a syncline.



Finding this type of specimen with these morphologies is surprising as they are found in a sedimentary context in a place with an 'alpine' type geology at the contact between the carbonaceous strata and the rock matrix that hosts them. And like everything in life the luck factor on certain occasions is decisive

Baryte. Lubin mine, Legnica, Lower Silesia, Poland. Size: 8.3 × 2.5 × 1.5 cm. The largest crystal measures 0.6 × 0.6 cm Very aerial growth with book-like aggregates of lamellar Barite crystals, flattened, very sharp, with curvatures, translucent, and yellow to brown in color. A classic of European mineralogy.



Sphalerite with Quartz and Siderite. Very fine and elegant piece. Dalnegorsk, Primorsky Krai, Russia. Size: 5.2 × 4.4 × 3.4cm. The largest crystal measures 3.1 × 2.2 cm.

Sphalerite crystals, one of them clearly dominant, with the forms of the tetrahedron and the typical polysynthetic twinning in this species, on matrix together with fine very lustrous water-clear Quartz crystals, and small groups of rhombohedral crystals of Siderite with a brown color.

Meeting of enthusiasts, with minerals as the common link. Gail Spann, Jolyon Ralph and the Smirnoff family under the watchful eye of Jordi.

Mineral shows can be tough, they are tiring, and from time to time we need rest, yes, without losing the opportunity to see minerals, which is why you go to a mineral show just like Jack Halpern does here in 2009.

The social part must be taken care of too, with rest for a while from minerals to ingest solids and liquids that allow us to return to the task. Members of the very active HAMS mineralogical group from Texas, in 2011.

We now enter page 3 dedicated to Morocco and the rest of Africa, along with Brazil and the rest of South America.

Malachite (primary) with Quartz and Chalcopyrite. Jebel N'Zourk mining district, Alougoum, Souss-Massa Region, Morocco (2021). Size: 7.6 × 4.5 × 4.1 cm. The largest crystal measures 0.6 × 0.6 cm. Groups of primary Malachite crystals, very distinct, lustrous, and with a very deep green color. On matrix, with small Quartz crystals and coatings of Chalcopyrite, from a new locality. Primary Malachite is not seen very often but lately there are several Moroccan localities where this mineral has appeared as a primary deposit.

Calcite (kanonenspat variety) with Quartz. Jebel Masker, Imilchil zone, Tounfit, Khénifra Province, Morocco (09-10/2021). Size: 8.1 × 6 × 4.4 cm. Group of Calcite crystals with a very sharp pseudohexagonal outline, completely covered by a second generation of small crystals, also Calcite, partially dissolved and with small Quartz crystals. The dissolution shapes at the back of the piece give it a curiously labyrinthine appearance. These types of specimens have been analyzed, due to their genetic complexity.



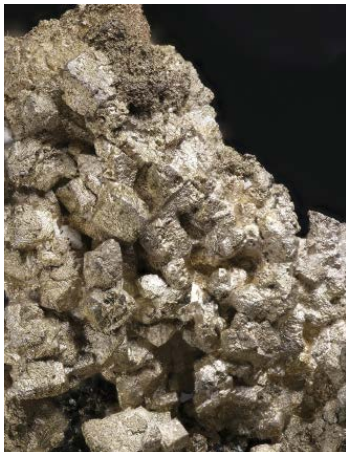
In the world of anything specialized there is always someone who stands out. Here are three of the greats, each a specialist in his discipline. From left to right: Peter Megaw in 2007, John S. White in 2005 and finally Marshall Sussman in 2008.


Fluorite with Quartz and Baryte. Sidi Ayad, Boulemane Province, Fès-Meknès Region, Morocco (09/2021). Size: 3.6 × 4.3 × 2.4 cm. The largest crystal measures 2 × 2 cm. Group of very sharp Fluorite crystals, translucent, lustrous, yellow-green in color, with partial coatings of microcrystals of Quartz and small lamellar crystals of Baryte, different from those found previously at this locality.



Fluorite with Quartz and iron oxides. Sidi Ayad, Boulemane Province, Fès-Meknès Region, Morocco (09/2021). Size: 14.9 × 13.6 × 4.5 cm. The largest crystal measures 2.2 × 2 cm. Group of very sharp Fluorite crystals, translucent, with good luster and yellow-green color, with partial coatings of microcrystals of Quartz with yellow tints, most likely of iron oxides, and that, unlike what is usual, in this case embellish the piece by outlining its crystals with shades of intense yellow.

Elbaite-Schorl (rubellite variety) with Microcline and Quartz. Beni Bouzra, Chefchaouen Province, Morocco (2021). Size: 6 × 3 × 3.4 cm. The largest crystal measures 2.8 × 1.4 cm. Elbaite-Schorl crystal (variety rubellite) with well-defined faces and edges, between transparent and translucent, with bright luster and a dominant intense pink color with yellow tones in the heart of the crystal. It sits on matrix, with Microcline and Quartz crystals. The microcline partially covers the upper end of the crystal. This specimen has been reviewed, photographed and published by the magazine Paragenesis, on page 77 of its 01/2022 edition.



Silver with the amalgam variety of Silver, Löllingite, and Calcite. Aït Ahmane, Agdz, Bou Azzer mining district, Zagora Province, Morocco (12/2020). Size: 4.5 × 4.1 × 2.4 cm. The largest crystal measures 0.3 × 0.2 cm. Very aerial growth of a first generation of cubic Silver crystals with extraordinarily well defined faces and edges, and a second generation that partially covers the crystals of the first with small poorly defined growths, yellowish and with rougher surfaces, also of Silver, but rich in mercury (amalgam variety). The set is on an epigenetic growth of Löllingite on a matrix of acid-etched Calcite. The components of this specimen have been analyzed, and it has been reviewed, photographed and published by the magazine Paragenesis, on page 101 of the 02/2021 edition.



Beryl (variety morganite). Betafo District, Vakinankaratra Region, Antananarivo Province, Madagascar. Size: 6.6 × 5.7 × 6.1 cm. Doubly terminated crystal of Beryl (morganite variety) with very sharp crystal forms, with the lower termination displaying very distinct dissolution features but free of damage and conserving a good part of the faces. Intense pink color, although with areas of paler color. It comes from a very old French collection. The Betafo district, perhaps best known for the presence of uranium-rich minerals, also yields good pieces like this one.



Endearing couples and/or strange couples... from left to right: Terry and Marie Huizing in 2013, Wayne and Donna Leicht in 2011, and finally David Mustart and Rick Ely in 2020 with fun guaranteed.


Hureaulite with Rockbridgeite. Cigana mine (Mina Jocão), Conselheiro Pena, Minas Gerais, Brazil (2021). Size: 6.6 × 4.1 × 3.7cm. The largest crystal measures 0.3 × 0.2 cm.

Druse of very well defined and sharp Hureaulite crystals, from translucent to transparent, with good luster and an intense pink color, on matrix, with small black Rockbridgeite crystals. The deposit where this species comes from is a pegmatite hosted in a granite and famous for phosphates, such as these two phosphates of manganese and iron respectively.

On the left Pedro Ansorena and Eloïsa Artola in 2011, on the right a happy Will Larson and a skeptical Marcus Grossman in 2012.

Gold. Santa Elena de Uairén, Gran Sabana, Bolívar State, Venezuela. Size: 2 × 1 × 0.4 cm. The largest crystal measures 0.8 × 0.3 cm. Weight: 2.28 grams. Dendritic growth of elongated octahedral Gold crystals with very well defined faces and edges, of great quality.

Rhodochrosite with manganese oxides. Uchucchacua mine, Oyón Province, Lima Department, Peru. Size: 5.3 × 5.1 × 3.8 cm. The largest crystal measures 0.7 × 0.5 cm. Very sharp Rhodochrosite crystals, transparent and with an intense color, on a matrix of manganese oxides. The specimen, very characteristic of Uchucchaccua, is in a better state of preservation than is usual for specimens from that locality. Comes from an active mine that mainly produces silver, although zinc and lead are also extracted as byproducts. Noteworthy gangue minerals include Calcite, Kutnohorite, Quartz, and Rhodochrosite, as in this beautiful specimen. The mineralization is emplaced in lower Cretaceous limestones.

From left to right: Jeff Scovil, one of the great professional mineral photographers at the 2013 show; in the center Elise Skalwold and Ian Jones during the celebration at Casa Vicente in 2012, and finally Bob Downs in 2010 demonstrating that some minerals are so outstanding that it is no longer enough to merely bow down in respect but you must actually prostrate yourself in homage - in spirit of fun of course.

Turning to page 4 and accordingly to China and the rest of Asia. Here is one of the great novelties of this show, namely that in 2021 in the Shijiangshan mine in China were found the best specimens of Imayoshiita so far.

Fluorite. Guxian (Minggang), Tongbai Xian, Henan Province, China (2021). Size: 8.8 × 8.1 × 7.5 cm. growth of small Fluorite crystals that form a large sphere. They are translucent, very lustrous, and have an intense and uniform dark green color, which is remarkable since the vast majority of the pieces found so far in this mining district were more or less intense lilac-purple in color, but they did not stand out for a greenish coloration as intense as the one shown in this specimen.

Calcite perimorph after quartz. Xiefang mine, Ruijin, Ganzhou Prefecture, Jiangxi Province, China (2014). Size: 9.2 × 6.6 × 6 cm. The largest crystal measures 6.6 × 3.3 cm. Druse of Calcite and Quartz crystals completely covering a much larger single crystal, a Calcite scalenohedron replaced by microcrystalline Quartz that perfectly preserves the sharp forms of the preexisting calcite. A strong light source reveals that the crystal is completely empty inside, reminiscent of certain specimens from the Las Monjas vug in the La Viesca mine in Asturias, Spain.

Malachite. Shilu mine, Yangchun, Yangjiang Prefecture, Guangdong Province, China (±1995). Size: 7 × 6.8 × 3.3 cm. Very aesthetic botryoidal growths (nicknamed 'The Kiss') of Malachite with bands with different shades of green and an intense silky luster which gives it a peculiar chatoyant appearance. Skarn-type copper deposit hosted in a karst zone in Carboniferous strata in contact with a granite intrusion. The mineralized bodies are oxidized, which resulted in the Malachite.

Hubeite with Calcite. Fengjiashan mine, Edong, Daye, Huangshi Prefecture, Hubei Province, China (±2001). Size: 7.8 × 9.7 × 3.7 cm. The largest crystal measures 0.6 × 0.2 cm. Type locality. Groups of very sharp Hubeite crystals, much larger than usual for what is known so far for the species, lustrous, dark reddish brown in color and implanted in a matrix with white rhombohedral Calcite crystals. There are almost as many types of collectors as there are minerals, and minerals from type localities (TL) have an "army" of followers, that is, collectors actively valuing a TL specimen. This piece is dedicated to these collectors, a superb specimen.

Imayoshiite with Bultfonteinite. Shijiangshan mine, Yinwu, Linxi, Ulanhad League, Inner Mongolia, China (09/2021). Size: 7 × 6.2 × 4.7 cm. The largest crystal measures 0.7 × 0.4 cm. New for 2021 and in all probability the best known so far for the species. Spheroidal growths of Bultfonteinite, of good size and pink color, associated with very sharp crystals of colorless Imayoshiite of tabular habit and hexagonal contour, transparent, and very lustrous. The specimen has been analyzed and we will send a copy of the analysis to the buyer. If you want to delve deeper into the species and the paragenesis of the mine, you can consult the article by Menor-Salvan, C.; Ottens, B.; Richard, E. "Rare borate minerals from the Shijiangshan, Hexigten Banner, Inner Mongolia, China." Rocks and Minerals. 96(5): (Sep/Oct 2021)



Imayoshiite with a Tobermorite group species and Andradite. Shijiangshan mine, Yinwu, Linxi, Ulanhad League, Inner Mongolia, China (09/2021). Size: 3.7 × 2.6 × 2.1 cm. The largest crystal measures 0.7 × 0.4 cm. Novelty of 2021 and, in all probability, of the best known so far for the species. Imayoshiite occurs in numerous very sharp crystals, with a tabular habit and hexagonal outline, transparent, very lustrous and between colorless and slightly yellow, associated with small coatings of fibrous white Tobermorite-Clinotobermorite, on an Andradite matrix. The specimen has been analyzed and we will send a copy of the analysis to the buyer. If you want to go deeper into the species and the paragenesis of the mine, you can consult the article by Menor-Salván, C.; Ottens, B.; Richard, E. "Rare borate minerals from the Shijiangshan, Hexigten Banner, Inner Mongolia, China." Rocks and Minerals. 96(5): (September/October 2021).


Imayoshiite with Datolite (bakerite variety), Fluorapophyllite-(K) and Andradite. Shijiangshan mine, Yinwu, Linxi, Ulanhad League, Inner Mongolia, China (07/15/2021). Size: 8 × 3.4 × 2.2 cm. The largest crystal measures 1 × 0.4 cm. A novelty of 2021. Very sharp crystals of Imayoshiite, a rare carbonate-borate of calcium and aluminum, many of them doubly terminated, with a hexagonal prismatic habit and very marked parallel growths, transparent and very lustrous, on matrix, along with Andradite and small reddish brown crystals of Datolite (bakerite variety) and Fluorapophyllite-(K). Very good quality for the species. The specimen has been analyzed and we will send a copy of the analysis to the buyer. If you want to delve deeper into the species and the paragenesis of the mine, you can consult the article by Menor-Salván, C.; Ottens, B.; Richard, E. "Rare borate minerals from the Shijiangshan, Hexigten Banner, Inner Mongolia, China". Rocks and Minerals. 96(5): (Sep/Oct 2021).


Rhodochrosite and Sphalerite. Oppu mine, Nishimeya-mura, Naka-Tsugaru-gun, Aomori Prefecture, Japan. Size: 24.7 × 13.4 × 4.8 cm. Globular growths of Rhodochrosite, on matrix, with a silky luster and an intense reddish pink color. Associated with black Sphalerite as lamellar crystals. The specimen comes from a classic locality in Japan which, like many others in that country, was hardly known until its rhodochrosites became famous when they reached the international market.

And now page 5, which, as usual, corresponds to the "Safe", where the specimens exhibit an extra fine quality above the rest.

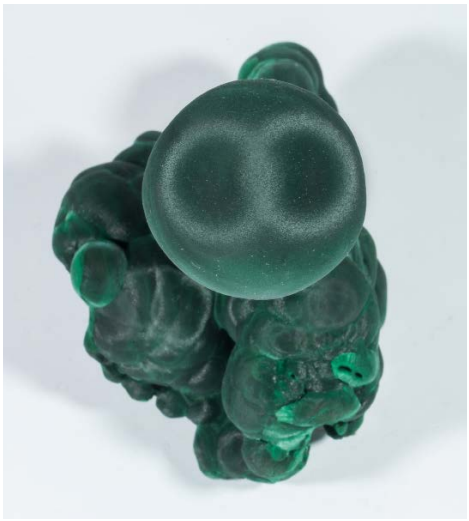


Gold (spinel twin). Aouint Ighoman, Assa-Zag Province, Morocco (09/2021). Size: 5.6 × 0.6×0.6cm. The largest crystal measures 1 × 0.3 cm. With a copy of the analysis. Weight: 4.2 grams. Stylized parallel growths of crystals of Gold with a very well defined morphology, with the dominant forms of the octahedron in parallel growths and with very distinct spinel-law twinning. Among the top pieces of those found so far.



Elbaite. Pederneira concession, São José da Safira, Governador Valadares, Minas Gerais, Brazil (1972). Size: 5.5 × 1.4 × 1.4 cm.
Doubly terminated and complete floater crystal of Elbaite, very rich in faces and with perfect terminations, transparent, with bright luster and a clear pleochroism, deep green at the ends and vivid pink in the prism. Specimen of the year for 1972, it comes from the former Ginette Verax collection. The deposit where the piece comes from is one of the most outstanding worldwide for the species.


Tobermorite group species with Bultfonteinite. Shijiangshan mine, Yinwu, Linxi, Ulanhad League, Inner Mongolia, China (09/2021). Size: 8 × 7.3 × 2.7 cm. The largest crystal measures 1 × 0.8 cm. New for 2021. Tobermorite-Clinotobermorite, on matrix, forming small fibrous spheroidal coatings of an intense pink color, associated with spheroidal growths of Bultfonteinite of good size and orange-brown in color. The specimen has been analyzed and we will send a copy of the analysis to the buyer. If you want to delve deeper into the species and the paragenesis of the mine, read the article by Menor-Salván, C.; Ottens, B.; Richard, E. "Rare borate minerals from the Shijiangshan, Hexigten Banner, Inner Mongolia, China". Rocks and Minerals. 96(5): (Sep/Oct 2021).


Malachite. Shilu mine, Yangchun, Yangjiang Prefecture, Guangdong Province, China (±1995). Size: 16.5 × 8.5 × 6.8 cm.
The largest crystal measures 12.8 × 3 cm. Botryoidal and stalagmitic growth of Malachite with very aesthetic shapes, banded with different shades of green and an intense silky luster which gives it a peculiar chatoyant appearance. Among the best stalagmites found in the deposit.

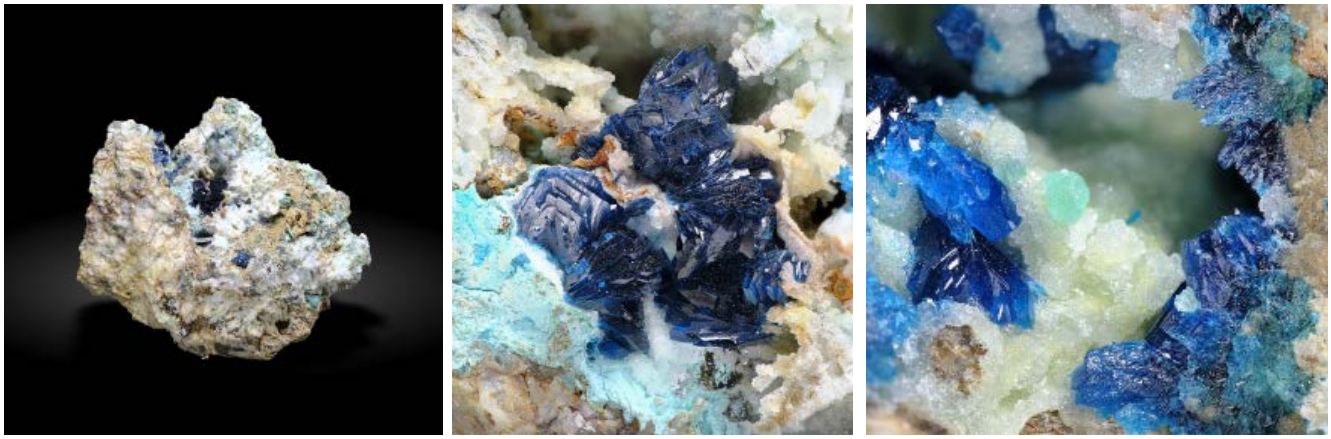

Epidote with Quartz. Kharan, Balochistan (Baluchistan), Pakistan (±2015). Size: 15.3 × 10.2 × 7.3 cm.
Fan-shaped growths of Epidote crystals with a prismatic habit with very well defined and sharp crystal forms, translucent, with bright luster and an intense, deep and uniform green color, on a matrix of water-clear Quartz crystals, one of them with a contact that makes it have a different termination from the other central crystal. The specimen comes from the collection of Miguel David Martínez (number 479).


At this point we change key and enter the true spirit of the show which is none other than "The Heart of Tucson Virtual Show 2022". Ten days in a row where pieces are offered throughout the day and that even though being virtual it is the closest thing to a face-to-face show. The distribution of pieces throughout these ten days are reflected in the following list:

-Monday, January 24: 7 pieces.
-Tuesday, January 25: 22 pieces.
-Wednesday, January 26: 19 pieces.
-Thursday, January 27: 23 pieces.
-Friday, January 28: 19 pieces.
-Saturday, January 29: 22 pieces.
-Sunday, January 30: 15 pieces.
-Monday, January 31: 25 pieces.
-Tuesday, February 1: 22 pieces.
-Wednesday, February 2: 23 pieces.

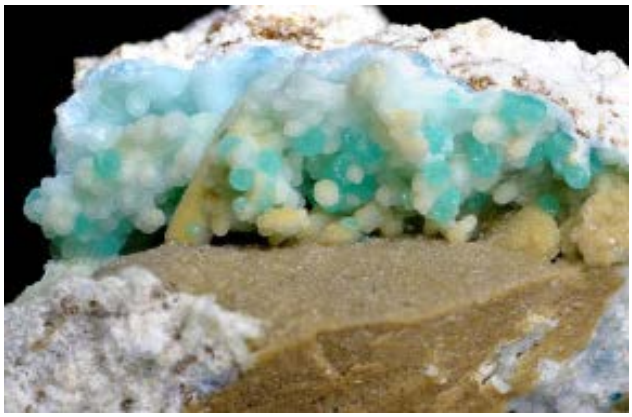
A total of 197 pieces over 10 days, providing an average of close to 20 new pieces offered per day. Let's take a look at the ones that seemed most outstanding.

## Monday, January 24:



Cuprodongchuanite with Veszelyite, Hemimorphite, and Calcite. Sanguozhuang, Dongchuan District, Kunming Prefecture, Yunnan Province, China (12/28/2021). Size: 8 x 7.1 x 4.2 cm. Main crystal: 0.1 x 0.1 cm. Type locality. Lustrous spherical Cuprodongchuanite aggregates of light green color implanted on a rock matrix covered by sky-blue botryoidal crystals of Hemimorphite. Completing the color palette is an intense blue corresponding to Veszelyite crystals as aerial growths and isolated in the mineralized cavity. Cuprodongchuanite, a new species approved by the IMA, with reference number IMA 2021-065, but still pending publication, is a curious phosphate of Pb, Cu and Zn, the copper analog of Dongchuanite. This find from the end of 2021 comes from the type locality (TL).

Cuprodongchuanite with Calcite. Sanguozhuang, Dongchuan District, Kunming Prefecture, Yunnan Province, China (12/28/2021). Size: 2.7 x 2 x 2 cm. Main crystal: 0.1 x 0.1 cm. Type locality. Lustrous, light green spherical aggregates of Cuprodongchuanite, in a rock matrix partially covered by earthy aggregates of white Calcite. Cuprodongchuanite, a species recently approved by the IMA, with reference number 2021-065, but still pending publication, is a curious phosphate of Pb, Cu and Zn, the copper analog of Dongchuanite. This find came from the type locality (TL) at the end of 2021.

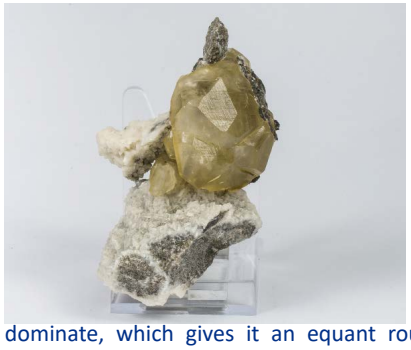


Fluorite. La Barre mine, Saint-Jacques-d'Ambur, Pontgibaud, Saint-Ours, Riom, Puy-de-Dôme Department, France (2019). Size: 5.4 x 4.2 x 4.1 cm. Main crystal: 2.1 x 2.1 cm. Former Alain Martaud collection. Group of very sharp crystals of Fluorite, between transparent and translucent, lustrous, and deep blue in color with a fine geometric zoning of violet color on the edges, an unusual color for what is known from this mine.

## Tuesday, January 25:

Aurichalcite (variety zeiringite) with Calcite and cobalt-bearing Calcite. Solita mine, Peramea, Baix Pallars, Lleida / Lérida, Catalonia, Spain. Size: 14.4 x 8.3 x 5.3 cm. One of the best Aurichalcites (variety zeiringite) from Peramea that we know of. It comes from the collection of Adolf Bull, a chaplain from the Black Forest area in Germany. He collected it between 1950-1965. The 'zeiringite' is on Calcite that grew on an earlier generation of cobalt-bearing Calcite that can be seen especially on the back of the piece. From a small mine in the Catalan Pyrenees, the Solita mine, located in the town of Peramea, exploited minerals rich in cobalt and nickel. This piece returned to Lleida after its European tour.

Conichalcite with Baryte. Santa Isabel cut, Sierra de Enmedio, Almendricos, Lorca, Alto Guadalentín region, Murcia, Spain (12/2020). Size: 7.1 x 5.4 x 5 cm. With a copy of the analysis. Druse of white Baryte crystals with a lenticular habit, with Gypsum and coatings of Conichalcite microcrystals (analyzed) with an intense green color.



Calcite with Dolomite. La Florida mining district, Herrería-Valdáliga-Rionansa, Cantabria, Spain. Size: 7.3 x 4.9 x 5.3 cm. Main crystal: 2.5 x 2.2 cm. Complex crystal, very rich in faces, in which the rhombohedron and scalenohedron dominate, which gives it an equant rounded habit. Noteworthy are the uniform yellow color, the transparency, luster, and the very aerial position of the crystal on the matrix with Dolomite.

Baryte with Pyrite. Bou Nahas mine, Oumjrane mining district, Alnif Community, Tinghir Province, Morocco (07/2020). Size: 11.4 x 10.4 x 6.4 cm. Main crystal: 6.5 x 6.2 cm. A novelty from Morocco, from a find in the summer of 2020. Very aerial white tabular Baryte crystals partially coated by perimorphic growths of a mosaic of small bright shiny crystals of cubic and octahedral Pyrite. The Bou Nahas mine, a polymetallic hydrothermal deposit, continues to provide pleasant mineral surprises.

Quartz (hematoidal variety). Jebel Irhoud, Youssoufia Province, Marrakesh-Safi Region, Morocco. Size: 8.8 x 5.2 x 3.6 cm. Main crystal: 1.3 x 1.2 cm. Group of Quartz crystals with very short prisms, almost non-existent, extraordinarily bright and red, unusually vivid and uniform due to inclusions of Hematite. On crystalline quartz matrix.

## Wednesday, January 26:

Quartz (doubly terminated). Les Deux Alpes, Saint Christophe en Oisans, Commune Le Bourg d'Oisans, Isère, France. Size: 5.1 x 3 x3.6 cm. Main crystal: 4.1 x 0.7 cm. Former Alain Martaud collection. Group of Quartz crystals, on matrix, one of them clearly dominant and doubly terminated, water-clear and very lustrous. I found this piece to be very interesting especially because of the locality of origin, the mythical Alp d'Huez, where iconic pages of Tour de France cycling history have been written.

Baryte. Côte d'Abot, Saint-Saturnin, Saint-Amant-Tallende, Puy-de-Dôme Department, France (1985). Size: 9.6 x 5.2 x 2.5 cm. Former Alain Martaud collection. Group of three very sharp Baryte crystals, between transparent and translucent, very lustrous, very dense and uniform honey color and with geometric contact shapes on the back. The specimen is excellent for the locality.

Chalcocite with Pyrite. Las Cruces mine, phase 6, levels 130-135, ↓175 m., Gerena-Guillena-Salteras, Sierra Norte region, Seville, Andalusia, Spain (09-11/2019). Size: 5.3 x 2.1 x 2.2 cm. Main crystal: 0.7 x 0.3 cm. With a copy of the analysis. Very sharp crystals of Chalcocite that form hexagonal cyclic twins with very well defined faces and edges, flattened and lustrous, on matrix.

Fluorite with Chalcopyrite and Calcite. La Viesca mine, La Collada mining area, Huergo, Siero, Oviedo region, Asturias, Spain (±2015). Size: 5.7 x 5.1 x 2.8 cm. Main crystal: 1.4 x 1.4 cm. Group of Fluorite crystals with steps and polycrystalline growths, transparent, lustrous, and sky-blue in color, with violet tones, and with small crystals of Chalcopyrite on their faces and also with a small scalenohedron of Calcite. The color contrast between the blue-violet of the Fluorite and the Chalcopyrite's gold seems to me to be one of the most beautiful that Nature offers us.

Fluorite. Josefa-Veneros vein, level 75, La Collada mining area, Siero, Oviedo region, Asturias, Spain (±1970). Size: 11.4 x 8.3 x 4.5 cm. Main crystal: 6.7 x 6.1 cm. Fluorite crystals of cubic habit with very deep dissolution forms. They are transparent and with a marked geometric color zoning, which varies from lilac to violet passing through shades of blue. From the historic Josefa-Veneros vein, a great classic of Asturian fluorites.

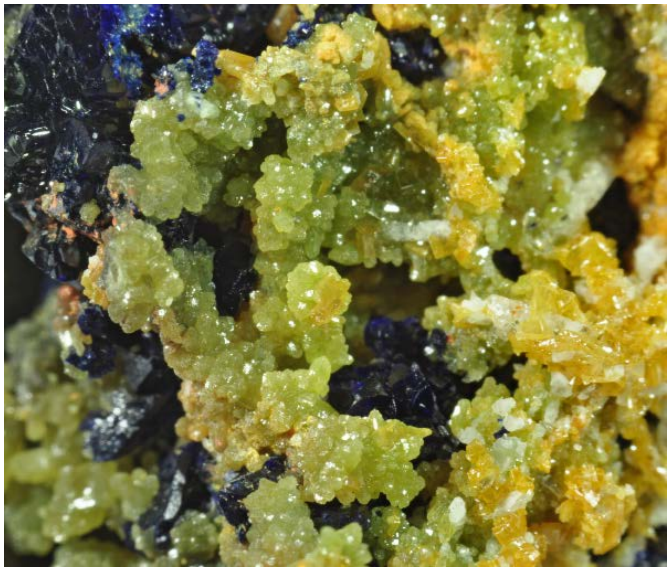
Quartz pseudomorphs after Baryte, on Quartz. Cabezo de Don Juan, Llano del Beal, Cartagena, Campo de Cartagena Region, Murcia, Spain. Size: 14.2 x 8.2 x 5.9 cm. Main crystal: 4.6 x 2.6 cm. Former Miguel David Martínez collection. Group of Quartz crystals covered by groups of crystals that preserve the lamellar crystal forms of Barite but which have been replaced by microcrystals of Quartz. A genetic curiosity.

## Thursday, January 27:

Elbaite (verdelite variety) on Quartz, with Albite. Minas Gerais, Brazil. Size: 22.3 x 15.1 x 14 cm. Main crystal: 4 x 1.4 cm. Elbaite crystals (verdelite variety), well individualized, with clean pinacoidal terminations, one of them doubly terminated and implanted in a group of Quartz crystals. The Elbaite crystals are transparent, lustrous, and have a very vivid and uniform green color. The specimen comes from the collection of Miguel David Martínez (number 940) in which it is stated that it had previously been in the collection of Mariano Guillén.

Hydroxylapatite on Quartz. Sapo mine, Ferruginha, Conselheiro Pena, Vale do Rio Doce, Minas Gerais, Brazil. Size: 19.8 x 12.1 x 6.2cm Main crystal: 2.2 x 1.3 cm. Isolated Hydroxylapatite crystals on a matrix of Quartz crystals. The Hydroxylapatite forms crystals with a very flattened bipyramidal habit, almost lenticular. They are translucent and have a beautiful green color, with a much darker greenish yellow zoning, pale in the center. This unusual hydroxylapatite-fluorapatite series mineral comes from the d'Amoirés pegmatite district in eastern Brazil. Hydroxylapatite is a very important biomineral because it is the main mineral of which tooth enamel is composed. Up to 50% in volume and up to 70% in human bone weight is a modified form of hydroxylapatite.

Gold (spinel-law twin). Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Size: 1.4 x 1 x 0.2cm. Weight: 0.9 grams. With a copy of the analysis. Parallel growths of deformed octahedral Gold crystals, with bright luster, forming a very aerial growth.



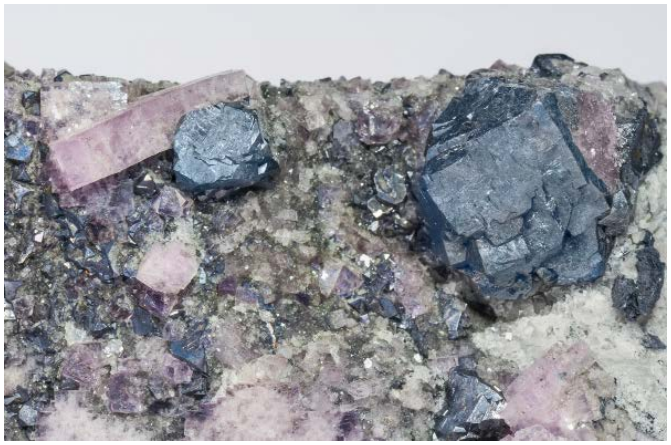
Azurite with Mimetite and Wulfenite. Bou Bekker, Touissit District, Jerada Province, Morocco. Size: 5.1 x 4.8 x 3.9cm. With a copy of the analysis. Growths, on matrix, of Azurite crystals with green crystalline concretions of Mimetite and yellow tabular Wulfenite crystals, an uncommon association there. This is a clear example of a high quality mineral at a price more than reasonable, very representative of the popular abbreviation 'HQLP', that is, High Quality Low Price.

Vanadinite. ACF mine, 200 m.↓, Mibladen mining district, Midelt Province, Morocco (05/2014). Size: 6.6 x 5 x 1.5 cm. Main crystal: 0.7 x 0.5 cm. Aggregate of doubly terminated Vanadinite crystals, with good luster and very well defined faces and edges, and with a very unusual color between orange and cream, with a dark colored band in the center of the crystal. The specimen was collected at a depth of 200 meters in the old shafts of the ACF mine and, due to the difficulties of access and extraction, no future specimen recovery is planned in that area.

Erythrite with Phlogopite. Tazalarht mining district, Taroudant Province, Morocco (01/2015). Size: 7.4 x 3.6 x 3.7cm. Main crystal: 0.5 x 0.1 cm. With a copy of the analysis. Aggregate of very elongated crystals of Erythrite with a habit somewhat different from those from the better known Bou Azzer. These crystals, on matrix associated with spheroidal growths of Phlogopite, stand out for their transparency, their brilliant luster and their intense and uniform color.

Gold with Covellite, Malachite and Chrysocolla. Bleida Far West mine, Tinzouline, Zagora Province, Morocco (2017-2018). Size: 4.6 x 3.7 x 3.7 cm. Dendritic growths of Gold, on matrix, with Covellite and Malachite and Chrysocolla concretions. This combination of Gold with the different shades of green of Malachite and Chrysocolla, is very aesthetic but uncommon.

## Friday January 28:



Fluorite with Galena. Blackdene mine, Ireshopeburn, Weardale, County Durham, England. Size: 17.5 x 13 x 9.2 cm. Main crystal: 17.5 x 13 cm. Cubo-octahedral crystals of Galena, very sharp and shiny, implanted in the surface of cubic Fluorite crystals, translucent, with good luster and an intense violet color. An English classic. Lead mining in that area dates back to the beginning of the 15th century and the exploitation of fluorspar from the beginning of the 20th century, until coming to a final close in 1987.

Arsenopyrite with Quartz and Muscovite. Minas da Panasqueira, levels 0-1, Aldeia de São Francisco de Assis, Covilhã, Castelo Branco, Portugal (04/2017). Size: 15.6 x 11.3 x 4.5 cm. Main crystal: 1.8 x 1.1 cm. With handwritten collection label, Folch (duplicates). Floater plate of Arsenopyrite crystals with very sharp crystal forms, very bright luster, with water-clear crystals of Quartz and leafy aggregates of Muscovite crystals.

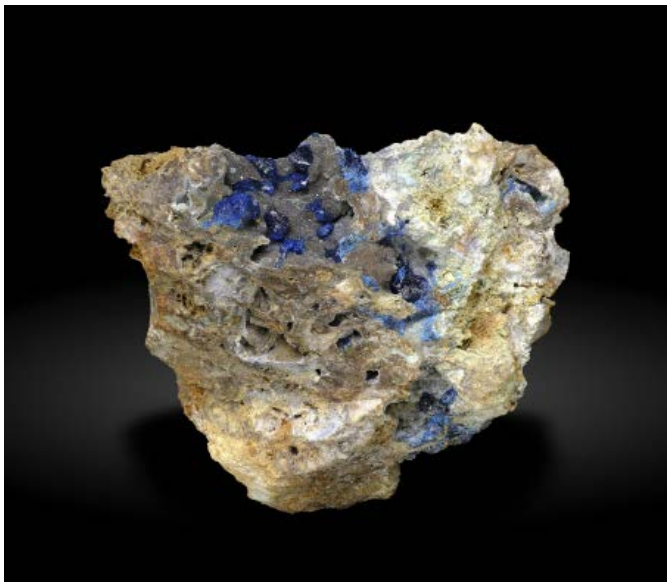
Quartz (jacinto de compostela variety). Chella, Canal de Navarrés Region, Valencia, Spain (2002). Size: 3.3 x 1.8 x 1.9 cm. Complete floater crystal, with distinct parallel growths, good luster, and with a vivid and uniform color. The specimen comes from the Miguel David Martínez collection (number 787).

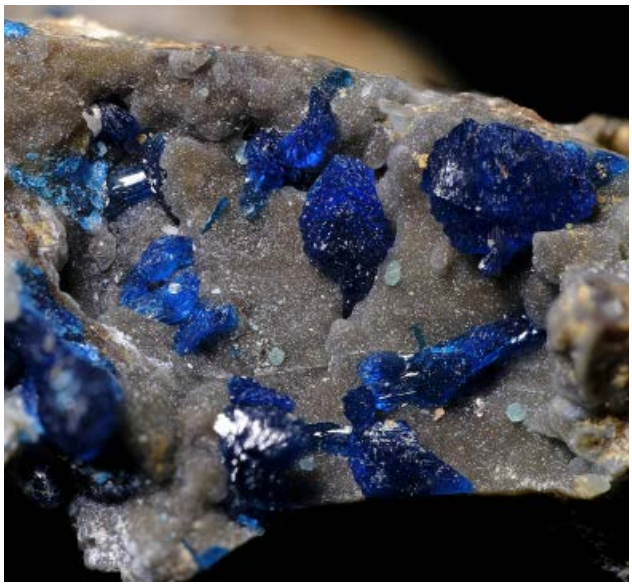
Shattuckite with Quartz, Malachite and Chrysocolla. Milpillas mine, level 1100, Cuitaca, Santa Cruz Municipality, Sonora, Mexico (01/2019). Size: 6.6 x 2 x 3.5 cm. Main crystal: 0.2 x 0.2 cm. With a copy of the Shattuckite analysis. Spherulitic growths and felty Shattuckite aggregates, with a very intense and deep color, encompassed in small Quartz crystals that protect them, in a Quartz matrix, with coatings of acicular Malachite crystals and globular growths of Chrysocolla.

Rhodochrosite with Quartz and Sphalerite. Austria Duvas mine, Morococha District, Yauli Province, Junín Department, Peru (07/2021). Size: 5.3 x 3.7 x 2.8 cm. With a copy of the analysis. Spheroidal growths of small lenticular crystals of Rhodochrosite with an intense and uniform pink color and with lustrous Quartz crystals and aggregates of Sphalerite microcrystals.

Quartz (amethyst variety). Piedra Parada (Las Vigas), Tatatila Municipality, Veracruz, Mexico. Size: 4 x 3.6 x 3 cm. Main crystal: 3 x 1 cm. Former Miguel David Martínez collection. Centered group of Quartz crystals (amethyst variety), some of them totally or partially doubly terminated, transparent, very lustrous, with phantom growths, geometric color zoning and with small inclusions. The specimen comes from the collection of Miguel David Martínez (number 863). A very fine and elegant piece.

## Saturday January 29:





Cuprodongchuanite with Veszelyite and Hemimorphite. Sanguozhuang, Dongchuan District, Kunming Prefecture, Yunnan Province, China (12/28/2021). Size: 3.4 x 3.1 x 1.5 cm. Main crystal: 0.1 x 0.1 cm.

Spherical aggregates of translucent, shiny pale green Cuprodongchuanite on matrix, with sky-blue botryoidal Hemimorphite crystals, and with Veszelyite crystals too. The Cuprodongchuanite is a new species recently approved by the IMA, with reference number IMA 2021-065, but still pending publication. A find from the end of 2021, it is a curious phosphate of Pb, Cu and Zn, the copper analog of Dongchuanite, and comes from the type locality (TL).

Veszelyite on Quartz. Sanguozhuang, Dongchuan District, Kunming Prefecture, Yunnan Province China (12/28/2021). Size: 5x 3.6 x 3.7 cm. Main crystal: 1.2 x 0.2 cm. Veszelyite crystals, isolated or in small groups, very sharp, translucent, with good luster and an intense color, on a matrix of white Quartz crystals.

Quartz with inclusions, Calcite-Dolomite and Magnetite. Huanggang mining district, Hexigten Banner (Kèshíkèténg Qí), Ulanhad (Chifeng), Inner Mongolia, China (2014). Size: 10.6 x 4.7 x 2.1 cm. Main crystal: 10.6 x 1.6 cm. Parallel growths and doubly terminated Quartz crystals with dipyramidal shape, scepter terminations and very rich in inclusions. Associated with small crystals of Magnetite and Calcite or Dolomite. Most of the quartz crystals lack apparent prism faces, which has sometimes led to the mistaken belief that it is β-Quartz.

Roweite with Olshanskyite and Andradite. Shijiangshan mine, Yinwu, Linxi, Ulanhad League, Inner Mongolia, China (04/2017). Size: 8.1 x 5.2 x 4.2 cm. Main crystal: 1.4 x 1.3 cm. With a copy of the analysis. Aggregates of lamellar Roweite crystals of great size and quality for the species, in matrix, with radial aggregates of colorless, transparent and very lustrous crystals of Olshanskyite and small Andradite crystals. The Roweite crystals, well differentiated, are light brown in color, with well defined faces and edges. The quality of the specimen is indisputably superior to what was previously known, both due to the individualization of the crystals, their sharp forms, the size of the crystals and their association with first-rate Olshanskyite, which makes them worthy of entry in the best private collections and museums. We have had the specimen analyzed to confirm the identity of the different species.

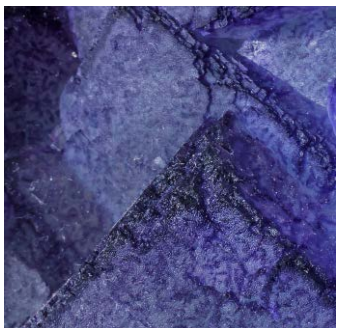
Löllingite with Fluorite and Quartz. Huanggang Mines, Hexigten Banner (Kèshíkèténg Qí), Ulanhad (Chifeng), Inner Mongolia Autonomous Region China (2011). Size: 5.9 x 5.4 x 3.4 cm. Main crystal: 2.1 x 1.8 cm. Löllingite crystals group with lenticular shape and polycrystalline surfaces, with hyaline and octahedral shape and small associated Quartz crystals.

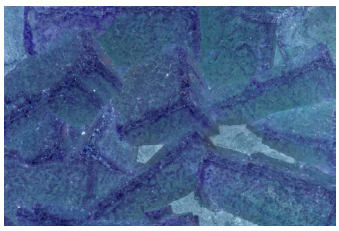
Olshanskyite with Roweite, Andradite and Wurtzite. Shijiangshan mine, Yinwu, Linxi, Ulanhad League, Inner Mongolia, China (04/2017). Size: 7.7 x 5.4 x 4.1 cm. Main crystal: 0.7 x 0.2 cm. With a copy of the analysis.

Aggregates of white Olshanskyite crystals, transparent and with a silky luster, on matrix, with small groups of Roweite, Andradite and Wurtzite crystals. The crystals of Olshanskyite from Shijiangshan, are considered among the best in the world, and have been carefully analyzed to avoid possible confusion with other similar calcium borates. The results of the first Raman analyses were not consistent with previously published data, so their study was completed with thermal analysis and XRD, whose results were consistent with those of the type specimens.

Pyromorphite with Plumbogummite. Yangshuo mine, Yangshuo, Guilin Prefecture, China (01/2015). Size: 6.6 x 5.2 x 4.6 cm. Main crystal: 2.8 x 1.4 cm. With a copy of the analysis. Group of Pyromorphite crystals, some of them doubly terminated, with hopper terminations and partially covered and replaced by Plumbogummite of an intense light blue color.

## Sunday January 30:





Bicolor Fluorite with Quartz. Qinglong mine, Dachang, Guizhou Province, China (10/2021). Size: 23.5 x 21 x 9 cm. Main crystal: 3.2 x 3.1 cm. Group of Fluorite crystals with a cubic habit and rhombohedral bevels with well defined polycrystalline growths. These translucent crystals have a very marked color zoning between green and an intense violet that is concentrated especially on the edges. With small white coatings of Quartz.

Detail photos are made with intense LED light.

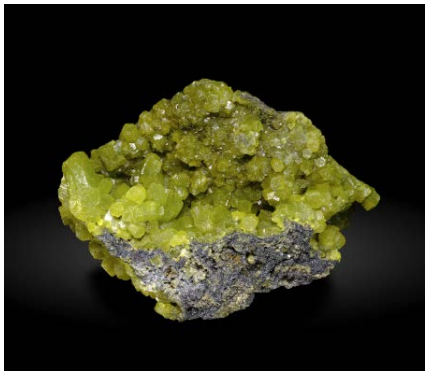
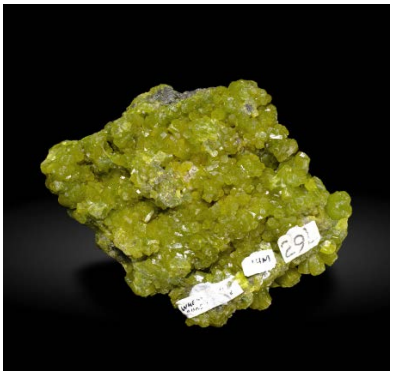
Epidote. Kharan, Balochistan, Pakistan (±2019). Size: 4 x 2.5 x 2.1 cm. Main crystal: 3.1 x 1.6 cm. Floater aggregate of Epidote crystals with a prismatic habit and very well defined crystal forms that form fan-shaped growths. They are translucent, with good luster and an intense, deep and uniform green color. The specimen comes from the collection of Miguel David Martinez (number 868).

Vanadinite. Mibladen mining district, Midelt Province, Morocco (±2018). Size: 3.6x3x2.1cm. Main crystal: 2.7 x 2.6 cm. Floater group of tabular Vanadinite crystals with very well defined polycrystalline growths. Lustrous and bright red on the front and with orange tones on the back. The specimen comes from the collection of Miguel David Martinez (number 784).

Beryl (emerald variety). La Pita mining district, Maripí Municipality, Boyacá Department, Colombia. Size: 2 x 1.8 x 1.3 cm. Main crystal: 1.1 x 1 cm. Group of very sharp and lustrous Beryl crystals (emerald variety), transparent, gem quality and with a more intense and uniform green color than usual not only for the La Pita area but for any other deposit as well. High quality.


Zunyite with Hematite. Qalat-e Payeen salt dome, Bandar Abbas County, Hormozgan Province, Iran (07/2019). Size: 2.6 x 1.6 x 2.3 cm. Main crystal: 1 x 1 cm.

Zunyite crystal, a rare aluminum sorosilicate and fluoride, on matrix. The crystal is tetrahedral, beveled by cube faces, and has very sharp and smooth crystal forms, with a color between reddish and dark brown and with lamellar inclusions of Hematite, which makes it different from the first Zunyites from Iran that arrived in the collecting world at Munich 2018.


Pyromorphite. Wheal Alfred, Phillack, Cornwall, England. Size: 4.7 x 3.6 x 2.1 cm. Main crystal: 0.2 x 0.2 cm.

Prismatic Pyromorphite crystals on matrix, with very sharp crystal forms, with good luster and an intense and uniform green color. A European classic.



Silver with Rhodochrosite, Acanthite, Quartz, and Calcite. Uchucchacua mine, Oyón Province, Lima Department, Peru (±2009). Size: 6.3 x 5 x 3.3 cm. Main crystal: 2 x 0.2 cm. Arborescent Silver crystals with Quartz and small crystalline concretions of Acanthite. The specimen comes from a locality where Native Silver is known but which produces collector grade specimens only sporadically, and even more infrequently with this extremely unusual combination of Rhodochrosite crystals covering the Silver crystals. It comes from the collection of Ignacio Gaspar Sintes (number PL-34). The deposit corresponds to a complex mineralization related to a dacitic intrusion that cuts Cretaceous and Tertiary formations on the west side of the Andes mountain range which produced mainly silver, with lead and zinc as by-products.

## Monday, January 31:

Calcite with Fluorite, Baryte and Dolomite. Moscona mine, El Llano, Solís, Corvera de Asturias, Avilés Region, Asturias, Spain (2019). Size: 16.8 x 14.2 x 9.9 cm. Main crystal: 4.4 x 2 cm. Complex Calcite crystals with a spheroidal shape, transparent, lustrous, on a matrix of transparent yellow Fluorite crystals. With tabular Baryte crystals and coatings of white Dolomite crystals. A piece that summarizes the geology and, to a large extent, the paragenesis of a large Asturian mine.

Fluorite with Calcite. Obdulia vein, Llamas quarry, Caravia mining district, Las Cabañas, Duyos, Caravia, Asturias, Spain (2018). Size: 4.2 x 4.1 x 2.5 cm. Main crystal: 1.9 x 1 cm. Fluorite crystals with cubic habit, clearly beveled by dodecahedron faces, transparent, lustrous, colorless and very aerial on a matrix of scalenohedral Calcite crystals.

Quartz (amethyst variety) with Quartz (smoky variety). Les Mallorquines, Sils, La Selva Region, Girona, Catalonia, Spain. Size: 10.4 x 6 x 4.3 cm. Main crystal: 5.7 x 3.5 cm. With a copy of the Lluís Daunis collection handwritten label. Quartz crystals (variety amethyst), partially doubly terminated and forming scepter growths on Quartz (variety smoky), with remnants of microcline matrix. It comes from a unique find at a locality discovered by Lluís Daunis but later lost.

Baryte with Quartz. Guillermín mine, Alcaracejos, Los Pedroches Region, Córdoba, Andalusia, Spain (11/2011). Size: 13 x 9.4 x 2.7 cm. Main crystal: 7.2 x 4.8 cm. Former Miguel David Martínez collection (number 974). Former Jaume Vilalta collection. Group of tabular Baryte crystals, lustrous and with a color between yellow and brown on a matrix of Quartz crystals that to a great extent cover the Baryte too. From a classic Spanish locality from which curiously, despite being very extensive and having been worked for many years, very few quality specimens have been preserved.

Quartz (amethyst variety). San Valentín cut, Sancti Espiritu, La Unión, Murcia, Spain. Size: 11 x 9.6 x 4 cm. Main crystal: 2.2 x 2 cm. Druse of Quartz crystals (variety amethyst), transparent, lustrous, pale violet in color, with a more intense tone on the edges and vertices. This specimen, of great quality for the locality, comes from the collection of Miguel David Martínez (nº 857).

Quartz (prase variety). Balsa Depositaria mine, El Pino, El Gorguel, Cartagena, Murcia, Spain. Size: 16.3 x 11.8 x 6.3 cm. Main crystal: 4 x 2.3 cm. Very aerial group of translucent Quartz crystals, with phantom growths and greenish inclusions. The specimen comes from the collection of Miguel David Martínez (nº 794).

## Tuesday, February 1:

Hematite (iron rose variety). Mount Stahlberg, Rimbach-près-Masevaux, Thann-Guebwiller, Haut-Rhin, France. Size: 8.5 x 8.4 x5.1 cm. Main crystal: 1.2 x 0.7 cm. Groups of lamellar crystals of Hematite on matrix, very sharp and lustrous, forming rosette growths. An alpine classic that comes from the Alain Martaud collection.

Galena with Quartz. Dillenburg, Lahn-Dill-Kreis, Gießen region, Hessen, Germany. Size: 4.4 x 3.5 x 2.8 cm. Main crystal: 1 x 1 cm. Former Michel Perraudin collection. Groups of cubo-octahedral Galena crystals with very balanced crystal forms and very bright luster, on a matrix of Quartz crystals.

Mimetite with Calcite. Megala Pefka mines, Legrena Valley, Lavrion, Attikí Prefecture, Greece. Size: 5.3 x 3.3 x 3.1 cm. Main crystal: 0.2 x 0.1 cm. Group of scalenohedral Calcite crystals with inclusions, mostly covered by very elongated crystals of Mimetite, with good luster and an intense yellow color. The specimen comes from the collection of Michel Perraudin.

Calcite. Berry Materials Corp. quarry, North Vernon, Jennings County, Indiana. Size: 6 x 4.7 x 3.2 cm. Main crystal: 2.2x2cm. Former A. Mayor collection. Group of complex Calcite crystals, very rich in crystal forms, with a spheroidal shape, transparent, lustrous and intense orange-yellow.

Quartz (pink quartz variety). Huancayo District, Huancayo Province, Junín Department, Peru (2021). Size: 8.7 x 5.5 x 3.8 cm. Clustered growths on a matrix of elongated Quartz crystals, translucent, with good luster and an intense pink color, whose color is not due to inclusions of iron oxides but is its natural color.

Pyromorphite on Baryte. Des Farges mine, Ussel, Corrèze, Nouvelle-Aquitaine, France. Size: 10.2 x 9.7 x 10 cm. Main crystal: 0.2 x 0.1 cm. Coatings of Pyromorphite crystals with very well defined faces and edges, some with deeply hoppered terminations and many of them doubly terminated. These lustrous crystals have a classic Des Farges shade of deep green, and are on a baryte matrix.

Pyromorphite. El Horcajo mines, Almodóvar del Campo, Campo de Calatrava region, Ciudad Real, Castilla-La Mancha, Spain (±1910). Size: 1.6 x 1.1 x 1.1 cm. Main crystal: 0.2 x 0.1 cm. The specimen displays the very classic morphology of El Horcajo, with typical groups of prismatic crystals in parallel palisade-like growth. It is intense green in color with the classic zoning on the tips.

## Wednesday, February 2:

Dolomite (cobalt-bearing variety) with Malachite. Kansalawile mine, Kolwezi District, Lualaba, Katanga (Shaba), Democratic Republic of the Congo (Zaire). Size: 7.3 x 4.1 x 3.9 cm. Main crystal: 1.2 x 1 cm. Rhombohedral crystals of Dolomite (cobalt-bearing variety), on matrix, with very sharp faces and edges, translucent, with good luster and intense and vivid mauve tones, with green nodular Malachite. This specimen was reviewed, photographed and published by the magazine Paragenesis, on page 74 of its 01/2022 edition.

Galena with Calcite. La Cruz vein, La Cruz mining group, Linares, Sierra Morena Region, Jaén, Andalusia, Spain. Size: 14.3 x 11.6 x 6.3 cm. Main crystal: 6 x 5 cm. Cubic Galena crystals, very aerial on matrix, with polycrystalline growths, lustrous, and with white scalenohedral Calcite crystals. From a classic Spanish locality from which today it is very difficult to obtain any specimens of this superb quality. The specimen comes from the collection of Jordi Povill.

Cinnabar with Calcite. Almadén mine, Almadén, Alcudia Valley Region, Ciudad Real, Castilla-La Mancha, Spain. Size: 7.5 x 4 x 4cm. Main crystal: 1 x 0.7 cm. Group of Cinnabar crystals, very rich in faces, one of them clearly dominant, transparent, very lustrous and bright red. On matrix, with white Calcite coatings. This specimen comes from the collection of Ignacio Gaspar Sintes (number CIN-52), whose label, accompanied by others that demonstrate a long history, we will send to the buyer. The best quality for Almaden.

Sphalerite. Las Mánforas mine, Áliva mining district, Camaleño, Cantabria, Spain. Size: 4.1 x 3.5 x 1.7 cm. Polycrystalline growth of Sphalerite with a single dominant crystal, with curvatures on faces and edges, transparent, with very bright luster and a very deep and uniform roasted honey color. The specimen is of excellent quality despite having a cut made on the back to better see its transparency. It comes from the Carlos Prieto Paramio collection.


Fluorite. Obdulia vein, Jaimina mine, Caravia mining district, Trechorio, Carrales, Caravia, Asturias, Spain. Size: 10.5 x 6 x 3.5 cm. Main crystal: 2.6 x 2.1 cm. Group of Fluorite crystals with very well defined faces of the cube and the tetrahexahedron, transparent, lustrous and colorless. The specimen is of great quality for this type of Fluorite, and comes from the collection of Ignacio Gaspar Sintes (number FLU-47)

Fluorite with Baryte and Chalcopyrite inclusions. Jaimina mine, Obdulia vein, Caravia mining district, Trechorio, Carrales, Caravia, Asturias, Spain (01/2014). Size: 15.1 x 12.7 x 8.7 cm. Main crystal: 1.4 x 1.3 cm.

Cubic Fluorite crystals with tetrahexahedral faces, colorless, transparent, lustrous, and with numerous Chalcopyrite inclusions. In matrix, with large groups of white lamellar Baryte crystals that give the piece a special appearance due to its peculiar 'architecture'.

Fluorite with Quartz. La Viesca mine, La Collada mining district, Huergo, Siero, Oviedo region, Asturias, Spain (±2006). Size: 14 x 11.4 x 7.8 cm. Main crystal: 3.6 x 3.6 cm. Fluorite crystals with polycrystalline growths on the vertices, translucent, with an intense blue color, on matrix, with Quartz crystals. A Spanish classic from the collection of Raúl Sanabria Orellana.

## ***Conclusions:***

This has been my particular vision of what the Virtual Tucson Show 2022 was. This time it has taken me too long but luckily I've finished now and here it is. Of course many more pieces were seen than those described here, and I have only reviewed the ones I personally liked the most, so this is inevitably a subjective vision. As already pointed out in the introduction, I believe that the level has been qualitatively and quantitatively quite high, something not easy to achieve for a Virtual version of a mineral show. It's been a while since it took place so I recommend that mineralogy enthusiasts review what was seen and rediscover some details that surely escaped us and that with the passage of time might still surprise us. And finally, let's congratulate Fabre Minerals for their 50 years of history! And to Jordi in particular for a lifetime dedicated to minerals, always the minerals!