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Organic Gems
Species Overview



Ethiopian Sapphires

CITES Regulations

Freshwater Pearls

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Gold Sheen Sapphires – From Gold Mine to Market

Everything has beauty, but not everyone sees it. – Confucius

This famous quote is surely accurate when it comes to describing *nearly everyone*, but an exception can be found in Tanzim Khan, a gem dealer in Bangkok. A few years ago, Khan saw something *beautiful* in a batch of rough gemstones that no one else could see.

By Cynthia Unninayar

Born and raised in Agra, Tanzim Khan is no stranger to the universe of fine gems. Growing up, he saw many of the world's famous celebrities visiting the Taj Mahal and often buying beautiful gemstone jewelry during their stay. He readily understood their fascination with the color and beauty of Nature's creations and, when he was just 17, opened his own small shop selling gems.

Through family connections, he moved to Jaipur for a few years to learn more about the trade. Then, seeing opportunities in Nepal, he packed his bags again and opened three shops in the neighboring country to sell rough stones that he purchased in the City of Gems.

"I traveled to Thailand and to Burma's ruby auctions for gems to sell in Nepal," he reminisces, adding that after several years, he settled to Mae Sai in northern Thailand on the Burmese border. Buying from his contacts there, he took the gems to Bangkok where eventually the young man set up offices before ultimately moving to the Thai capital some sixteen years ago. "After buying rough rubies and sapphires in Burma and Kashmir, I had them cut in Bangkok, and my business grew."

Good As Gold

Fast-forward to 2009. "With my shop—Genuine Gems & Jewellery located in Silom—and so many years in the gem business, I was often approached by brokers and dealers coming from other parts of the world to sell their gems," Khan recalls. One day, a man from Africa came in with a batch of rough stones from a remote location in Kenya near the Somali border. "At first glance, they did not really look like that much, but there was something about them that intrigued me. They had a sort of sheen to them. I knew they were sapphires, but they were unlike any I had ever seen."

Khan took a few samples and asked the man to return in a week. Over the next few days, Khan guided the cutters in how he wanted the rough to be cut and faceted. "What I saw in the stone, the others could not see or even imagine, but I followed my instinct." On the fifth day, after experimenting with finding the right orientation, the stones produced a unique asterism with a gold sheen shimmer.

"The result was so incredible that I decided to investigate further and perhaps buy the mine's entire output.



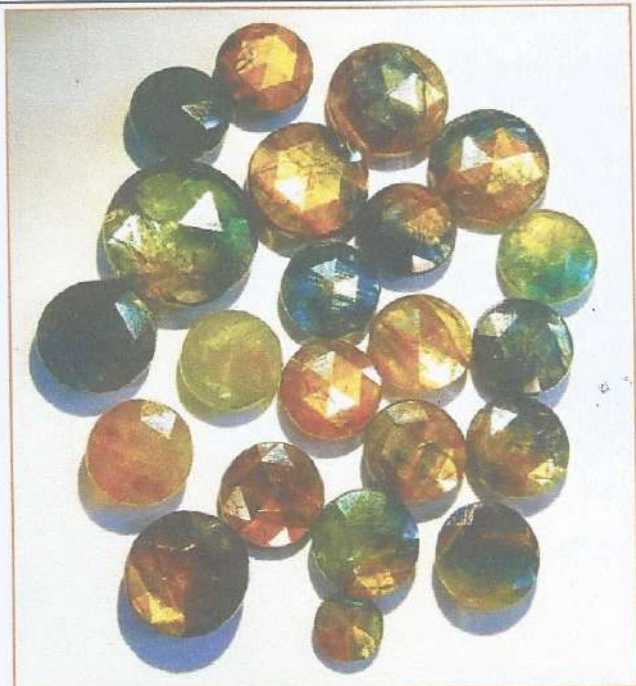
Samples of rough Gold Sheen™ sapphires similar to those brought to Tanzim Khan in 2009. He saw a hidden beauty in them that others did not see.



After much experimentation with orientation and cuts, the rough sapphires showed promise.



Nearly all cabochon cuts of Gold Sheen™ sapphires exhibit six-rayed stars.



Examples of the checkerboard cut showing some of the colors displayed by Gold Sheen sapphires.

I found the workers' conditions in Kenya to be above average, so I helped the mine owners financially and built up good relations with them and their workers. It took a few more years to get the necessary funds to finance mining the rest of the production, and by 2014, the stones were depleted—nothing more was coming out.

"In my 27 years in this business, I have never seen anything so exciting," smiles Khan. "The gems differ from conventional sapphires in that they exhibit a gold adularescence previously unknown in sapphires. This appears to be caused by the gem's molecular structure, which



A rare photo of miners at the Gold Sheen™ sapphire mine in Kenya when it was operational. The mine is now depleted. Khan and the mine owners have intentionally kept the location of the mine secret.

International Colored Gemstone Association

refracts and reflects light creating an iridescence that gives the appearance of light being emitted from within as well as shimmering on the surface when the gem is moved."

The stones also change color when viewed from different angles, flashing between gold and blue. All cabochon cuts exhibit some degree of asterism, with many displaying one or more six-rayed stars.

"We are getting sizes from a few points to 300 carats. The most common are 10 to 20 carats. Rarely, we find 500 to 1000 carats. Some buyers even ask for the dust, as they want it for certain metaphysical purposes."



The characteristic sheen and color of many of the Gold Sheen™ sapphires.

The popular checkerboard cut.



Tanzim Khan (right) with Jeffrey Post, curator of the National Gems and Mineral Collection at the Smithsonian Museum in Washington DC. The Smithsonian has registered Gold Sheen™ as a new variety of corundum and now has a sample in its collection. (Photo taken at the Smithsonian exhibit at the AGTA GemFair in Tucson, 2018)

Marketing the Gems

The question now was how to spread the word about these unique and unusual stones. Khan began by having them tested at various laboratories around the world, including GIA, AIGS, GIT, TGL, GRS, Lotus, AGL, SSEF, ICA GemLab and IGL among others.

"The results all came back that these sapphires were a new species of sapphire, natural, with no enhancement, exhibiting a golden sheen." Khan felt that his new gem needed a descriptive name, so, in keeping with the gold sheen the polished gems exhibited, he trademarked Gold Sheen™ sapphires, internationally.

As word spread about this new find, articles began appearing in the press and Khan started a social media campaign to enhance the visibility. He also took his new find to the trade shows in Bangkok and Hong Kong.

In 2014, Cap Beesley, of New York-based ARD Analytics, was one of the first to describe the new stone as "a unique bronze colored sapphire that exhibits a shimmering gold effect juxtaposed against a chocolate brown backdrop... This new material with its unique sheen, color and geometric patterns offers lots of creative options for designers, jewelers and manufacturers at a reasonable price... It promises to be an interesting addition for designers looking for a unique gemstone option..."

The Gemmological Association of Great Britain was the first to publish an in-depth analysis of these shimmering sapphires, with an article in the *Journal of Gemmology* (34(8), 2015, pp. 678–691). They found that the gemological properties of the "Gold Sheen sapphires are consistent with typical corundum... The sheen effect in these sapphires originates from the simultaneous reflection of light from the oriented network of exsolved hematite-ilmenite inclusions."

In 2016, an *Update On Spectroscopy Of "Gold Sheen" Sapphires* was published in GIA's *Gems & Gemology* (Winter 2016, Vol. 52, No. 4), which described the analysis of fourteen gold sheen sapphires of various shapes and cuts by GIA's laboratory in Bangkok. "The samples had yellow and green to blue body color, were transparent to translucent, and weighed 1.06 to 97.69 ct..." Among the physical properties was "an abundance of hematite/ilmenite platelets."

Also in 2016, with interest growing about the sapphires, Dominic Mok, founder and principal of AGIL (Asian Gemmological Institute Laboratory) gave a seminar on the new Gold Sheen™ variety to a packed crowd in Hong Kong.

In addition to exhibiting in shows in Bangkok and Hong Kong, as more people asking about the new sapphires, Khan decided to take his gems to Tucson in 2016. "It was a good decision," he confides. "Not only did I sell a lot of stones, but I met a lot of people who share my passion for them and made many friends."



The challenge of bringing out the beauty of the Gold Sheen Sapphires is finding the right orientation of the rough.



Examples of the blue sheen seen in many of the Gold Sheen Sapphires.

One person sharing his passion is geologist Veronica Poteat. "I saw the Gold Sheen™ gems for the first time in Tucson and bought stones representing all the varieties and colors available." She adds that she was impressed by Khan's sincerity and his determination and efforts to bring the gem to market.

After the Tucson show, Khan received calls from a number of designers and brands interested in his shimmering stones, including "representatives from David Yurman and John Hardy, as well as several smaller designers," smiles Khan. Sometime later, he was delighted when a Gold Sheen™ sapphire ring created by William Travis Jewelry won the American Gem Trade Association's *Savor Silver Award* for Men's Jewelry.

Then, David Yurman featured Gold Sheen™ sapphires in a variety of jewels. Currently, John Hardy is in talks for



In rare gems, Gold Sheen sapphires exhibit multiple colors, which Khan calls the Aurora Effect.



Winner of AGTA's Savo Silver Award for Men's Jewelry by William Travis Designs. (Photo: William Travis Designs)

specific custom cuts. U.S.-based designer Brenda Smith has devoted a collection to Gold Sheen™, which she displayed at the 2018 AGTA GemFair in Tucson.

Moving Forward

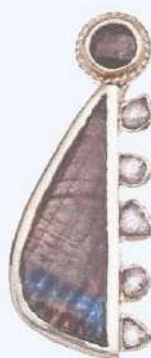
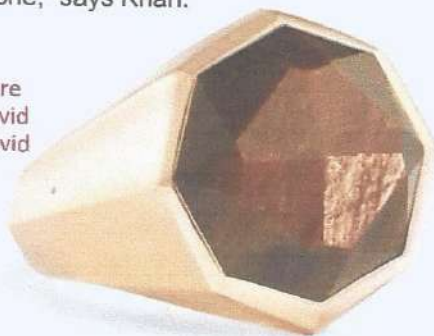
When Khan started cutting the sapphires, he obtained maybe 30% useable gems, but after years of experimentation, he was able to get 90% in commercial grade and 10% as fine gems. "As we continue to cut and experiment, we are finding more colors. On top of the gold, the stones exhibit sheens of blue, green, gray and pink. Rarely, we find red and purple." Most gems have two to three colors, but a few have four.

A few very rare gems vividly emulate the flashing colors and folding undulations of the Aurora Borealis lights in the northern sky, leading Khan to call this the Aurora Effect.

When asked if, as part of his experimentation with cuts and shapes, he has ever tried to enhance the sapphires in any way, Khan replied that he had experimented in the beginning with heating, but that the process only diminished the sheen effect. "All of the stones we produce are natural, unheated and unique," he insists.

Among the cuts, the most popular is the cabochon, although some countries seem to have a preference for the checkerboard or the rose cut—the preferred cut of designers in the USA. Other cuts include the brilliant cut, and various shapes, among them ovals and flat geometric cuts. "We can do any cut that enhances the unique character of the stone," says Khan.

Gold Sheen sapphire and gold ring by David Yurman. (Photo: David Yurman)



Gold Sheen sapphire and gold earrings by Brenda Smith. (Photo: Brenda Smith)

Gold Sheen sapphire and gold ring by Baer Jewels. (Photo: Baer Jewels)



Another advantage of the Gold Sheen™ sapphires is the transparency in their provenance. "They come from only one place and now there are no more. We know the workers were treated well, so buyers can be confident about ethical sourcing in their purchase."

In Tucson 2018, Khan explained that he has been asked by many people to sell some or all of the remaining stock of rough, but that he is not interested. As his business grows, he is investing more into creating an even greater marketing infrastructure for his Gold Sheen™ sapphires.

"This endeavor has exceeded my expectations. I cannot rest on my laurels, however," muses Khan. "There is still work to be done to get the word out about Gold Sheen™ so that others may also appreciate its singularity and beauty." Khan has certainly seen the beauty and now he wants everyone to see it.

All images are courtesy of Tanzim Khan unless specified.