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Why we need to rekindle our love affair with fluorescent diamonds

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TIME TO WAKE UP TO FLUORESCENCE

WHAT THE EXPERTS SAY

HOW SCIENCE HAS HELPED DEBUNK THE MYTHS

STYLE AND SPARKLE

DESIGNERS CELEBRATE THESE LUMINOUS STONES

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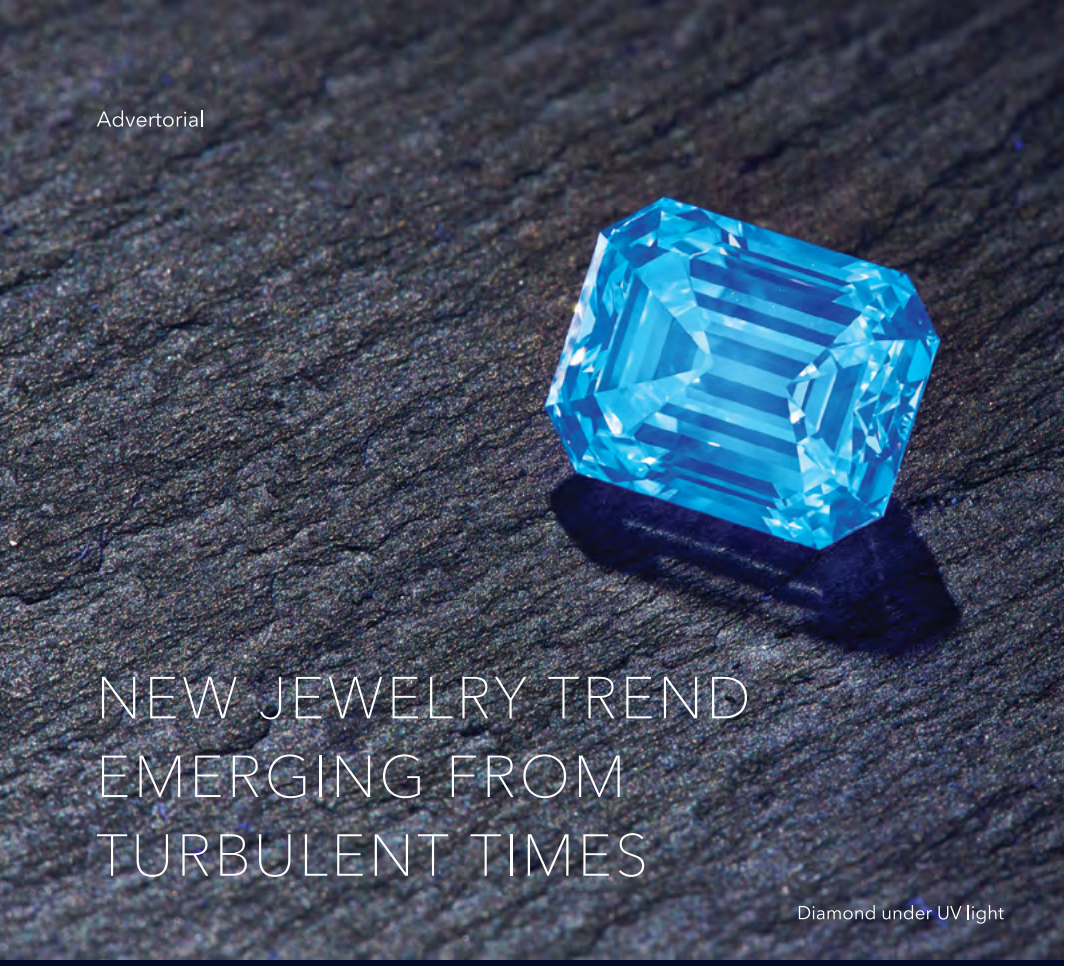
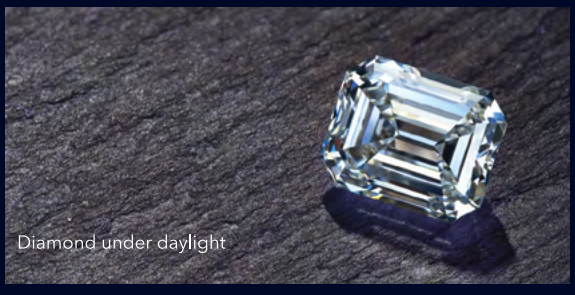


NEW JEWELRY TREND EMERGING FROM TURBULENT TIMES

Diamond under UV light

As countries emerge from the pandemic or prepare to re-enter lockdown, various surveys show that people are expressing more gratitude for the simple pleasures in life and treasure relationships now more than before the pandemic. This, in turn, creates demand for meaningful gifts and pieces of timeless value that can also reflect deeply personal feelings.



Diamond under daylight

This is where an often overlooked diamond feature comes into play. Every person has a natural inner light, an inner power, which you don't see, but can definitely feel. It helps us go through the darkest times, and to emerge and go on to achieve greater heights. Some diamonds also have an inner power – they shine from within. Those are commonly referred to as "fluorescent" but some call them "diamonds with inner light".

Fluorescence, meaning a diamond's ability to glow under the UV-light, is very rare. According to GIA, only up to 35 percent of all diamonds show some amount of fluorescence, but only 2 to 3.5 percent of all diamonds show Medium to Very Strong fluorescence, which is visible.

However, consumers are not yet aware of fluorescent diamonds. A recent survey found that 74 percent of US consumers "don't know or are poorly educated" about fluorescence.

However, upon witnessing the diamond's "inner glow" and receiving some basic education on fluorescence, 82 percent of respondents considered buying a diamond with this feature. More interestingly, 60 percent expressed a willingness to pay a premium for such a diamond – as much as a 15 percent premium for some. This is especially true of Millennials and Gen Xers.

Shortly put, fluorescence is perceived as a new and unique category of diamonds. Consumers in the US said they liked the notion of a hidden meaning in a diamond and the idea of a "diamond with a secret". They also believe that fluorescence will look spectacular in jewelry with the right combination of stones and settings. This opens up countless opportunities for jewelry designers.

Both Millennials and Generation Z are more likely to opt for fluorescent diamonds, as they aren't willing to "waste" money on ordinary gemstones, finding them quite "old-fashioned". Fluorescence, on the other hand, is perceived as a new and attractive feature. But most importantly, a diamond, being the hardest material on earth, combined with a glowing from within, communicates a deep and meaningful message. It reminds us of the unique inner glow a human personality emits, that beautiful and magical light that helps us and those around regain strength in these turbulent times.

Why haven't we been swept away before with the thrill of luminous diamonds? The answer lies in the market. Being quite conservative it did not question the prejudice against glowing diamonds for years, stating that the glow comes with a flaw in clarity.

Experts state that only in very rare cases some diamonds will exhibit "extremely strong" fluorescence, which gives the precious gemstone a "milky" or "hazy" appearance. But only 0.2 percent of fluorescent diamonds submitted to the GIA exhibit this effect. Meanwhile, in 2018 HRD Antwerp conducted the most extensive and large-scale scientific study of fluorescence to date. They not only found that the common prejudice against fluorescence was misplaced, but that consumers might be better off with a fluorescent diamond. Fluorescence, they discovered, can positively affect color. Diamonds having strong fluorescence will display a better color in daylight, depending on the initial color. For example, a J-L color diamond with strong fluorescence can look one color grade higher.

The combination of new scientific research confirming the positive effect of fluorescence, as well as consumer interest in this bright effect, offers an opportunity to create a new product category in the diamond and jewelry market.

The world's leading diamond producer by output, ALROSA, is supporting the new trend and intends to introduce a new fluorescence-focused brand to the market called Luminous Diamonds®.

A turn-key branded marketing program will bring the rarity and beauty of fluorescent diamonds into view of the U.S. consumer. It will give participating stores carrying the Luminous Diamonds® jewelry reasons to expect increased sales of both self-purchasers and gifters.

Research conducted in the United States has shown high consumer interest surrounding the phenomenon of fluorescence and the Luminous Diamonds® brand.

"The most difficult part of this project is working with stereotypes," says Alrosa USA Director Rebecca Foerster. "The market will not immediately get rid of the prejudice against fluorescent diamonds, so this is part of its history, the younger generation of traders and cutters have grown up with this idea. I believe that there will also be a lot of work with consumers to explain that this is a natural property of diamonds. Moreover, fluorescence is not absolute, but likely proof that a diamond is not synthetic. Fluorescence is not bad, it even gives some advantages to a diamond, and it looks amazing. Therefore, we believe in the success of this initiative".

It all comes to just one conclusion – fluorescence is a new trend to keep an eye on. And for those seeking a meaningful symbol to celebrate the preciousness of human nature, a diamond with inner light is a great option to give a telling present of enduring value.

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A BRIGHT NEW OPPORTUNITY

The future of our industry relies on the willingness of consumers to choose diamond jewelry over the vast array of competing luxury items and experiences available to them. To ensure this, we need to continually innovate with new product categories to attract new generations of buyers and develop fresh, engaging marketing campaigns to capture the hearts and minds of consumers.

One market niche, for example, that offers the potential to achieve this is fluorescent diamonds.

A misconception regarding fluorescence arose in the second half of the 20th century, based on fears that it may cause a "milky" appearance in diamonds and therefore make them less desirable. This is, however, incorrect.

Scientific research conducted by well-known industry institutions, such as HRD Antwerp and the GIA, have proved just the opposite – polished diamonds can benefit from fluorescence.

More importantly, research has shown that consumers see fluorescence as an exciting and valuable feature when its unique qualities are fully explained to them.

Fluorescence, which adds a considerable intensity to a diamond's sparkle, is not just real – it is also rare. Only a small proportion of all stones display this effect, with medium-to-strong fluorescence appearing in less than 10% of all natural diamonds.

Fluorescence also boosts the color of a diamond, both under normal conditions and even when outdoors. However, their most fascinating optical attribute could well be their ability to glow in the dark. This presents the idea of a "hidden secret that only you know," which resonates well with modern consumers who

want to see and own something new, something that brings emotions and differentiates them from others. They see fluorescence as an amazing natural feature that is worth a slight premium. For industry professionals, this provides a unique opportunity to monetize the natural feature of fluorescence by creating new revolutionary products with more added value.

As a full-cycle, mine-to-market, diamond producer, Alrosa sees fluorescence as an underexplored niche with huge and largely untapped potential. As such we intend to launch a number of powerful marketing initiatives in this segment in collaboration with jewelry retailers in key markets.

The brand concept that ALROSA is developing will not only help jewelers bring this idea to their customers, gradually changing industry perceptions, but will generate consumer demand by revealing the magic and sparkle of fluorescent diamonds to a wider market. ■

SERGEY IVANOV
CEO, ALROSA

WHAT IS FLUORESCENCE?

Fluorescence is the most misunderstood phenomenon in the diamond industry. So let us try to clarify things for you.

BY AVI KRAWITZ

Fluorescence is the visible light some gemstones emit when they are exposed to invisible ultraviolet rays from sources such as the sun and fluorescent lamps. Blue is the most common color of fluorescence, but other colors may be visible. Once the light source containing the UV is no longer available the diamond will return to normal and cease to fluoresce. It is important to note that fluorescence is not considered a grade, such as the 4Cs (color, clarity, cut and carat weight), but is considered as an identifying characteristic on diamond grading certificates.

To assess fluorescence, the GIA examines the diamond from a side view with the table down. The American Gem Society (AGS) does so as a diamond would appear in jewelry, with the table up. De Beers examines its stones with the table facing down, like the GIA does, believing this offers the most accurate results.

TERMINOLOGY

The AGS and De Beers also use different terminology than the GIA in their fluorescence ratings, starting their scales with "negligible" rather than the GIA's seemingly straightforward "none."

Firstly, it is important to understand that all diamonds have some fluorescence. In the end, it simply comes down to how much. The GIA uses the term "none' to describe diamonds which exhibit no sign of fluorescence to those that exhibit a hint of fluorescence. This "hint" is so weak as not to be considered "faint". The AGS, on the other hand, prefers to use the term "negligible" to identify what the GIA terms as "none". As all diamonds have some fluorescence some believe the AGS terminology to be more accurate.

All agree on the rest of the scale used to denote levels of intensity of fluorescence - Faint, Medium, Strong and Very Strong. The term "faint" describes diamonds where the level of fluorescence is so slight it is highly difficult to distinguish it under a controlled UV light source. If the color of fluorescence is blue, the rating will not indicate the color of the fluorescence. However, if the color is other than blue (yellow, green, white, etc), the rating will include the word faint and the color of the fluorescence.

PRICE IMPACT

The impact of fluorescence on price depends on its noticeability. In some cases, it gives the stone a milky-white appearance, which greatly lowers value. In some instances, the fluorescence is hardly noticeable and has minimal impact on the stone's brilliance. Blue fluorescence gives lower-color stones a whiter, brighter face-up appearance. Yellow or white fluorescence is problematic and may require an additional 5% to 10% discount. Generally, the higher the quality and price per carat, the more fluorescence lowers value. ■

A BRIEF HISTORY OF FLUORESCENT DIAMONDS

Misinformation and a series of events has seen the diamond trade undervalue the phenomenon of fluorescence.

BY AVI KRAWITZ

Fluorescence in a diamond used to be viewed as a desirable trait. Diamond dealers would actively seek out near-colorless stones with strong blue fluorescence as they believed it made these diamonds appear more colorless and therefore brighter under light containing ultraviolet (UV).

When a large quantity of these diamonds were uncovered at the Premier mine in South Africa, it gave rise to the term "premier" to describe light-yellow diamonds with strong blue fluorescence. Similarly, the term "jager" referred to diamonds from the Jagerfontein mine, also in South Africa, which produced a high proportion of colorless stones with strong fluorescence. These diamonds were known as "blue-white" (blauweiss) and commanded a higher price because of the prevailing belief that fluorescence added value to higher-color diamonds.

However, the positive associations connected to the term "blue white" began to be eroded when the trade started selling lower-color diamonds under the "blue-white" label. This eventually led the Federal Trade Commission (FTC) in 1938 to ban the term "blue-white" in diamond marketing.

Other historic developments also contributed to the discounting of fluorescence.

NEGATIVE VIEWS

In the boom market of the 1970s, some dealers were offering substantially lower prices for what they called "milky Ds," or Ds with strong blue fluorescence and reduced transparency, according to a GIA report. This negative view of fluorescence gradually spread to lower colors, and even to stones in which the fluorescence was weak.

Matters were made substantially worse when it was revealed labs in South Korea were over-grading the color of fluorescent stones in the early 1990s. Local consumers suddenly realized their stones were over-graded and not only stopped buying fluorescent stones, but became active sellers.

Around the same time, a large volume of goods containing fluorescence started coming onto the market, mainly from mines in Russia, and this increase in supply in turn negatively impacted price. Nonetheless, fluorescent diamonds still remain in the minority, with the GIA estimating they account for 35% of global supply.

SIGNIFICANT OPPORTUNITY

Studies, by the likes of the GIA, have shown the jewelry-buying public see no difference between diamonds with fluorescence and those without. Indeed, the trade could be missing out on a significant opportunity. Savvy diamantaires and jewelers are buying fluorescent goods and marketing them as a specialized product.

Considering that the industry needs an avenue for offloading its fluorescent diamonds, it should be encouraging initiatives like these. ■

DISMANTLING THE FLUORESCENCE STIGMA

Diamonds with this trait may fetch lower prices on the market, but some in the trade are embracing the opportunities they offer.

BY RACHAEL TAYLOR

While GIA studies show that fluorescence has no noticeable effect on a diamond's appearance in the vast majority of cases, "diamantaires have generally looked down upon" it as reducing the stone's value, notes Eddie LeVian, chief executive of American jeweler Le Vian.

Indeed, most industry buyers latch on to this diamond feature as a gateway to lower prices. The Rapaport Price List has a section dedicated to the discounts one can expect for diamonds with blue fluorescence. Depending on the stone's color and clarity, the discount can be as high as 25% if the fluorescence is very strong, or as low as 1% if it's faint (though lower colors may have no discount at all).

WHY THE BAD RAP?

Despite the stigma, there is little science to back up claims that fluorescent diamonds are inferior stones. Fluorescence is a commonplace trait, occurring in somewhere between 25% and 35% of all diamonds, according to the GIA. Only 10% of these would have a grading classification of "medium," "strong" or "very strong" fluorescence — the levels that the lab says "may impact appearance."

One of the most serious — and popular — criticisms is that fluorescence can cause diamonds to look milky. Yet the GIA reports that fewer than 0.2% of the fluorescent diamonds it's received for testing have appeared "hazy or oily" as a result of the fluorescence, so that phenomenon is incredibly rare.

"There is a perception that fluorescence affects the value of a diamond, and I think that is probably true," comments gemologist, dealer and gemstone educator Eric Emms. "Whether that is fair or not is a moot point."

While Emms says the negative valuation is very much a trade issue, the vilification of these stones might have started with a lack of education among consumers. "There are tales from retailers in the past where clients have bought a diamond ring, gone to a disco [where UV lights reveal the fluorescence] and brought it back, complaining that one of the diamonds is blue, so 'it can't be a real diamond, can it, Mr. Jeweler?'" says Emms. "This is one of the reasons fluorescence is thought of in negative terms. Wholesalers don't want to explain this phenomenon to the public."

A WIN FOR THE BUDGET-CONSCIOUS

Though fluorescence is still an influential factor in the pricing matrix, attitudes toward these diamonds are softening as the market tries to shift away from a rigid 4Cs approach to selling — and also as tightening budgets lead trade and consumer buyers to tinker with their ideal specifications.

"The public perception of fluorescence is, in my opinion, very misguided," says Mo Hanzi, managing director of jewelry

manufacturer Pugata, who blames the internet for fueling confusion. But by explaining the reality of fluorescence, Pugata has managed to persuade shoppers to switch — which can mean that "a client who can't afford a carat can suddenly afford a carat," Hanzi says. "The market has been forced to sell stones with fluorescence at a cheaper price. The winners in this case are those who understand this, and they will get a cheaper price for the exact same stone."

LUMINOUS JEWELS

One buyer reaping the benefits of this situation is Costan Eghiazarian, managing partner of Austrian jewelry brand Aenea. He collects D-color diamonds of 3.50 carats and above with very strong (VST) fluorescence. "I love the effect," says Eghiazarian, who enjoys watching the color emerge from these stones when the sunlight hits them. "There is no design in our stock without at least strong fluorescence, regarding stones over 3 carats. We just bought a beautiful marquise-cut, 4-carat, D VST. It's fantastic."

British jewelry designer Cora Sheibani feels similarly. Her Glow collection not only accepts fluorescence, but celebrates it: Clients are encouraged to view the highly fluorescent gems she has picked out for her jewels — such as the aptly named Disco ring — under UV light and marvel as the colors change. In addition to diamonds, Sheibani has used colored gemstones that fluoresce, such as spinels, rubies and tourmalines. These glow-in-the-dark jewels were on display in New York last May, with a deliberately darkened exhibition space showing them off in all their luminous glory.

NOT ALWAYS UNLOVED

While Eghiazarian and Sheibani love the color play, some buyers believe fluorescence can enhance the brilliance of white diamonds in the right color grades. Research by Venus Jewel, which specializes in manufacturing solitaires, has shown that in the top three colors — D, E and F — fluorescence enhances the stone's luminance for a stronger sparkle.

> ***"The negative valuation is very much a trade issue."***
> ***Eric Emms, gemologist***

Others in the trade report similar findings, with the GIA saying that "in many instances, observers prefer the appearance of diamonds that have medium to strong fluorescence."

As with the 4Cs, the beauty of this much-debated "F" is in the eye of the beholder. "The overall objective needs to be achieved [through] looking at a stone and making sure it's sparkly," says Hanzi. "I don't see people walking around with microscopes." Or, indeed, UV lamps. ■

SHEDDING LIGHT ON FLUORESCENCE

The diamond trade had a glowing love affair with fluorescence, but why did this change and what is the value of this category of diamonds?

BY MARTIN RAPAPORT

Once upon a time before the diamond industry standardized to GIA color grading terminology the term Blue White (Blauweiss) was used to describe the finest color white diamonds. The original Blue White diamonds came from South Africa's Jagersfontein mine. The best Jager stones were highly transparent (clear and colorless) with a bluish tint due to fluorescence.

Ironically, during the early part of the 20th century fluorescence was seen as something that had a very positive impact on top colors. The extra sparkle fluorescence provided when the diamond was seen face up in sunlight was accepted as verification of the diamonds high color. Blue White diamonds were avidly sought out by the trade and consumers who paid higher prices for diamonds with fluorescence. Contrary to current market conditions, fluorescence added value to high color diamonds.

Now, the history of what happened to fluorescence is very interesting and informative. The trade had something very good going with fluorescent Blue White diamonds, but they blew it. Instead of maintaining consumer confidence in Blue White the trade began selling all types of lower color diamonds as Blue White. The term Blue White and the underlying concept that blue (i.e. fluorescence) added value to white (colorless) diamonds was so abused by the trade that in 1938 the U.S. Federal Trade Commission outlawed the use of the term Blue White for anything but blue diamonds.

Abuse of the term Blue White and the subsequent FTC restrictions undoubtedly encouraged the establishment of the GIA color grading system. Color grading systems try their best to differentiate between the amount of color or tint in a diamond (i.e. the degree of its transparency or lack of any color) and the sparkle effect provided by fluorescence (fluor) in various lighting environments. In fact, one primary reason the GIA developed standardized color grading using a Diamondlite box with a controlled light source was to be able to color grade diamonds while minimizing the influence of fluor.

Eric Bruton in his classic book Diamonds explained the impact of fluor on color as follows: "If the diamond is examined in sunlight, even reflected light which contains ultra-violet light, the blue fluor will tend to cancel the yellowish body color because the colors are nearly complementary, and the stone will appear whiter than it is. These stones are often mistakenly called 'blue-white'. Similarly, a stone that fluoresces yellow will appear worse in white light containing ultra-violet."

The bottom line is that blue fluor

enhances the color of diamonds in almost all lighting conditions. Is this bad? If not, why does the trade pay lower prices for fluor diamonds?

In some instances the trade does pay more for fluor. Typically J color and lower fluor stones bring a better price. This is because they look whiter to the trade. However, when it comes to higher D-F colors in VS and better clarity grades fluor is discounted. In general the more expensive the diamond the greater discount.

Some people believe that the trade is making a mistake and fluor diamonds are wrongly discounted due to misinformation and a misguided herd instinct. The theory is that the trade misunderstands the impact of fluor on higher color stones which is minimal because there is very little yellow color in the stone to improve upon. Suppliers believe that if they could convince buyers not to discount fluor they would make more money and improve liquidity.

The GIA in 1997 published a definitive research report on the effect of blue fluor on the appearance of diamonds. The GIA's observations confirm Bruton and emphasize that with the exception of milky fluor the impact of fluor on higher color diamonds in minimal. Interestingly the GIA concludes, "This study challenges the industry notion that fluor usually has a negative effect on better color diamonds."

MARKET POWER

The GIA is saying that lower prices for high color fluor stones do not make sense. So why does the trade discount higher color fluor diamonds? Are the diamond markets irrational?

This writer tends to believe in the rational market theory. In other words, over the medium and long term markets are never wrong because prices reflect the combined wisdom of everyone everywhere. The old market rule, "You can fool some of the people some of the time and the rest of the people the rest of the time, but you can't fool all the people all the time," makes perfect sense. It is especially true when people are voting with their money. While education and information certainly shape demand, add value and influence market forces that set prices, over the long term, by definition, markets do not make mistakes, they value things correctly.

So why does the trade discount fluor? Let's view the market from the perspective of a diamond trader and consider some diamond history.

As the investment diamond boom developed in the mid '70s and prices for D-IFs skyrocketed, very strong blue over-white or over-blue hazy diamonds needed to be weeded out of distribution. Since traders were flipping certs over telex machines the easiest way to do this was by avoiding strong blues (SB). Sure some SBs were fine but you had to look at them and convince your customer they were ok. In some instances fine jewelers were resisting mixing fluor goods with non-fluor goods because the stones face up differently. Also, the French who were important buyers at the time hated fluor. This may be because fluor means 'false color' in French.

Perhaps if certs didn't mention fluor no one would have cared about it. However, since it was there on the paper dealers figured they could use it to haggle and do some price differentiation. In soft markets dealers could discount fluor stones without disturbing the market value of inventory too much.

GRADING ISSUES

Traders were and still are disturbed by the correlation between over-graded colors and fluor. Nothing upsets a trader more than buying a G and finding out the stone is really an H because some lab made a mistake. Unfortunately, the probability of a lab over-grading a fluor stone is

A fluorescent diamond under daylight and under UV light

much greater than a non-fluor stone and a large percentage of high color mistakes turn out to be fluor. Over time mistakes pile up in the market since no one wants to buy them. This reinforces the notion that over graded stones have fluor. Perhaps if the labs graded fluor more conservatively dealers wouldn't be so afraid of them.

Korea's scandal in the early 1990s also had a great impact on world prices for fluor goods. In short, the Korean labs over-graded the color of fluor stones which encouraged huge imports of fluor stones. In the early '90s Koreans were the world's largest buyers of fluor stones and as much as 50 percent of the stones sold in Korea were fluor. The bubble burst in 1993 when an investigative TV special informed Korean consumers that their fluor stones were over-graded. Korean consumers found out their Gs were really Hs and no one in Korea ever trusted a fluor stone again. Not only did the Korean buyers stop buying fluor stones they became net sellers as consumers insisted sellers replace the fluor stones.

As the market struggled to deal with the Korean problem along came the Russians dumping diamonds. Guess what? A huge percentage of Russia's diamonds were fluor. Now it is very nice for the cutters and the GIA to explain to everyone that fluor stones are OK (assuming they are not over-graded). But let's consider supply and demand from the dealers' perspective.

I'm a dealer looking for D-F, IF-VVS goods. Expensive stones. 70 percent of the stones offered to me are fluor 30 percent are not. If prices are the same or near same, which stones do you think I am going to buy? Frankly, I don't care what anyone says about fluor or even what the stones look like. I trade scarcity. I trade liquidity.

DISCOUNTS

One primary reason dealers discounted fluor stones was to protect the market from the great inflow of Russian goods. The overriding factor justifying the market discount for fluor was scarcity. If Ds were expensive because they were rare it was reasonable to expect that scarcer Ds (i.e. Ds without fluor) would be even more expensive. The trade did not and does not necessarily price diamonds based only on appearance. Scarcity also has a great influence on price.

Obviously from the market perspective there appears to be a reasonable basis for price discrimination against fluor. While this article supports the rational markets theory it is important that we pay careful attention to what the GIA is saying. It may very well be that the trade is over-discounting fluor. If fluor diamonds are graded accurately under ideal laboratory lighting conditions blue fluor stones have an advantage in that their color

improves in normal daylight.

While education can play an important role changing buyers' perception about the negative impact fluor has on higher color diamonds it will have to be backed up by solid results. In other words the labs are going to have to be very serious about not over-grading the color of fluor stones even though these stones tend to appear whiter than they are. Furthermore the labs must clearly indicate on their grading reports instances where milky fluor detracts from the quality of the diamond. Only then will the trade and consumers have the confidence to pay better prices for fluor stones.

Regarding relative scarcity fluor stones are scarcer than non-fluor stones. The reason the availability of fluor stones is greater in the market is because they are more difficult to sell. Over the long term if the trade changes its perception about fluor goods and they sell through on a more liquid basis market availability may decline so that there is no longer an oversupply of fluor stones in the market.

From an economic perspective, there appears to be little benefit to the trade by increasing prices for fluor stones. It is likely that any price benefit will be absorbed by higher prices for rough. Furthermore, the availability of fluor stones helps the market adjust to varying degrees of availability. When the availability of higher colors are tight the discount for fluor drops as buyers more readily accept fluor because there are fewer alternatives available. On the other hand when goods are plentiful the fluor discount grows protecting prices for non-fluor goods. This assures less price volatility for higher colors.

The assertion made by the GIA over two decades ago is still true today. The negative perception of fluor is a trade issue, whereas consumers are not bothered by it, and even attracted to its effect on their diamonds. That should influence market behavior, encourage greater acceptance of high color fluor stones and ultimately shift the demand curve for fluor diamonds. However, it is important for us to recognize the sophisticated nature of price making forces in the free market and the role of the market in deciding what is and is not a better diamond through pricing. The beauty of the free market is that it is a real changing live world, open to all information, influences and opinions. Yet at the same time markets provide real numbers that reflect the consensus of all participants as to the real value of diamonds.

In conclusion, the fact that fluorescence has a positive "blue white sparkle" impact on diamonds should encourage greater acceptance of fluorescent diamonds. While it is important for us to recognize the sophisticated nature of market pricing driven by scarcity, we must also consider the role of the trade in marketing the relative benefits of fluorescence.

There is significant opportunity for the diamond trade to influence market behavior by marketing the concept of "blue white sparkle." While commoditization of diamonds based on GIA grading reports establishes pricing standards in the interdealer market, the opportunity to add value to diamonds through honest communication with consumers is powerful. The only way to increase profits is by adding value and the best way to add value is to sell something more than the stone.

We need to sell sparkle. Consumers want to buy sparkle and it's high time we sold it to them. Currently, "blue white sparkle" is not only the best value in the diamond market for consumers, it is also the best marketing opportunity for the trade. So, let's do it.

This is a revised article first published on April 9, 1998 in Rapaport Magazine. ■

WHAT THE EXPERTS SAY

Research into fluorescence, conducted by the GIA and HRD Antwerp, has found that it adds more than a sparkle to the beauty of diamonds.

BY JOHN COSTELLO

The Gemological Institute of America published the definitive paper on fluorescence back in 1997. This was groundbreaking at the time as it challenged the belief that fluorescence had a negative impact on the color and transparency of a diamond.

While fluorescence used to be a much sought after characteristic commanding higher prices, fluorescent diamonds had become to be viewed as less desirable and therefore sold for lower prices. Until the publication of the GIA's groundbreaking report, A Contribution to Understanding the Effect of Blue Fluorescence on the Appearance of Diamonds, there had been no scientifically controlled study of fluorescence in diamonds.

Before undertaking the study, the researchers at the GIA identified several fundamental variables related to the phenomenon of fluorescence. They used these to develop tests to understand how and under what conditions fluorescence affects the appearance or transparency of a diamond's color. Various elements, such as lighting conditions and viewing positions, were altered and their impact on how the diamond was perceived was noted.

POSITIVE BENEFITS

The researchers found that when viewed table-down, the strength of fluorescence had no "widely perceptible effect on the color of diamonds," according to the results of the study. Furthermore, "in the table-up position, diamonds described as strongly or very strongly fluorescent were, on average, reported to have a

Jewelry with fluorescent diamonds under daylight and under UV light

better color appearance than less fluorescent diamonds," the GIA found.

The study also revealed that blue-fluorescent diamonds tended to appear less transparent table down when viewed under artificial light, and slightly more transparent when viewed in the table-up position under sunlight.

The GIA also noted that when there is fluorescence, the negative impact on price is greater in higher colors (E and G) even though fluorescence is more noticeable in lower color diamonds (I and K).

"This study challenges the industry notion that fluorescence usually has a negative effect on better-color diamonds," reported the GIA at the time. Furthermore, it recommended the industry focus on the merits of individual diamonds rather than painting all diamonds with fluorescence in a negative light.

While the study undermined the industry's negative views towards fluorescence in diamonds, it did little to turn this negativity around.

FURTHER RESEARCH

In 2018 HRD Antwerp decided it would enter the fray and undertook a study entitled The Effect of Fluorescence on the Colour of a Diamond. This research revealed several standout points. The most crucial was the conclusion that diamond fluorescence has no influence on the color grading of a diamond in a laboratory setting. This is due to the lack of significant UV light in grading lamps. Furthermore, when a diamond with a fluorescence grade above 'medium' is viewed in outdoor conditions it improves the color grade, according to the results. HRD Antwerp used the example of a diamond it had graded as J color with very strong fluorescence in its laboratory appearing as a D color when examined outdoors.

HRD Antwerp's findings, similar to those of the GIA, found that despite the negative perceptions within the industry, there is no justification for the negative impact on price that currently applies to fluorescent diamonds.

Indeed, grading labs consider fluorescence as an important characteristic of a diamond, along with the 4Cs (carat weight, clarity, color and cut). And while this characteristic typically has a negative influence on a diamond's price, the scientific studies by both the GIA and HRD Antwerp found that this common perception is not justified. Furthermore, the research has found that a diamond's color is enhanced by fluorescence when viewed in natural light. It seems like it is high time the industry let go of its unfounded negative perceptions and let consumers decide. ■

Jewelry with fluorescent diamonds under daylight and under UV light

QUICK GUIDE
THE EXPERTS ON FLUORESCENCE

1. Research by the GIA, HRD Antwerp and other labs confirm that even very strong fluorescence has no detrimental effect on the appearance of diamonds in a laboratory setting.
2. When viewed outdoors, fluorescence can result in a clear improvement in a diamond's color.
3. Fluorescence has a neutral or positive impact on the appearance of a diamond when viewed by a casual observer.
4. All studies conclude there are no reasons to justify the current lower prices that apply to fluorescent diamonds.

GOT THAT GLOW

Designers are celebrating the magic of fluorescent diamonds.

BY RACHAEL TAYLOR

Disco diamonds. Glow-in-the-dark diamonds. Whichever moniker you prefer, it's safe to say that the ability to turn blue at the flash of an ultraviolet (UV) beam is the coolest thing about fluorescent diamonds. Any old solitaire with a decent level of fluorescence can offer this party trick and will undoubtedly impress. However, for a next-level wow factor, designers are artfully constructing jewels that take full advantage of this hidden superpower.

Cora Sheibani created a whole collection, aptly named Glow, around diamonds and other gems that fluoresce, such as rubies. So novel was the idea that it became the subject of an exhibition by lauded London gallerist Louisa Guinness. Jewels sat within light-rigged boxes where visitors could click a button to go from glow to no-glow and back again.

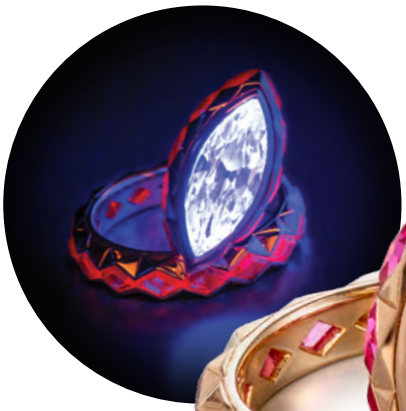
Others have used these rare diamonds to create jewels with celestial or ethereal aesthetics. Minnesota jeweler Patrick Mohs adds magic to his Night Sky necklace by using fluorescent diamonds to map out star-sign constellations, while Belgian brand Mére & Fille's Dragonfly ring utterly transforms after dark.

As if glowing diamonds weren't enough of a surprise on their own, some designers mix them in with nonfluorescent ones. Flip on a UV light, and an extra detail or secret message appears — such as the wings that magically materialize over a sleeping gold baby in Maria Kovadi's Sweet Dreams charm, transforming it into an angel. ■

MÈRE & FILLE
Dragonfly multi-finger ring with 150 fluorescent diamonds in 18-karat gold. *mereetfille.h*

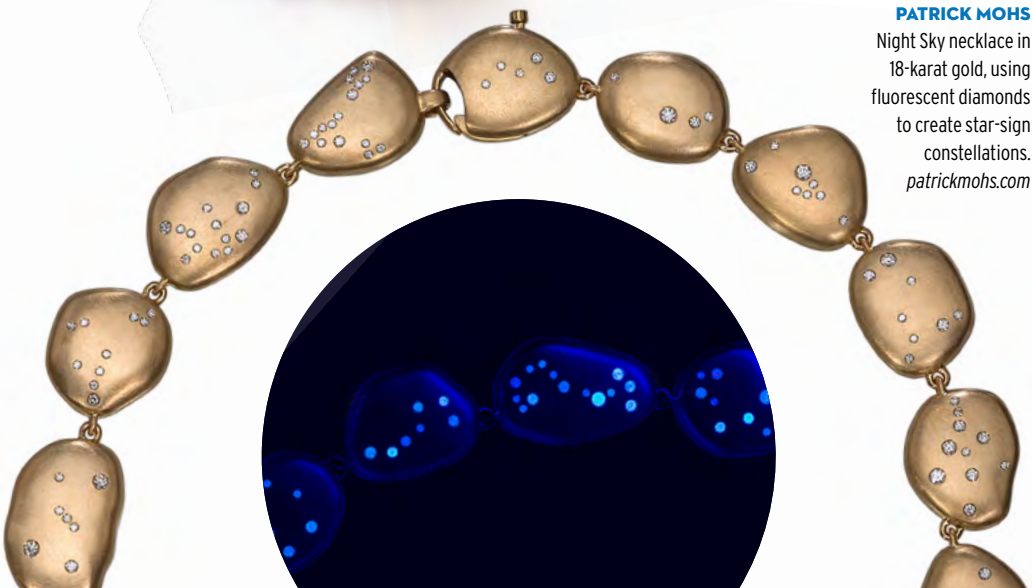
MARIA KOVADI
Sweet Dreams charm in 18-karat gold, featuring fluorescent diamonds that create a hidden-wings detail. *kovadi.com*

ATELIER EKLÖF
Fiore cocktail ring with a 1.50-carat nonfluorescent diamond surrounded by 10 fluorescent yellow diamonds in 18-karat gold. *ateliereklof.com*



CORA SHEIBANI
Disco ring in 18-karat gold with fluorescent rubies and a marquise-cut fluorescent diamond.*corasheibani.com*

PATRICK MOHS
Night Sky necklace in 18-karat gold, using fluorescent diamonds to create star-sign constellations. *patrickmohs.com*



DID YOU KNOW?

It is time to dispel the cloud of misinformation that surrounds fluorescent diamonds and get a clear understanding of this wondrous natural effect that adds even more mystique to natural diamonds.

1 FLUORESCENT DIAMONDS ARE RARE

Only up to 35% of diamonds display some level of fluorescence, according to the GIA. However, in the majority of cases there is no noticeable impact on appearance. Indeed, 94% of all diamonds submitted to AGS Laboratories had negligible fluorescence. The lab also found that 'very strong' fluorescence appeared in just 0.34% of diamonds it graded, while 'medium' and 'strong' effects were exhibited in 3.6% and 1.5% of all stones respectively.

2 FLUORESCENT DIAMONDS CONTAIN A SECRET

Fluorescence is the ability of a diamond to glow under some conditions. So, to the natural eye such diamonds appear just like other diamonds. However, when they are exposed to UV light, in a dance club for example, or bright sunlight they will fluoresce. Once the light source is removed the diamond will return to normal. Given this trait they have often been referred to as 'disco diamonds'.

3 DIAMONDS CAN FLUORESCE IN A VARIETY OF COLORS

While blue is by far the most common color, diamonds can fluoresce in a spectrum of colors ranging from orangey yellow, yellow, orange, red, white and green. The difference in color is caused by variations deep within the diamonds atomic structure, such as the number of nitrogen atoms present.

4 DIAMOND FLUORESCENCE APPEARS ON GRADING REPORTS

While fluorescence is not one of the 4Cs (color, clarity, cut and carat weight), it is considered a significant identifying characteristic that can distinguish one diamond from another. The GIA, for example, rates the intensity of a diamond's fluorescence as: None, Faint, Medium, Strong, Very Strong. If the grading report describes the fluorescence as Medium, Strong or Very Strong, it will also note the color of the fluorescence.

5 CONSUMERS WOULD CONSIDER PURCHASING FLUORESCENT DIAMONDS

While 74% of consumers in the US are either poorly informed or lack any knowledge regarding fluorescent diamonds, once educated, over 82% would consider buying a diamond with such a feature, according to research by Gfk market research agency. The research conducted among over 4,000 jewelry consumers also found that almost 60% of customers, mostly Millennials, expressed a willingness to pay as much as 15% more for a fluorescent diamond.

6 THE WHOLESALE DIAMOND MARKET IS FULL OF MISCONCEPTIONS

While the majority of consumers are not aware of the phenomenon of fluorescence, the diamond wholesale market is dominated with unfounded and untrue perceptions of this natural marvel found in some diamonds. The main misconception is that fluorescence causes a milky appearance. This belief has been discredited and disproved untrue by scientific research which has shown that fluorescence either has a neutral impact or can actually improve the appearance of polished diamond characteristics. ■

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A BLUE LIGHT TO DAZZLE THE JEWELRY MARKET

– Fluorescence is a sign of naturalness
– More than just a stone, a diamond with inner meaning
– Positive impact on a diamond's appearance
– Consumer interest and readiness to buy it in jewelry
– Huge market potential

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