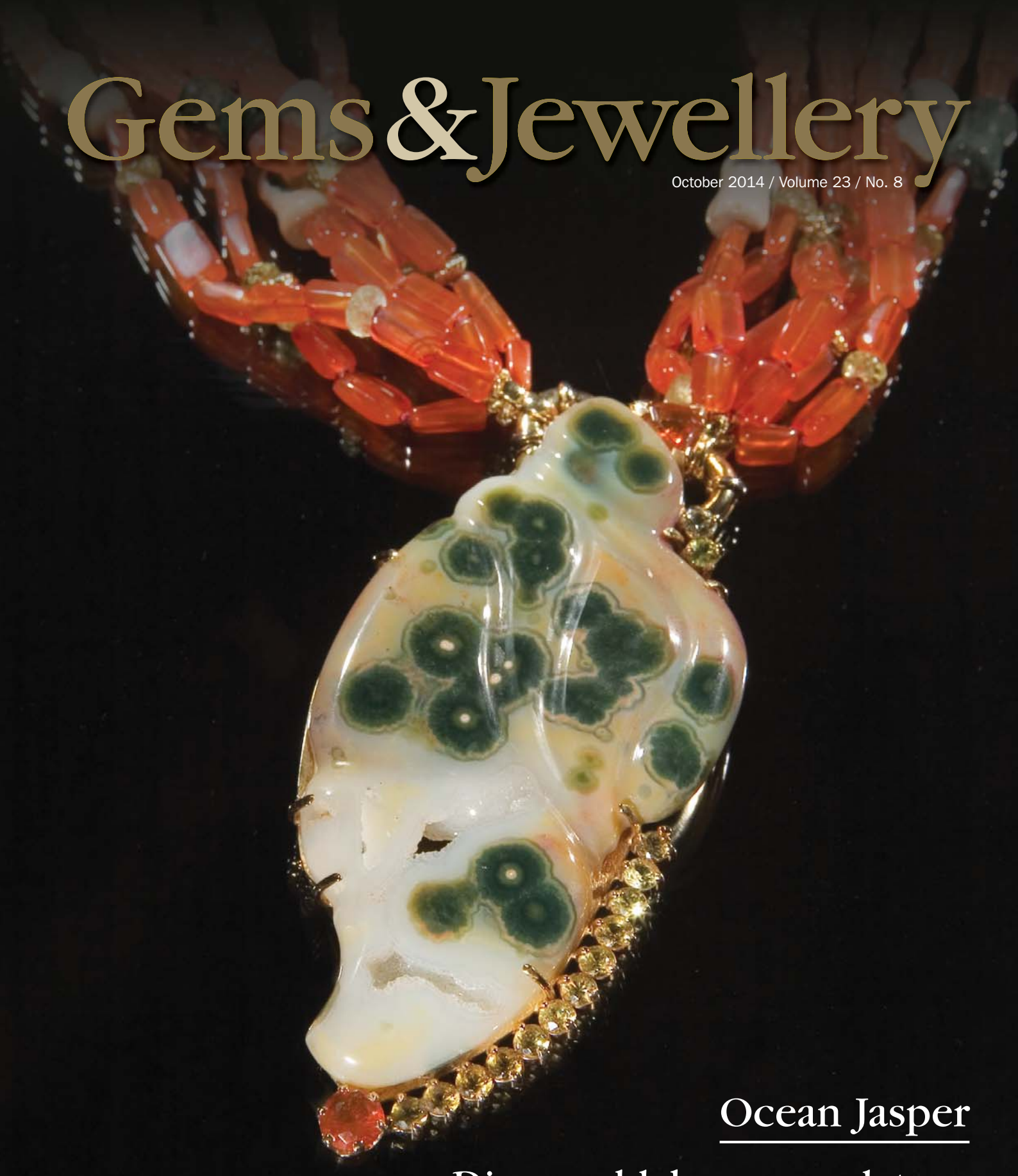
Gems & Jewellery

October 2014 / Volume 23 / No. 8



Ocean Jasper

Diamond lab nomenclature

Advanced instrumentation, advanced learning

Gem-A
THE GEMMOLOGICAL ASSOCIATION OF GREAT BRITAIN

MARCUS MCCALLUM FGA

PRECIOUS STONES, BEADS & PEARLS

A wide range of precious and semi-precious stones,
beads and freshwater pearls, personally selected
from around the world.

Unusual stones a speciality.

ROOM 27-31, NEW HOUSE
67-68 HATTON GARDEN, LONDON EC1N 8JY
TELEPHONE: +44(0)20 7405 2169
FACSIMILE: +44(0)20 7405 9385
email:info@marcusmccallum.com
www.marcusmccallum.com

Editorial

Gems&Jewellery
Oct 14

Contents

Grading reports — love them or hate them, they are here to stay. I have noticed some interesting developments over the last few months; some of which are for the good, others perhaps less so.

First there seems to be a marked shift from referring to them as certificates or 'Certs' to 'Reports'. People who for years have talked about the former now have strict policies in force to only talk about the latter. This is good because they are not certifying anything and, as the small print implies, they are merely an opinion. One might argue that in some way they verify a particular stone, but even then the legal caveats are such that they would be unlikely to withstand a legal challenge.

The legal eagles are probably responsible for the shift. There is a thought that laboratories who grade significantly differently from the more commercially acceptable ones could end up in litigation on the basis that their opinion is so different from the market leader that it must be valueless and misleading to the customer. It is perhaps for this reason that RapNet has recently stopped listing stones graded by two labs. RapNet themselves might fall foul of being deemed to be misleading, albeit that they are only the conduit for a sale and not responsible for describing the goods. The issue is that if you are advertising goods which you know or feel are wrongly described then you yourself are culpable.

This is music to the ears of those of us promoting corporate social responsibility (CSR) and ethical trading, and the interest shown in our new education course on CSR shows there is an appetite. CSR is not a panacea though; it is doing the right and honest thing which all of us should be doing anyway. The gem trade has a long way to go to put its house in order as parts of the supply chain are so opaque and have historically always been that way. While we do not seek to dictate to our members or the trade in general, we do feel it is our role to promote best practice and knowledge. There are those who say it is impossible but these issues will only get bigger as the world continues to shrink. Eventually the miscreants will have nowhere to hide.

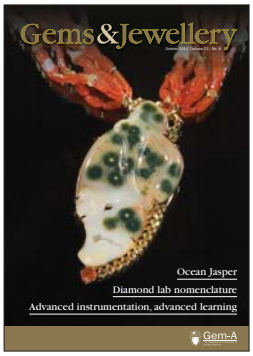
However, rather than just criticize them it is important to demonstrate how best practices can help a business and even add to the bottom line. Individuals can choose whether or not to adhere, but in the long run our industries have shown that traceable supply chains add value to the end product.

This is of course why grading reports became popular; they added value perceived or otherwise to the product. IJL showed the plethora of 'laboratories' operating in the UK, which is a microcosm of the rest of the world. Gem-A does not endorse any lab around the world, though there are a select few with whom we work closely on different projects and who are a clear cut above the rest. As the person unashamedly responsible for suspending the commercial operations of our lab, The Gem Testing Laboratory, I can tell you that to operate professionally is very expensive and in our case resulted in a considerable deficit annually. Anyone can set up a 'lab' with a microscope and basic kit and start grading; but it does not mean they are reliable. IJL felt like one was playing alphabet soup with all the different names. Granted most employ our graduates, many of whom are our members. However, our courses and the holding of the FGA and DGA are not designed to prepare someone to open a lab any more than other recognized global qualifications. Good lab work requires a high level of expertise, experience, equipment and research, not to mention firm data references. Often one or more of these is missing. This means that the end report is flawed (excuse the pun) from the outset.

Insurance companies are already questioning the validity and reliability of these hitherto unheard of labs. So too should you. Price should not be the overriding factor. Accuracy and specifically an openness to evolve, improve and learn from mistakes are critical, as should be the professionalism and integrity of the lab concerned. We are currently working with insurers and labs to move forward. One key issue is a lack of agreed international standards to which everyone adheres. The leading and reliable labs do work together to maintain standards, but if you use one from the second, third or even lower divisions beware of what you might get.

James Riley
Chief Executive Officer

Cover Picture
Ocean Fire necklace by Helen Serras-Herman, in private collection. Photo Michael J. Colella.
See *Gems and Minerals* page 18.



Published by
The Gemmological Association
of Great Britain (Gem-A)
21 Ely Place, London EC1N 6TD
t: +44 (0)20 7404 3334
f: +44 (0)20 7404 8843
e: editor@gem-a.com
w: www.gem-a.com
Registered charity no. 1109555
 ISSN 1746-8043

Editor
James Riley

Production Editor
Georgina Brown

Advisory Board
Mary Burland, Harry Levy

Design and Production
Zest Design +44 (0)20 7864 1504

Gem news

(From left) Stephen Lussier, executive vice president of marketing, De Beers Group and CEO, Forevermark; Philippe Mellier, CEO, De Beers Group; and Bruce Cleaver, executive head, strategy and corporate affairs, De Beers Group at the Launch of The Diamond Insight Report.

Global diamond demand reaches record levels

Global demand for diamond jewellery reached a record high of US$79 billion in 2013 according to the inaugural Diamond Insight Report, published by The De Beers Group of Companies and launched during the Hong Kong Jewellery & Gem Fair.

Demand is expected to continue to grow over the long-term, driven by the ongoing economic recovery in the US and the growth of the middle classes in developing markets such as China and India. The report cautions though that future demand levels cannot be taken for granted. The overall category is facing increasingly strong and sophisticated competition from other luxury categories.

The report further highlights that a forecast reduction in supply from existing sources will likely not be matched by new production coming on-stream in the years ahead and diamond supply is expected to plateau in the second half of the decade before declining from 2020 onwards.

Meanwhile, as mining moves deeper into the earth and towards more remote locations, the extraction process is becoming increasingly complex and costly. Substantial investment will be required in diamond production, technology and branding, marketing and retail standards if the industry is to sustain its recent levels of success into the future, the report says.

Call for GIA to drop 'damaging' express service

Moti Ganz, chairman of the Israel Diamond Institute has asked the GIA to cancel its express service, which, he says, is a track for fast, preferential treatment of large, expensive stones, and is in danger of crippling his business and the industry at large.

Writing in *HaYahalom* magazine (issue 215) Ganz accuses the "flagship of the gemmological laboratories" of making its non-express service clients wait 180 days for documentation. He explains that problems supposedly arose when the Indian diamantaires began sending huge quantities of quarters and sixths to GIA, all for express service. "Since the price for express service is double that of regular service… the GIA began assigning the overwhelming majority of its workforce, throughout the world, to these orders," he writes. "To order regular, non-express service, you have to visit the company's website at a very precise time to make an appointment to submit one stone, obtain a date for two weeks later and receive the results three months after that," he continues. "And if you decide to send a stone that weighs less than one carat for testing in the US, via one of the GIA's service branches, you encounter stoppages every now and then, which make it impossible to progress. Can anyone explain why a job that took 14 days last year now takes 90, though the quantity manufactured in the world diamond industry hasn't changed?" The high stock turn of the diamond trade, he adds, means that a delay of three to six months is crippling to an already highly leveraged industry.

The inventory amassing in the factories and in the GIA laboratories pending the issue of documents represents a cost of over 100 million dollars a year — a burden that naturally falls on the shoulders of the manufacturers. Ganz adds: "if there should be another crisis like the global economic crisis of 2008-9, the diamond market will totally collapse because of goods locked in laboratories, valued in our estimation at some two billion dollars, compared with the 500 million dollars at the time of the 2008 crisis."

In response to Ganz's feature, the GIA has said that it will be reducing its express service considerably, even discontinuing it in most of its branches. It is also investing in training new staff quickly. Ganz says that he holds the GIA in "great esteem" but urges its laboratory heads to "find solutions even more quickly and with greater urgency".

US manager for Gem-A

Gem-A would like to extend an official welcome to Eric Fritz FGA, who joined the team team on 1 August as its manager for North America – a new role for the Association. Currently based in North Carolina, he will be moving shortly to offices in Tucson, Arizona, which will be the main point of contact.

With a long-standing interest in collectible minerals, fossils and gems (with pearls a speciality) and a business liquidating estate mineral collections, Eric discovered Gem-A while looking to further his gemmological education. "Five top gemmologists in the

US all – independently – recommended Gem-A courses to me," he explains. "Prior to that I had no knowledge of the Association at all."

Two years ago Eric graduated and Gem-A followed this up by creating the US role. "I understand the difficulty of finding out about gemmological education in the US, and I am able to share with Gem-A those other people who want this help — whether they're hobbyists or professionals," he adds.

New sponsors for Gem-A Conference 2014

The Company of Master Jewellers (CMJ) and CIBJO have signed up as Sponsors for the forthcoming Gem-A Conference 2014, which will be held at the Business Design Centre, Islington, from 1–4 November. CW Sellors have also signed up as Associate Supporters of the Conference and will be bringing the largest piece of Whitby jet ever found, which attendees will have the opportunity to study.

"For another year Gem-A has pulled together some of the largest international companies to sponsor our conference. It's no wonder, with the calibre of speakers at this year's event, that we've had such overwhelming support from all aspects of the trade," said James Riley, Gem-A CEO. For more information on the Gem-A Conference see page 22.

Sri Lankan sapphires join Gemfields' portfolio

Gemfields has entered into a joint venture with East West Gem Investments Limited (EWGI), a Jersey-registered company, in order to progress opportunities in the Sri Lankan sapphire and gemstone sector via three Sri Lankan subsidiaries which will be 75 per cent and 25 per cent held by Gemfields and EWGI respectively.

Under the terms of the agreements, Gemfields has acquired 75 per cent operating interests in 16 exploration licences (covering diverse minerals) for a consideration of US$0.4 million. The Sri Lankan joint venture seeks to deploy Gemfields' exploration and gemstone experience with a view to replicating the successes achieved in Zambia and Mozambique, where Gemfields' approach has brought considerable benefits for both the local population and the regional economy.

Photo courtesy of Gemfields

RapNet to stop listing EGL grading reports

Effective 1 October 2014, diamond grading reports from all European Gemological Laboratories (EGL) will no longer be listed on the RapNet Diamond Trading Network.

RapNet is concerned about the misrepresentation of diamond quality by laboratories that use GIA grading terminology while applying alternative grading standards that overstate the quality of diamonds. While some EGL grading reports are more consistent with GIA grading standards than others, there is, in RapNet's opinion, "confusion and inconsistency among the various EGL grading reports.

Rapaport's statement adds: "RapNet recognizes that GIA and other diamond laboratory grading is based on human evaluation and is therefore subjective. We recognize that a difference of one colour and one clarity between diamond grading reports from the same or different laboratories is within a reasonable tolerance range. We reject the idea that there is no diamond grading standard and caution RapNet members not to use GIA grading terminology to describe diamonds that are below a reasonable tolerance range of the GIA standard".

"The Rapaport Group is opposed to the misrepresentation of diamond quality. The over-grading of diamonds is an unfair practice that destroys consumer confidence and the legitimacy of the diamond industry. Retailers who sell over-graded diamonds using GIA terminology and non-GIA grading standards are at great risk. When consumers try to resell their diamonds or send them to the GIA for re-grading and discover significant quality differences there will be hell to pay. The diamond trade must prioritize the protection of consumers above profits," said Martin Rapaport, chairman of the Rapaport Group.

Petra finds 232 ct diamond

Last month Petra Diamonds Limited announced the recovery of an exceptional 232.08 ct white diamond at the Cullinan mine in South Africa. The stone is a D colour Type II diamond of exceptional size and clarity, and is, says the company, "a magnificent example of the large, high quality diamonds for which the mine is known". The stone is expected to be sold in the second quarter of its financial year.

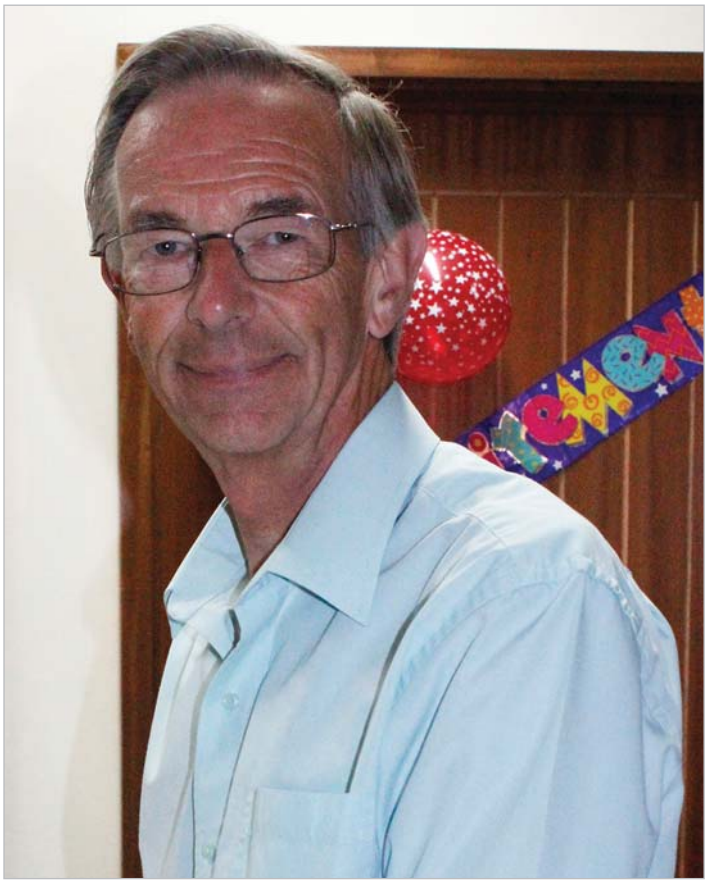
The leading independent diamond mining group has interests in six producing mines — five in South Africa and one in Tanzania. The company's core objective is to steadily increase annual production to five million carats by 2019.

Alan Clark: 34 years at Gem-A

James Riley bids a fond farewell to one of the Association's longest-serving members of staff.

The end of July saw the end of an era at Gem-A with the retirement of Alan Clark FGA DGA. Naturally, Gem-A hosted a party at Ely Place to celebrate Alan and his years of service to the Association, to which many of Alan's current and former colleagues came along to make the evening especially memorable. Alan was also honoured at the IRV conference in Loughborough last month, where he was presented with his first ever mobile phone!

Alan has worked for Gem-A for some 34 years, starting his employment in the Gem Testing Laboratory in 1980. As such Alan represents a bridge between the 'phalanx of four' of Messrs Anderson, Payne, Webster and Farn. Alan himself was part of an illustrious team in the lab, including Ken Scarratt, Eric Emms and Steve Kennedy. Nicknamed 'the pinpoint king' for his ability to spot even the smallest of inclusions, Alan is still probably the most highly regarded diamond grader in the UK. To give one example of his skills, an important stone came back with a new report showing it to be IF and Alan spotted a pinpoint in the pavilion with a 10× loupe, which he then confirmed by taking a picture under the microscope. Definitely a VVS1 for the Gem Testing Laboratory and of course a significant price difference!



From left-right: Alan Clark, Eric Emms, Ken Scarratt and Steve Kennedy in 1985.

Alan started his career in his father's jewellery business and then moved on to Ratners before joining the Lab in 1980. During his time he was involved in the issuing of GIA reports from London and he became head grader in 1995. In later years he became manager of Gem-A Instruments (formerly Gemmological Instruments Ltd. The quality and design of many staple items are due to his diligence, insight and knowledge of his subject, particularly the student kits which all Gem-A students now receive.

Not one to mince his words, Alan has on many occasions weeded out inferior products and seen through the ego of many individuals trying to sell him their latest gadget. Unfailingly helpful to his customers and students, he will be sorely missed for his dry sense of humour and calming influence. Anyone who has attended his advanced diamond course will know that his encyclopedic knowledge is almost impossible to replace.

On behalf of the Association I would like to thank Alan for his many years of dedicated service, and wish him and his wife Barbara every happiness in their retirement. We hope that he will find time in between tennis matches to stay in touch, and also hope to see him at our conference in November.

Gem-A Events

Gem-A Conference 2014

Saturday 1 – Sunday 2 November, Business Design Centre, Islington

Gem-A will host its internationally-acclaimed annual conference on 1 and 2 November at the Business Design Centre, Islington. This year features talks from Edward Boehm GG CG, Bruce Bridges, Dr Laurent Cartier FGA, Terry Coldham FGAA, Brian Cook, Dr Thomas Hainschwang FGA, Alan Hart FGA DGA, Dr Ulrich Henn, Richard Hughes FGA (with special guest John Saul), Craig Lynch GG, Vincent Pardieu GG, Dr Menahem Sevdermish FGA and Chris Smith FGA.

Monday 3 November — Gem-A Headquarters, 21 Ely Place, London, EC1N 6TD

- **Gemmological Applications of Raman and Photoluminescence Spectroscopy seminar**
  Hosted by Mikko Åström FGA and Alberto Scarani GG, GemmoRaman.
- **Coloured Stone Grading and Pricing Workshop seminar**
  Hosted by Richard Drucker FGA GG, President of GemWorld International Inc.
- **A portable EDXRF device in gemmology: toy or dream?**
  Hosted by Dr Franz Herzog.

Monday 3 November — The Goldsmiths' Hall, 13 Foster Lane, London EC2V 6BN

- **Graduation Ceremony and Presentation of Awards**
  With guest speaker Tim Matthews FGA DGA, JTV CEO.

Tuesday 4 November — Natural History Museum, Cromwell Road, London, SW7 5BD

- **Visit to the Natural History Museum**
  Hosted by Alan Hart FGA DGA, head of Collections and Mineralogy Collections

Tuesday 4 November — Gem-A Headquarters, 21 Ely Place, London, EC1N 6TD

- **Global Ethical Challenges within the Industry seminar**
  Hosted by Greg Valerio, Vivien Johnston and Dana Schorr.

For the full conference programme see page 22.

Gem Central evenings

Gem Central will be held on the following evenings: 6 October, 10 November and 16 December.

Gem-A Workshops

Workshop prices:
Gem-A/NAG/BJA Members and Gem-A Students: £100, Non-members: £120

Understanding practical gemmology
Friday 10 November 2014
Birmingham City University, Birmingham B42 2SU

This workshop focuses on the practical aspects of gemmology, covering the effective use of all the readily available instruments and testers that you are likely to need. The 10× lens, polariscope, spectroscope and refractometer are all covered in detail, and, under the guidance of expert Gem-A tutor Andrew Fellows FGA DGA CDG, you will quickly learn the basic principles and techniques needed to use them efficiently. By the end of this workshop you will be able to use the equipment correctly and have an appreciation of the value of each instrument in testing.

Understanding diamond grading
Wednesday 26 November 2014
Birmingham City University, Birmingham B42 2SU

This specialist workshop focuses on the key aspects of diamond grading, giving a unique insight into the 4Cs and their impact on value. Led by experienced Gem-A diamond tutor Andrew Fellows FGA DGA CDG, participants will be guided through the underlying theory before seeing the practical side of cut, colour, clarity and carat weight on both loose and mounted diamonds. This course provides the perfect foundations for those wanting to either go forward to study the full Diamond Diploma course, or to embark upon a career in the retail diamond market.

Understanding diamond simulants
Friday 28 November 2014
Birmingham City University, Birmingham B42 2SU

This workshop is for those working, or considering working, in the diamond market. Gem-A tutor Andrew Fellows FGA DGA CDG explains the key differences between diamond and its simulants, and how to recognize them both as loose stones, and in set or mounted jewellery. Using basic observation techniques and readily available instruments, such as diamond and combination testers, participants will be taught to quickly and effectively separate diamonds from all other imitations, thus preventing costly purchasing errors, and allowing informed buying decisions to be made.

Other events and conferences

Company of Master Jewellers (CMJ) UK Jewellery Conference
Tuesday 7 and Wednesday 8 October 2014
Hilton Birmingham Metropole, NEC, Birmingham, B40 1PP

Open exclusively to CMJ retail members and approved suppliers, contact the CMJ Events team on 01788 540250 or email: events@masterjewellers.co.uk for details on how to book.

IJL, Olympia 2014: the start of a new tradition?

Miles Hoare declares the new arrangements for this year's show an outstanding success.

When we heard the news that International Jewellery London (IJL) would be held at a different venue this year, taking place over three days rather than four, we must admit we were a little dubious. It's not that we don't like change, quite the contrary — this is the mantra currently reverberating through the halls of Ely Place — but tradition is another thing entirely. To break with over 59 years of IJL tradition and make the move from the beloved Earl's Court we thought would be too much for us all to handle. However, within moments of entering the freshly fitted venue, we realized how wrong we were.

Olympia has a certain twee charm not shared by Earl's Court, and aside from perhaps the overall size of the venue, there was little to bemoan of the show's new abode. The structure of the new show, whilst perhaps not ideal for those stuck up in the gallery, boasted a minimalist allure, feeling more well-ordered and freshly presented than its larger, uglier sister in Earl's Court One. Although there were mixed reviews from exhibitors about the amount of natural light granted by Olympia's glass ceiling and trepidation from the Hong Kong pavilion, who previously raised concerns about the shorter show time (who wants to spend 30 hours travelling for 27 hours selling time?), the show's programme reflected previous years in still managing to squeeze in a number of inspiring and informative lectures and workshops alongside the usual catwalk shows, industry parties and various product launches, albeit in a more humble atmosphere.

Crowds gather at the Gem-A stand at IJL for champagne and launch speeches by CEO James Riley, Ethics Manager Vivien Johnston and CIBJO President Gaetano Cavelieri.

Screenshot of Gem-A's e-learning videos for the new 'CSR for the Jewellery Professional' course, in association with CIBJO, WJCEF and Branded Trust.

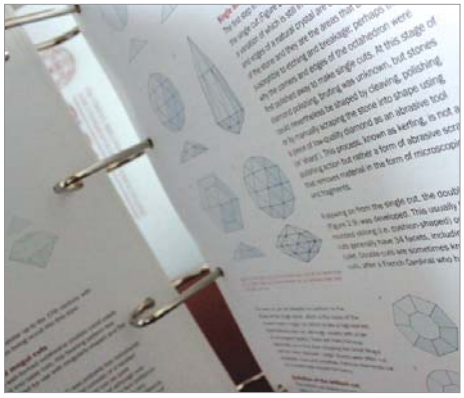
Sunday

For Gem-A, this mix of tradition and new tidings set the ideal backdrop for the launch of new products and the revitalization of some of our traditional, flagship offerings. Sunday marked the launch of a brand new course in conjunction with Branded Trust and the World Jewellery Confederation Education Foundation (WJCEF) — the educational arm of CIBJO — focusing on issues surrounding Corporate Social Responsibility (CSR) in the jewellery industry. The aptly titled 'CSR for the Jewellery Professional' course was unveiled with a champagne toast and speeches by CIBJO president Gaetano Cavelieri, Gem-A CEO James Riley and our new Ethics Manager, Vivien Johnston, and was followed by a live demonstration of the online platform and the first interactive video lectures. The course itself garnered a lot of trade press and consumer interest over the three days, and due to its attempts to address a number of prevalent and pressing issues in the industry, started serious discussions about how to tackle internal issues with ethics and CSR.

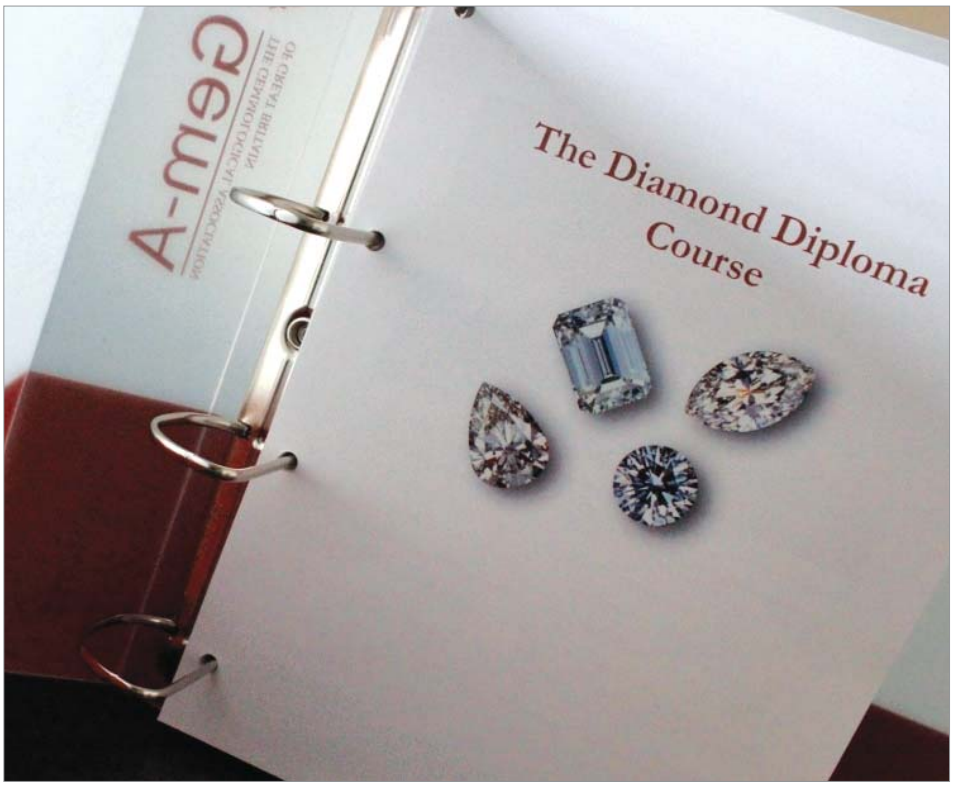
The Sunday launch of our new CSR course coincided with the release of an update to one of our flagship courses, in the form of the revamped Diamond Diploma. Similar to previous iterations of the course, the new notes look at topics

covering the formation of diamonds through to their use in the jewellery trade, how they are valued, and the identification of natural, synthetic and treated diamonds. The structure of the diploma, the assessments and the final learning outcomes remain the same; however, the upgraded and expanded notes contain more in-depth material on all diamond-related topics, including the latest information on technology, research, testing equipment and techniques, all spread over an extended 18 chapters (as opposed to the previous 14). Students, members and former graduates of the Diamond Diploma were invited to take the first sneak peek at the notes throughout the weekend and discuss the new changes with our tutors. Responses were overwhelmingly positive, with a number of guests signing up to be the first students on the revamped course and a few former graduates putting in requests to purchase their own copies.

Running alongside our Sunday launches we also invited members of the industry to join two of our leading tutors, Claire Mitchell and Andrew Fellows, for a fantastic workshop entitled 'Spectacular Spectrums'. This hands-on workshop invited attendees to study techniques used for successful absorption spectra observation and covered the best practice associated with the use of different spectroscope models. A well-liked staple for all our trade show appearances in 2014, this workshop, which was well over-subscribed, aided students in gaining an understanding of how gemmology is taught at Gem-A.



New Diamond Diploma notes with improved photography and visual stimulus.



Front cover of the new Diamond Diploma notes.

Monday

With no seminars, product launches, or prize giving on the Monday, the Gem-A team had a chance to network fully with visitors to the stand as well as take a further look around the show. The networking aspect was greatly aided by the constant stream of friends from our recent field trip to Idar-Oberstein (see the report in the August/September issue of *Gems&Jewellery*), who dropped by to check out the latest products, make enquiries about further trips, workshops and courses, and peruse the range of gemmological instruments on offer.

Within this window we also got the chance to turn a critical eye on the new and returning businesses at the show — taking in the gradual changes to the industry over the last year. One of the most apparent changes since the 2013 show was the number of newly-established gemmological laboratories promoting their services to members of the trade. Whilst the idea of an increased level of scientific rigour within the industry is a positive one, concerns about the quality of these labs and their level of analysis is high on the agenda (see also James Riley's Editorial, page 3). For anyone dealing with gems and diamonds the importance of a high-quality lab with strict standards, codes and practices is paramount to ensure that not only honesty, integrity and transparency remain, but that the value of laboratory certification is maintained. There is a sense that the analyses of some of these laboratories is severely lacking in the quality expected by businesses throughout the trade, but more importantly by insurance companies who have seen a rapid rise in certification from unknown or unverified labs. This not only impacts the individuals and businesses unlucky enough to receive a sub-standard lab report, but undermines the validity of lab reports in general, and has a destabilizing effect on the confidence of insurance companies to be able to accurately and assertively underwrite the value of a stone.

IJL, Olympia 2014 (cont.)

P J Watson receive the coveted Gem Empathy Award. Left to right: Sarah Kitley-Spencer (Marketing Manager, IJL), Vivian Watson (Managing Director, P.J. Watson), John Watson and James Riley (CEO Gem-A).

Tuesday

It was with these worrying trade practices in mind that we began to deliberate the potential winners of Gem-A's Gem Empathy Award for 2014. The award is presented annually on the last day of the show to the IJL exhibitor displaying, in the opinion of the judges, a single piece or collection of jewellery that makes captivating use of one or more gemstones and provides accurate ethical descriptions as well as displaying creativity and imagination. The winner, selected by a panel of judges from Gem-A, was designed by John Watson of fine gems and jewellery manufacturer P.J. Watson. Family jewellers with four generations of DGA members amongst its ranks, P.J. Watson never fails to impress with its statement pieces created especially for each annual IJL show. This year's piece, a multi-purpose peacock feather brooch/pendant (shown right), was created with a centre 23.80 ct tourmaline and 3.94 ct of G VS diamonds in an 18 ct white gold mount. It was awarded the prize for the completely original use of coloured gemstones, in a stunningly beautiful design, with all stone sources disclosed. As winner, P.J. Watson wins a free full-page advert in an upcoming issue of *Gems&Jewellery* as well as a free one-day workshop or attendance for one delegate at the Gem-A Conference 2014.

Talking of original use of colour, Tuesday continued on a vivid theme as tutors Andrew Fellows and Lizzie Gleave took to the rostrum to talk on 'Fifty Shades of Colour'. Our provocatively titled workshop looking at the range of different colours in gemstones showed attendees how, with the simple use of a light source and dichroscope, they could discover the range of colours within a gemstone that are invisible to the naked eye. Popular as always, the workshop was over-subscribed with individuals from around the trade ranging from those will little gemstone knowledge to experts looking to pick up a few extra tips and tricks.

The final curtain

Overall we have to admit that, despite our early pessimism, we were pleasantly surprised at the success of the new-feel IJL. Although there was a slight sense that as we were positioned in the gallery we were a bit isolated from the rest of the show, this didn't stop the crowds making their way to the stand and didn't hinder the successful launch of our brand new products. Following enlightening conversations we had with students and members, we're confident that our new offerings fit with the current changes within the industry, whilst still retaining Gem-A's ties to history and tradition. Similarly with the new IJL, and in an optimistic U-turn on our feelings from 2013, we look forward to seeing how the new IJL show continues to respect the long-running tradition of the show, whilst maintaining a flexible approach to the changes in the way the industry works. Concerns still exist about the show's international reach and how attractive it is to large markets in the Far East, but all we can do is wait and wonder… what will 2015 bring?

Over the coming months Gem-A will be in attendance at a number of the industry's largest trade shows and events. To find out more about all our upcoming trade show appearances, turn to our events calendar located on page 7.

The P.J. Watson winning piece: Multi-purpose peacock feather brooch/pendant created with a centre 23.80 ct tourmaline and 3.94 ct of diamonds in an 18 ct white gold mount.

ANCHORCERT®

GEM LAB

ROCK SOLID REASSURANCE

PROUD TO SUPPORT Gem-A THE GEMMOLOGICAL ASSOCIATION OF GREAT BRITAIN

GEM A CONFERENCE 2014
1-4 November
The Business Design Centre

IDENTIFICATION OF HPHT TREATMENTS AND SYNTHETIC DIAMONDS

A UNIQUE SERVICE IN THE UK

- **FAST TURNAROUND TIMES, NO NEED TO SEND STONES OVERSEAS FOR TESTING**
- SPECIALISED EQUIPMENT FOR THE IDENTIFICATION OF HPHT TREATMENTS AND SYNTHETIC DIAMONDS – A UNIQUE SERVICE IN THE UK
- INTERNATIONALLY RECOGNISED EXPERTISE IN GRADING WHITE AND COLOURED DIAMONDS GEMSTONES AND PEARLS
- **DIAMONDS GRADED TO GIA MASTER STONES AND NOMENCLATURE**
- THE ONLY LABORATORY IN THE UK TO BE UKAS ACCREDITED
- LASER INSCRIPTION OF DIAMONDS AND GEMSTONES
- REPORTS FOR LOOSE AND MOUNTED STONES

UKAS TESTING 0667

1773

PO BOX 151 NEWHALL STREET BIRMINGHAM B3 1SB TEL: 0871 423 7922 FAX: 0121 236 9487

E-MAIL: gem@theassayoffice.co.uk WEB: www.anchorcert.co.uk

Advanced instrumentation means advanced learning

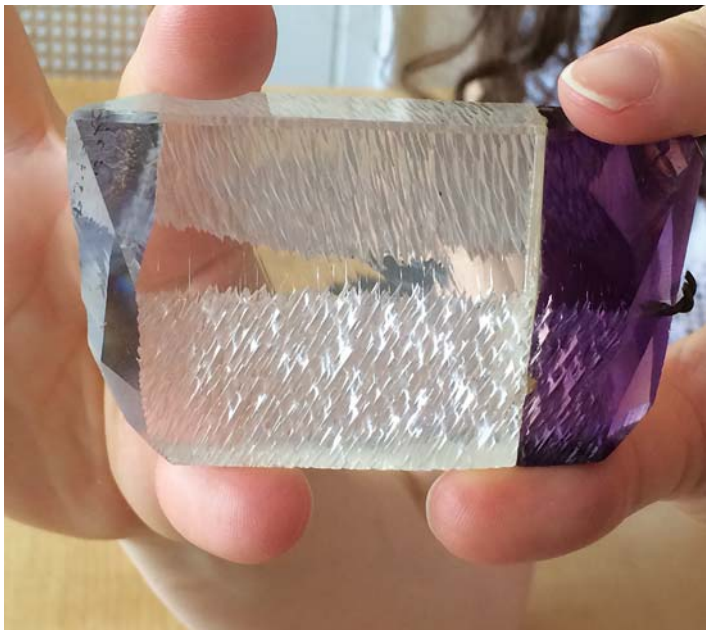
Charles Evans reports on a trip by Gem-A staff to the Swiss Gemmological Institute (SSEF) in Basel to learn about the latest equipment and techniques.

At Gem-A we have seen some very interesting changes on the more scientific side of 'diagnostic' gemmology over the last 10 years, changes that have had a profound effect on the industry, but not necessarily in the most obvious of ways. We strive, as always, to stay ahead of the game and this is a considerable challenge while running as a charitable organization. The decision was made in 2008 to mothball the lab for commercial reasons and this was a big (and controversial) step. The truth of the matter was that we did not have the volume of business to permit the purchase of certain key tools that for the most part still cost a six-figure sum and that were required to keep us a competitive force among other international labs. (How often have the CEOs politely refrained from answering that annoying question: "Why did Gem-A close the lab, I thought it was great having such a facility?" with the retort: "Yes, having it was great, however funding it was impossible. Just remind me exactly, how well did you support it when it was there?"). Times have changed. Business attitudes to due diligence in support of full disclosure are still 'restrained' and this 'restraint' still extends to investment in laboratory services. Nonetheless, Gem-A is always aware of new opportunities. As always, the consumer's concerns will be the decider for the industry dealing with the hoary old chestnuts of treatments and synthetics. There is additional momentum now from another perspective, with heightened interest and concern about the ethical issues in the supply chain meaning that identifying (or obscuring) provenance is key. At Gem-A, we are one step ahead. The price of much of the technology that can assist in this identification has come down to a point where it is going to find far more extensive use and be available to a wider audience than was previously the case.

Eva Bieler (far left) explaining the SEM's magnification options in the field of view to Lizzie Gleave and Cathryn Hillcoat at the Center for Microscopy at Basel University. Photo by Charles Evans.

It is with this in mind that Gem-A has invested in a Raman spectroscope, an FTIR and a soon-to-arrive EDXRF, with further instrumentation from Sarine on the horizon. Buying the equipment is all well and good, but investment in staff has to be made to ensure the new kit is put to thorough use and is thus in line with our ethos of advancing the understanding of gemstones through education. What our talented tutors learn will filter down to the benefit of all students and members.

So it was that six of us spent a week in the delightful city of Basel in early August. We were guests of the SSEF, there to spend a week familiarizing ourselves with the advanced equipment and techniques used in a modern laboratory. On a personal level this was a wonderful opportunity for professional development and a dream fulfilled to visit and investigate the inner workings of our contemporaries in Basel. Our tutor for the week was none other than the esteemed Prof. Henry Hänni FGA, who obligingly led us through this course of discovery and extended the exploration to



A beautiful crystal of synthetic quartz/amethyst in the SSEF reference collection. Photo by Charles Evans.

some of the historic delights of the amazing Old Town too, when our heads were reeling from the information onslaught.

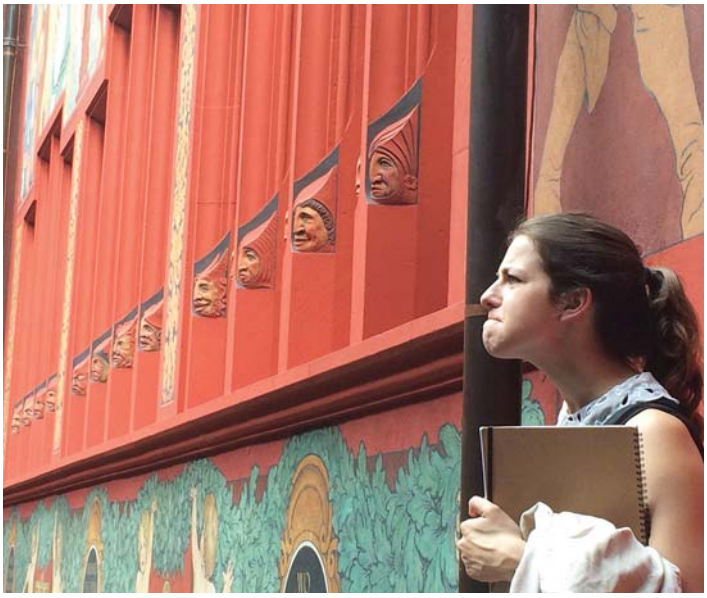
SSEF could not be more central in Basel and currently occupies the top floors of a building just off the tramway that runs through the centre of town. On our initial tour of the facility we were struck by the priority given to controlling environmental issues. There is a real risk that factors like air temperature and humidity might contaminate results and this meant sensitive equipment was located in different rooms, doors were shut, temperature was controlled; breathing may even have been frowned upon, but we were guests after all.

Our time was divided between classroom sessions and practical sessions. For classroom time we were in the supremely elegant, 700-year-old Safran Guild halls. The ornate decoration reminded us — as we discussed chromophores, anti-Stokes and interferograms — that we had been preceded in those very halls by brush makers, button makers and chandlers. We would return to the offices a short walk up the road in order to see the instruments in action and so it was we worked through different Raman units, EDXRF, FTIR, and X-ray machines. On Tuesday we had a full day devoted to Prof. Hänni's special love: pearls. Through an incredible collection of slides, anecdotes and samples, we binged on his knowledge, scribbling copious notes. Additionally, Dr Laurent Cartier FGA gave us a lecture on his fascinating PhD dissertation from Basel University that focused on pearl farming and pearl traceability issues conducted in collaboration with Dr Joana Meyer, an expert in DNA fingerprinting techniques in a range of materials and organisms. The implications of their findings will be profound, not just in identifying provenance, but also the aging of pearls.

On Thursday we had a special treat. We walked up to Basel University, Prof. Hänni's *alma mater*, and spent the morning, eyes agog, watching a scanning electron microscope (SEM) focus in with incredible accuracy and clarity on garnet inclusions in grains of sand, collected from one of Scotland's black sand beaches. Sample preparation involved the universally simple (glue on a piece of card with the sample dribbled over it) to the very highly specialized (gold anodizing within a vacuum). The fine layer of gold was required to overcome the one of two issues that come about when a sample is subject to the brutal rigours of the SEM's vacuum chamber. One is the fact that the sample is in a vacuum chamber itself — necessary to address the problem of scattered electrons of low energy being deflected by atmospheric particles and influencing the resultant reading. The second problem is dealing with the charge that builds up between the cathode end and the sample on the anode stage. A fine layer of gold on the sample provides grounding and is deposited onto the sample in a special 'sputtering device' beforehand. We were most fortunate to be able to watch every stage in the operation as a number of gemmological samples were prepared for us to see. In the SEM chamber, the basic X-ray principles applied and the reflected electrons could be captured allowing a picture to be built and displayed onscreen at up to 500,000× magnification. This incredible machine, by simply switching computer programs, would introduce an attached accessory in the form of a spectrometer that would take the information it had been using to generate these macro images and instead analyze the scatter to deliver us a precise chemical analysis of the area in focus — an area that could be as small as one nanometre. Sadly the level of complexity in this technology means that, despite all the advances

The team on the SSEF roof with Prof. Henry Hänni. From left: Claire Mitchell, Andrew Fellows, Prof. Henry Hänni (proudly displaying his Gem-A Fellowship tie!), Lizzie Gleave, Cathryn Hillcoat, Julia Griffith and Charles Evans. Photo by Laurent Cartier.

Advanced instrumentation means advanced learning (cont.)



Julia Griffith doing her gargoyle impression at the magnificent old Basel Rathaus (town hall). Photo by Charles Evans.

that have permitted us access to the other advanced gemmological instruments on an improved cost-to-benefit ratio, this remains well outside the reach of Gem-A. Not only does it require a full-time and dedicated operator, but the instrument itself still starts at the price of a mansion in Yorkshire
— or a broom cupboard in Mayfair. Perhaps not this year…

Another day, the focus was on diamonds and we had the pleasure of listening to Jean Pierre Chalain tell us about the extensive research work that SSEF had done over the years. In a number of cases, its vigour and rigour had cost it dear as a revenue stream dried up when it learnt of, and published detail on, the latest development in the industry. Lab work would move to competitors overnight who would give certification until the SSEF research was peer-reviewed and widely accepted, and these competitors would be pressured to tighten up.

With the next SSEF achievement, we stared, slack-jawed, and steamed up the outside cover of a special special instrument developed by SSEF: the Automated Diamond Spectral Inspection (ASDI) device. To give a brief backstory: manufacturers dealing in high volumes of melee have been most concerned about synthetic and treated stones entering the supply chain, as has been well documented recently. The SSEF's tenacious determination to serve the industry has been rewarded with a number of organizations now seizing the bull by the horns and addressing the 'salted melee' issue with this incredible device that it has developed.

This resulted in the ASDI device — I would recommend watching the video on their website (www.ssef.ch/asdi). This machine separates CVD-, HPHT-grown as well as HPHT-treated diamonds in melee. like a slow-motion pin-ball. A parcel of thousands of melee diamonds up to 3 mm in size is poured into one end and an exquisitely engineered and automated process nudges the melee into a precisely dressed line. This line of stones progresses along and every stone is then subject to aggressive spectral scrutiny that will see the fraudsters shoved unceremoniously off the diamond parade.

The week came to an end all too soon and Friday afternoon saw us flying back to London supremely gratified and enriched by our intense week of study; utterly grateful to our wonderful hosts at SSEF… and somewhat galled that we hadn't managed to buy and consume more chocolate in the time we spent in Basel.

Lizzie Gleave and Cathryn Hillcoat watch Prof. Henry Hänni using very unadvanced piece of equipment to check the specific gravity of a gemstone. Never forget the fundamentals… Photo by Charles Evans.

Our special thanks go to Gem-A for giving us all the opportunity to forge a further link with SSEF; to all the people at SSEF who provided such patient demonstrations while juggling a working day and most of all to Prof. Henry Hänni, who undertook a punishing schedule of lectures that displayed clear evidence of the enormous effort that went into planning, preparing and organizing a most enjoyable and educational week for the five of us. Special thanks must also go to Dr Markus Dürrenberger who runs the Center for Microscopy at Basel University and his colleague Eva Bieler who spent so much time with us demonstrating the University's amazing resources. For an idea of the equipment we saw, visit: https://zmb.unibas.ch/geraete/ (mix of German and English).

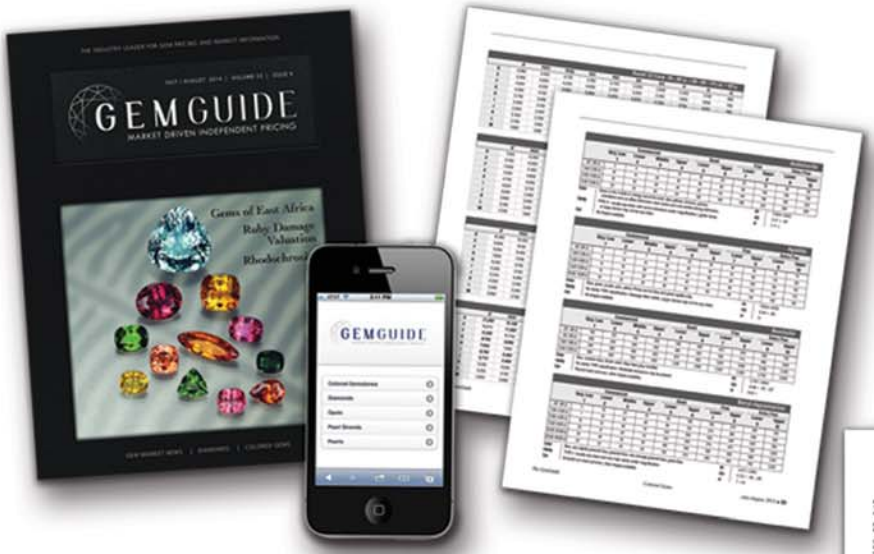
Prof. Henry Hänni FGA
Prof. Henry Hänni is a research associate with SSEF. He was director of SSEF from 1990–2009. He received his doctorate in Mineralogy from the University of Basel in 1980 and earned the title of professor in 1996 from the same university. He received his Gemmology Diploma in 1978. He has been regularly teaching gemmology courses at Basel and Lausanne universities for three decades. Prof. Hänni has published over 150 articles on gemstones and analytical techniques in numerous journals.

GEMWORLD

RESEARCH, PRICING, EDUCATION

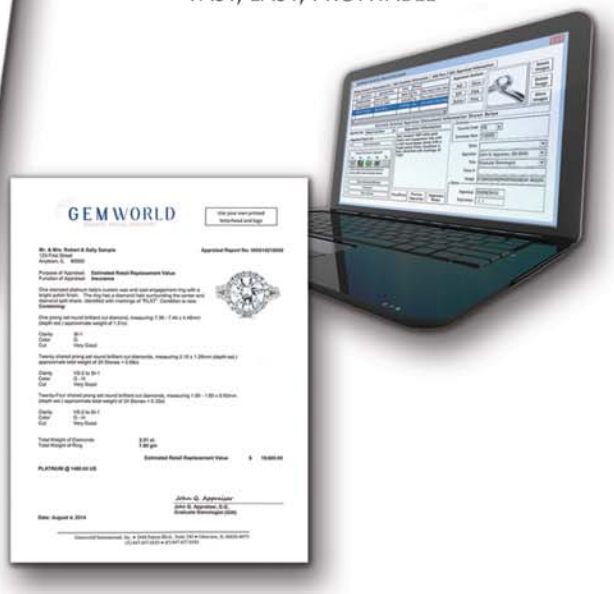
THE GEMGUIDE PRICING

THE INDUSTRY LEADER FOR
GEM PRICING & MARKET INFORMATION



GEMGUIDE APPRAISAL SOFTWARE

FAST, EASY, PROFITABLE



COLOR COMMUNICATION SYSTEM

BASED ON MUNSELL
INCLUDES GRADING CHARTS

COLORLESS "GEM CROWN" INCLUDED

Gemworld International, Inc.
2640 Patriot Blvd., Suite 240
Glenview, IL 60026 USA
1.847.657.0555
www.gemguide.com

Like us on

Gemmological laboratories

Harry Levy FGA discusses the use of GIA terminology but lack of GIA standards in laboratories.

Gemmological laboratories were first set up as places to identify gemstones of natural origin. Verneuil synthetic stones were on the market appearing as spinels and corundums in all colours. The spinels imitated aquamarines and peridots, amongst others, whilst the corundums masqueraded as blue and yellow sapphires, rubies, and even colour-change alexandrites. There were also flux-grown stones such as those of Kashan and Ramura. These were new products, unknown to most dealers and traders, and they needed independent experts to identify them. The next products that needed identification were cultured pearls appearing from Japan, which came into the world markets in the early twentieth century. This caused havoc in the pearl market; prices dropped as there was little differentiation between natural and cultured pearls until the two products were separated by laboratories.

These early laboratories were set up in most jewellery-producing centres, but were run through other bodies. This was because there was little funding available so they needed subsidizing, and most importantly they had to be commercially independent to prevent fraudulent results. In the UK a laboratory was set up in Hatton Garden, London, and run by the London Chamber of Commerce.

Research had to be done in developing the methods of detection, so the laboratories were run by people with a scientific background, and this led them to become educational institutions trying to teach traders (and anyone else that was interested) the basics and, later on, more advanced gemmological knowledge. Identification, research and education were their most important aspects until the grading of diamonds became necessary.

Initially diamonds were not graded to determine their value but as a method of communication. Traders had developed local 'languages' using descriptive terms such as 'white', 'yellow tints', 'light PK' (pique), 'small inclusions' and so on. This worked in localities where traders were in daily contact with each other and could compare goods, thus allowing them to ascertain prices and so be able to trade. However, this only worked in closed communities — each locality developed its own terminology. The most common were descriptive terms, but others used localities where the diamonds were found. One such system is the Scandinavian Diamond Nomenclature (Scan.D.N), which uses terms such as 'River', 'Wesselton', 'Crystal', 'Cape' and 'Yellow'.

Once you are involved in international trading, a system that all can understand and use is needed. Around the early 1950s the GIA developed its colour-grading system, using letters to denote colour. This is achieved through a series of 'master stones', where each stone is perceptibly different from the previous one. The GIA decided to name the top stone (the one showing no colour) 'D' and then graded them down to 'Z'. The colour of a diamond is then determined by comparing it to the master stones. If the colour falls between a G and H for example, it will be classed as G, although some systems would grade such a stone as H. There is no confusion as the master stones are so named to adjust for this apparent discrepancy. Thus in the second system just mentioned the H master stone would be a G using the first system. These games have been played between laboratories for years to show that each is using an independent system from the others.

The letter 'D' was selected by the GIA as the highest colour grade as this was the failure grade in American school exams. At that time the top colour was referred to as either 'A', 'A++', 'A+++', 'Super A', or similar terms by the traders in the market. D was a colour that was never used, so the GIA used this as the top grade knowing that nobody else had used this letter — this was recounted to me by Richard Liddicoat.

The clarity grade was adopted by all, using the descriptive terms such as 'flawless', 'very very small inclusions' (VVS), 'small inclusions' (VS), 'slight inclusions' (SI) and so on. Exactly where and how the divisions occurred in the different systems is not exactly clear.

Having established a system to grade for colour and clarity, the carat weight was always given, and the cut was also listed as a descriptive term, and so the 4Cs as a means to determine the value of a stone became available.

Traders saw the introduction of these criteria as an attempt to make diamond prices transparent and at the 1982 World Federation of Diamond Bourses' Congress in New York a resolution was passed that no Bourse member would be allowed to produce a diamond price list based on laboratory grading. Martin Rapaport did, however, and was expelled from the New York Bourse. Martin appealed and went to law, was re-admitted and the rest is history.

It should be noted that Martin's Rapaport list is based on asking prices in New York for GIA graded stones of a good make.

It should also be noted here that a Diamond Grading Report is simply a report and not a certificate. A certificate gives facts, whereas a report gives opinions.

Grading diamonds has become a very big business and we now have a proliferation of laboratories. Anyone can set up a laboratory and there are no controls as to its adequacy, competency and even honesty. For many years CIBJO tried to administer such controls by having a register of approved laboratories. For legal reasons CIBJO has stopped doing this and now has a listing of laboratories, but with no comments.

Most laboratories are set up with their main business as diamond grading. Few of these can identify stones and are unable to give origins and treatments for coloured stones. For diamond grading, laboratories have to give their reports in a way acceptable to the trade, and thus they have adopted GIA terminology, or if they have their own system, give charts of how to compare their system to the GIA one.

This is where problems have come about. To grade to GIA standards one needs master stones that are aligned to the GIA one. To simply take GIA-graded stones and use these as master stones does not work. To be a master stone a diamond has to be exactly the same as the GIA equivalent master stone. A GIA-graded stone can lie anywhere between two adjacent stones and to use this can give a wrong grade.

Further to this, in order to get business away from the GIA, laboratories can give a 'soft' grade. This means that if a stone is on a borderline they will give it the better grade. This can be abused by deliberately upgrading a stone by one colour, or one clarity, or sometimes both. Some abuse the system further by mis-grading diamonds by two grades. If challenged they claim they grade by their own master stones and grading system, so their 'G' is not the same as the GIA 'G'. Those who trade regularly understand all this and base their buying on a larger discount on the Rapaport price than on an equivalent GIA graded one. It should be noted that there is not a uniform discount on all stones found on a Rapaport list. Some think that the discount is always 25% but this is not so — it can vary, and often does, and on occasion there is a premium. This often occurs with the larger, better stones.

Thus we do not have a universal grading system. We *seem* to have one as many laboratories use the GIA system, but many do not adhere to GIA standards. Attempts have been made in the past to achieve a standard and 15 years of work was done to achieve this, but when a country vote was taken, the standard achieved was not accepted.

Assuming accurate scales, all 1 ct stones will weigh 1 ct all over the world, but not all GVS1 stones will be the same; this will depend on the grader and the location of the laboratory.

This is a time bomb ticking away; at some stage someone will want to know why he paid a price for a GVS1 stone in one location, only to be told when he tries to sell it that it is of a lower grade and worth less.

GIA	CIBJO/IDC	Scan.D.N
D	Exceptional white + D	River D
E	Exceptional white E	River E
F	Rare white + F	Top Wesselton F
G	Rare white G	Top Wesselton G
H	White H	Wesselton H
I	Slightly tinted white I	Top crystal I
J	Slightly tinted white J	Crystal J
K	Tinted white K	Top cape K
L	Tinted white L	Cape L
M	M	Cape M
N	N	Cape N
O	O	Cape O
P	P	Cape P
Q	Q	Cape Q
R	R	Cape R
S	S	Cape S
T	Tinted T	Cape T
U	U	Cape U
V	V	Cape V
W	W	Cape W
X	X	Cape X
Y	Y	Cape Y
Z	Z	Cape Z

Corresponding terms for colour grades showing GIA, CIBJO/IDC and Scan.D.N. nomenclature. Source: CIBJO Diamond Book.

Ocean Jasper

Helen Serras-Herman describes a stunning material adored by lapidaries and designers alike.

Ocean Jasper® is the trade name for a rare form of orbicular jasper that comes from Madagascar. The material is stunning and colourful, and immediately identifiable by its unique pattern with vibrant 'eyes' — the orbicules (or orbs) (**1**). Ocean Jasper occurs in many colour combinations, often interspersed with attractive natural 'vugs' of white or green drusy quartz crystals.

The name Ocean Jasper is a registered trademark of The Gem Shop, Inc., located in Cedarburg, Wisconsin, USA (www.thegemshop.com), the company that was the original sole US distributor of rough Ocean Jasper. The mine is owned and operated by Paul Obenich of Madagascar Minerals (www.madagascarminerals.com). Although mineralogically it is correct to call the material 'orbicular jasper', only dealers that have not purchased the material through the Gem Shop, Inc. refer to it in this way, as they do not have the 'official' permission to call it Ocean Jasper. The material is also marketed under the names of Sea Jasper, Orbicular Rhyolite, Moon Jewel Jasper, Atlantis Stone or, by the Malagasy natives, as Snake Agate.

The reason the trade name Ocean Jasper was given to this unique material is because the deposits are located at the edge of the ocean and can only be seen and mined at low tide. The area is remote with a very rugged coastline. Miners load the material on ox-driven carts then transfer it on boats, which are often in danger of capsizing from the weight, while the crew waits for the next high tide to sail off. The mining area stretches for about 120 miles on the west coast of the most northern part of the island of Madagascar, near the village of Marovato in the Ambolobozo peninsula district of the Antsiranana Province. Madagascar is the only known deposit location for this material in the world. The deposit, which followed the beach into the side of the hill for about 40 metres, initially formed as a rhyolite flow, but has been completely silicified.

1: Stunningly colourful Ocean Jasper. Photo Andrew Herman.

2: Sunflower patterns. Photo Andrew Herman.

Ocean Jasper has been on the market since 2000 and it is still as popular as when it first made its appearance. It has become one of the most loved and collectible stones in recent years. My husband and I first saw it at the 2001 Quartzsite and Tucson gem shows in Arizona, fell in love with it, and purchased a fair amount. Soon thereafter, I began carving Ocean Jasper into gem sculptures and free-form carvings, incorporating many of them into my jewellery artwork.

When I first wrote about Ocean Jasper (*Lapidary Journal*, February 2004), there was so much material coming out of the mine that we thought Ocean Jasper would be here forever. But since 2006, the quantity of available rough has considerably decreased. After following the mine deposit deep into the host rock, the jasper vein thinned out. The mine reserves were exhausted in 2006 and although the mine owners have been searching for new deposits, nothing new has been reported yet.

The current situation is that the prices of the gem material on the market are climbing every year, especially for good quality material with large orbs (#1 grade or AAA grade), if and when accessible. On the The Gem Shop, Inc. website, grade #1 is listed as sold out.

There is still material available on the market today, but mostly in lower grades and with very tiny, if any, orbs. Many visually artistic and collectible specimens and particularly finished products are reaching sky-high prices. Another problem is that rough chunks are available mostly in large sizes (over 10 lb), with some even between

30 to 100 lb each and requiring large slabbing saws for cutting, which would be beyond the average hobby cutter's workshop capability. They do, however, make beautiful doorstops or poolside rocks!

Physical properties

Ocean Jasper is rarely opaque — a physical property that commonly defines jaspers. It should have been called an agate, but the term 'ocean agate' already defines another lapidary material. So, the mine owners decided to call it 'jasper', partly because jasper was listed as the mineral resource in the mining claims, and mainly because most rhyolites exhibiting spherical patterns have been associated with jasper in the past. Other orbicular jaspers include the leopard skin jasper from Agua Caliente, Mexico, with red, pink, gold and green colours, the rainforest jasper from Australia with translucent jelly (clear, transparent material) 'eyes' within a green background, and the well-known poppy jasper from California, USA, with red-orange 'eyes' against a black/grey background.

The orbicules are inclusions of quartz or feldspar that have crystallized into radial aggregates of needle-like crystals forming these spherical structures (www.mindat.org)

The abundance of orbs, ranging in size from approximately 1 mm–1 cm in diameter, come in an astonishing array of colours and colour combinations. They occur in patterns described as 'dots', 'bull's eyes' (concentric rings of various colours and white) or 'sunflowers' (needle-like crystals in radial arrangement that resemble petals)(**2**).

The background material, which is composed mostly of chalcedony, can be clear, white, pink, green, red, yellow, grey, brown, maroon or orange, in solid colours or gorgeous swirled or striped patterns. Some may be opaque, but most of it is highly translucent. The colours of this material are all natural and not enhanced in any way.

Botryoidal (grape-like or bubble-like) formations, as well as natural cavities (vugs) with white and deep green drusy crystals, are also part of Ocean Jasper's mineralization (drusy is a generic term for very small crystal mineralization). Orbicular jasper displaying pure-white chalcedony, along with pure-white drusy quartz, is the rarest and most expensive type.

3: Ocean jasper with drusy cavities — a collector's item. Photo Helen Serras-Herman.

These stunning 'eyes', along with the swirly and lacy patterns in the chalcedony and the drusy cavities (**3**) are all nature's hallmarks that make Ocean Jasper instantly identifiable, and set it apart from any other gem material. All these natural patterns are skillfully used by lapidaries to create unique cabs, single centrepiece beads and carvings.

Being a member of the chalcedony family — a cryptocrystalline variety of quartz — with a hardness of 6.5–7 on the Mohs' scale, Ocean Jasper is compact and tough, while relatively easy to cut and polish.

4: Matched pair slabs. Photo Andrew Herman.

Lapidary and design work

Ocean Jasper was an instant hit with lapidaries and designers. Traditional cabochons, free-form cabs, sculptures and bases for sculptures, eggs and spheres, medallions (round flats), hearts, bowls, bookends and obelisks are some of the forms we see Ocean Jasper cut into.

Large slabs with polished faces, plaques, tiles, table tops and display pieces are part of collectors' wish lists. The material is also used for metaphysical purposes and it is cut into handheld massage tools.

Ocean Jasper also became a popular gem material for beads in all shapes and sizes. However, in most bead strands, the diagnostic 'eyes' are often too small to be seen, as the bead manufactures are cutting a lot of the lower-end quality material. The orbs will be best noticeable in larger and consequently more expensive beads.

My experience with Ocean Jasper has given me plenty of reasons to love it. Here are five of them:

• Ocean Jasper takes a high polish, making it a most desirable material for lapidary work. Its hardness is also a great asset for durability and wearability of the jewellery pieces. The tough chalcedony allows preforming on 80–100 grit coarse grinding wheels for fast removal of unwanted material. However, working over

Ocean Jasper (cont.)

the 'eyes' (the 'sunflowers' or drusy cavities), requires the lapidary to be more focused and careful, using a light touch on the wheels, as some of the delicate fibrous material may break or splinter off by accident. All these natural inclusions vary in hardness, often requiring extra sanding steps, before reaching the final polish.

5: Ocean Jasper and pink opal necklace. Necklace and photo Helen Serras-Herman.

6: White Ocean necklace. Grossular garnets, especially in the green and golden tones, as well as spessartite garnets complement the orange orbs, set with citrine beads and Ocean Jasper beads. Necklace by HSH, in private collection. Photo Michael Colella.

• Orienting the rough for slabbing may sometimes be challenging. We often change cutting direction after a few slabs in order to produce diverse and best patterns, and stop slabbing when we get close to the drusy pockets, leaving those for special sculptural pieces. The rough chunks of Ocean Jasper also provide 'clean slabbing', as they come naturally free of ironstone matrix or pyrite inclusions, which are often the culprits for dirtying the oil in the slab saws.

• The fact that each specimen of rough is completely different from the next one makes Ocean Jasper a unique material. Even consecutive slabs cut from one piece of rough may reveal unpredictable and dramatically different patterns. There is often a striking variation between the front and the back surfaces of a single slab or specimen. When the same colours and patterns continue through the rough rock, consecutively-cut 'butterfly' slabs from one piece of rough may display mirror-image, symmetrical patterns, often used for matched pairs for earrings (**4**). When the specimens include vugs, white drusy crystals, 'eyes' and 'sunflowers', they can really inspire lapidaries to be exceptionally creative (**5**). I usually follow the natural patterns in the stone and let the design suggest images to the viewer.

• Ocean Jasper comes in so many colour combinations offering jewellery designers unlimited design style options. They can incorporate other coloured gemstones, beads and pearls into their jewellery artwork, creating a number of colour palettes complementing the design patterns of the Ocean Jasper. I repeatedly use faceted gemstones of blue-green and yellow sapphires from Montana, USA, green and gold-tone grossular garnets, and orange-red to yellow spessartite garnets to complement the colours of the orbs (**6** and **7**).

7: Ocean Jasper 'Psychedelic' pendant. Surrounding the Ocean Jasper are fancy coloured sapphires from Montana. Photo Michael Colella.

• The exotic location and the mining story behind the gem, makes Ocean Jasper an intriguing gem material. Although it has been reported that some specimens of this material have existed since the 1920s, there was no known mine source until the discovery of the mines in Madagascar. The closing of the mine has been fuelling a 'collectors' frenzy'.

Ocean Jasper has been established as a highly prized and collectible stone during the past decade, and its value will only continue to climb as rough availability dwindles. It is one of nature's wonders. Customers are truly amazed with its unparalleled range of natural patterns, and are immediately attracted to gemstones, jewellery and decorative items cut from this remarkable material.

About the author
Helen Serras-Herman MFA FGA is an acclaimed gem sculptor with over 30 years' experience in unique gem sculpture and jewellery art. A 2003 National Lapidary Hall of Fame inductee, Helen's award-winning work has been exhibited worldwide and published in over 140 trade magazine articles and books. Visit her website at www.gemartcenter.com and on Facebook at Gem Art Center/Helen Serras-Herman.

GemmoRaman 532

made by gemmologists for gemmologists

Introducing

GemmoFtir

By INTERSPECTRUM

Gem-A Conference, London, 1-4 Nov 2014

www.gemmoraman.com

Gem-A
THE GEMMOLOGICAL ASSOCIATION OF GREAT BRITAIN

Gem-A Conference 2014

Gem-A will host its internationally acclaimed annual conference from Saturday 1 – Tuesday 4 November. Welcoming world-renowned speakers and delegates from across the globe, and with a reputation for tackling the most innovative and contemporary gem-related topics in the trade, this event is not to be missed.

SATURDAY 1 AND SUNDAY 2 NOVEMBER

Gem-A Conference

Business Design Centre, Islington, London

After a century-long absence, Gem-A returns to the former Royal Agricultural Hall, today known as the Business Design Centre, and the site of the first ever Gem-A Graduation Ceremony in 1913.

Registration and tea and coffee will commence at 08:45 on both days, and the Conference will close at 17:45 on Saturday and 17:00 on Sunday.

Saturday 1 November speakers

- **Bruce Bridges**
  The history of Tsavorite and legacy of Campbell Bridges
- **Edward Boehm GG CG**
  Analyzing gems on the go: tips from the field
- **Dr Thomas Hainschwang FGA**
  The challenges faced by green to greenish blue diamonds coloured by natural or artificial irradiation
- **Alan Hart FGA DGA**
  Gems at the Natural History Museum: a review and a forward look
- **Dr Ulrich Henn**
  The different types of moonstone
- **Brian Cook**
  Paraíba tourmaline: an update
  Bahia golden rutilated quartz: an introduction
- **Vincent Pardieu GG**
  From Jedi to Windex: a quest to the origins of the ultimate red and blue spinels

Sunday 2 November speakers

- **Craig Lynch GG**
  The recovered jewellery of *RMS Titanic*
- **Dr Laurent Cartier FGA**
  An update on worldwide cultured pearl production
- **Chris Smith FGA**
  Ruby and sapphire source — type classification: an objective approach to help make country of origin determinations more consistent
- **Dr Menahem Sevdermish FGA**
  Further developments into digital colour analysis, grading, pricing and trading of gems
- **Terry Coldham FGAA**
  Australian sapphire — a forgotten foundation stone of Thailand's gemstone industry
- **Richard Hughes FGA, with special guest John Saul**
  Heretical gemmology

SATURDAY 1 NOVEMBER (EVENING)

Gem-A Conference Dinner

Business Design Centre, Islington, London

Saturday's programme will be followed by a drinks reception commencing at 18:45. Delegates will then be seated at 19:30 for a delicious three-course dinner. Relax and enjoy the company of friends old and new. Dress code is smart/casual.

MONDAY 3 NOVEMBER

Seminars

Gem-A Headquarters, Ely Place, London

Three practical seminars will take place at Gem-A Headquarters in London.

Guest seminar hosts:

- **Richard Drucker FGA GG, President of GemWorld International Inc.**
  Coloured stone grading and pricing workshop
- **Mikko Åström FGA and Alberto Scarani GG, GemmoRaman**
  Gemmological applications of Raman and photoluminescence spectroscopy
- **Dr Franz Herzog NEW**
  A portable EDXRF device in gemmology: toy or dream?

MONDAY 3 NOVEMBER (EVENING)

Graduation Ceremony and Presentation of Awards

Goldsmiths' Hall, London, 18:30 – 21:00 (Registration opens from 18:00)
Graduates of the Gemmology Diploma and Diamond Diploma and their family and/or friends are invited to attend the 2014 Graduation Ceremony and Presentation of Awards.

Guest speaker:

Tim Matthews FGA DGA CEO of Jewelry Television (JTV)

TUESDAY 4 NOVEMBER

Private visit to the mineral collection at the Natural History Museum

FULLY BOOKED

Global ethical challenges within the industry

Gem-A Headquarters, Ely Place, London

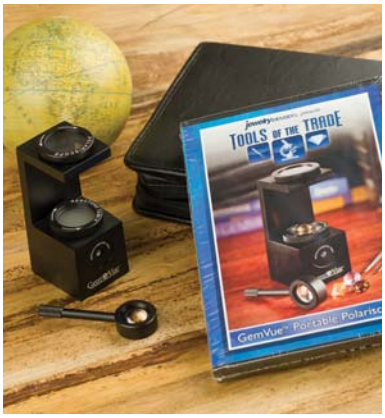
Seminar with Greg Valerio, founder of CRED Jewellery and co-founder of Fair Jewellery Action, Vivien Johnston, trained goldsmith and founder of Fifi Bijoux and Dana Schorr, coloured gemstone importer and President of Schorr Marketing.

Images (opposite page and top) courtesy of Business Design Centre.

To book contact events@gem-a.com or visit our website at www.gem-a.com/news--events/gem-a-conference-2014.aspx

Shine Bright

Celebrating 20 Years of Opening the World of Jewelry and Gemstones to Everyone!



As the largest retailer of loose gemstones in the world, Jewelry Television is committed to offering more of the naturally beautiful treasures that our customers adore.

Education, Expertise & Entertainment

We take pride in our longstanding commitment to education. With programs like our web-based GEM-A course and our on-air Jewel School® series, our partnerships bring industry luminaries straight into the homes of jewelry and gemstone aficionados everywhere.

Educational videos, professional tools of the trade, plus live programming with knowledgeable hosts place Jewelry Television and jtv.com at the forefront of a dynamic learning and shopping environment.

Into the Future

At the heart of our vision is a continuing quest to deliver the rarest of gemstones, plus educational resources and world-class gemstone authorities to our customers. We believe this is the ultimate way to enlighten, inform and entertain, as we take flight into our next decade.

20 yrs
jewelry television®

JTV Your Way

To order call 800-619-3000 or visit jtv.com