

[16:55] <Alain> I think it's time that we need to start. Are you ready for us Colin?

[16:55] <africanuck> welcome

[16:55] <Colin> Yes, fire away

[16:55] Cheryl (~Cheryl@69.207.239.124) joined #go.

[16:56] <Alain> Ok people, welcome everyone

[16:56] <Alain> Most of us know eachother through the gemologyonline.com forum

[16:56] <Alain> Also some people from the Gem-a Maitalk are present.

[16:57] <Alain> Colin Winter needs little introduction as we all have (or should have) his book and OPL spectroscope.

[16:58] <Alain> If you have a question to our guest, you can raise your hand by typing "question"

[16:58] <Alain> So as our guest said, fire away

[16:58] <Cheryl> question

[16:58] <Alain> Yes Cheryl

[16:59] <Cheryl> Hi Colin. I have to leave for work shortly, but I just wanted to say hello, and to tell you how much I have enjoyed my new teaching OPL scope and to thank you for the lovely Christmas card

[17:00] <africanuck> that's not a question! hehe

[17:00] <Colin> You are very welcome

[17:00] <Cheryl> I know it's not a question - but I wanted to say hello before I had to leave. I wish I could stay and chat!

[17:00] <Alain> I have a question aswell of a somewhat lighter caliber

[17:01] <Alain> Do you have many people requesting a spare box, to create a Hanneman-Daly wedge?

[17:01] apollo (~apollo@61.3.143.200) joined #go.

[17:01] <apollo> hi everyone

[17:01] <Colin> No I used to supply them many years ago but because many transparent plastic items are suitable no-one has asked me recently

[17:02] <apollo> am i late?

[17:02] <Colin> I use a quartz wedge but only when needed. ok

[17:02] <dav> hello apollo

[17:02] <apollo> hi

[17:02] <keemoog99> question.

[17:02] <africanuck> go ahead

[17:03] <Sara> Hey apollo. No we just began

[17:03] <apollo> great

[17:03] <Alain> Go ahead keemoog99

[17:03] <apollo> hi Colin, nice to meet you

[17:03] <apollo> go ahead

[17:03] <keemoog99> colin this is nina. please talk about lighting for newbies cause i can't see a thing unless it's garnet. and also any chance you can put scales on this thing?

[17:04] <Colin> Ok but be specific; what is the problem with your lighting?

[17:05] <Colin> We did produce a wavelength spectroscope 25 years ago but commercially it was not viable ok

[17:05] <keemoog99> i use a mag lite, and can only see the thick lines nothing else shows up and i can't tell the difference between the nms if they are so close.

[17:06] <Colin> A hand held torch however powerful is really not suitable because you need both hands free to manipulate the stone the spectroscope and the stand all at the same time. I would recommend a fixed fiberoptic light, a focused bright light other than a torch or ideally an OPL High Intensity light made for the purpose. ok

[17:07] <dav> question pls.

[17:07] <Alain> Yes dav

[17:07] <dav> I have a question about turquoise.
[17:08] <dav> OPL pg 59
[17:08] <Colin> Pretend that the spectrum you see is a photograph of a family member or friend. you are looking for recognition features and characteristics, not specific lines. Particularly as fine lines may not always be present eg chrome rich emerald and the 477.4 line
[17:09] <dav> comparing with MOD Artificial Gemstones pg 222
[17:09] <Colin> I am not in my office so cannot compare, can you tell me what the differences are?
[17:09] <dav> hence, if a faint Cu abs spect is seen, the material is Natural Turq OR Gilson Imitation Turq OR Plastic? ok
[17:10] <dav> OK, let me write it down.
[17:10] <Alain> Colin, some people claim to see an extra purple band after the red, do you have an explanation for that?
[17:10] <Colin> The spectrum of turquoise is so difficult to see unless you have exceptionally bright light. Or a thin section of turq, that most workers would prefer an alternative method of identification. ok
[17:11] <Alain> dav, it will be logged
[17:11] <Colin> Under what conditions can the extra band be seen? and how deep into the red?
[17:12] <dav> OPL pg 59: "The Turquoise spect is very difficult to see....If you are unable to see spectral lines, orwith great difficulty, it isnatural and untreated"
[17:12] <Alain> Usually they claim to see them in rainbows.
[17:12] <dav> I gonna write MOD now.
[17:12] <Colin> This could be internal reflections, possibly need to adjust the lighting behind you. Or ignore them!
[17:13] <Frank> Question
[17:13] <Alain> Yes Frank
[17:13] <Frank> Your picture for the selenium spectra show green and blur visible but the gem-a teach selenium as a "red filter" shutting out everything else. Can you account for this?
[17:14] <dav> MOD pg222: "The Cu absorption spectrum...faint bands in the blue.....distinguish Turquoise....rarely been noted in the Gilson product"ok
[17:14] <Colin> Both are possible and in my experience the green absorption is more often seen
[17:15] <Mark> Another problem with turquoise is stabilazation, can it not show almost anything (plastic), yet we may want to know if the actual material is natural?
[17:15] <Alain> Not everyone atonce please.
[17:15] <Alain> Follow-up's are asked with a "question" aswell, to keep it orderly
[17:16] <Colin> Turq is one of the most difficult materials to id using a spectroscope. It is advisable to confirm identity using other tests so that it is conclusive ok
[17:16] Guest23 (~apollo@61.3.143.203) joined #go.
[17:17] <Alain> Colin, you mentioned "thin section", how could that help in this case?
[17:17] <Colin> From a gemmological point of view this is unfortunately not relevant unless you have a piece of rough which you can thin section before fashioning the remainder. ok
[17:18] <dav> Therefore what clues can be obtained by testing Turq w a spectroscope?
[17:20] Guest10 joined #go.
[17:20] <Alain> Did you fall out Colin?
[17:20] <Guest10> Sorry guys we just lost our link so we don't have everything available to see now.

[17:21] Nick change: Guest10 -> Colin2
[17:21] apollo (~apollo@61.3.143.200) left irc: Ping Timeout
[17:22] Guest23 (~apollo@61.3.143.203) left irc: Guest23
[17:22] apollo (~apollo@61.3.143.203) joined #go.
[17:22] neil (~Guest@24.9.35.174) left irc: neil
[17:22] <Alain> There seems to be a connection problem
[17:22] <Catrix> opps
[17:22] <africanuck> looks like it
[17:22] <apollo> I suppose so
[17:22] <africanuck> dav asked : Therefore what clues can be obtained by testing Turq w a spectroscope?
[17:23] <Colin2> If the spectral bands are relatively easy to see it is possibly treated if the bands are almost impossible to see or nothing is seen it indicates that it might be natural turq but it might be an entirely different mineral. Other tests are needed.
[17:23] <dav> maybe Colin is typing....
[17:23] <africanuck> question
[17:23] Colin left irc: Ping Timeout
[17:23] <apollo> question
[17:23] <Alain> yes africanuck
[17:24] <apollo> nuck you go first
[17:24] <africanuck> has the GIA shown any interest in teaching the spectroscope?
[17:24] <africanuck> and if not, why?
[17:25] <apollo> I suppose Colin is out again
[17:25] <Colin2> They sell both the spectroscope and stand, as well as the small spectroscope but these are not labelled opl. As far as I am aware the spectroscope is considered beyond the normal gemmological courses. more
[17:25] <Colin2> However they also sell the book so they must have guidance for their students. ok
[17:25] <Alain> apollo, you also had a question
[17:26] <apollo> yes
[17:26] <apollo> is it possible to see the spectra for very light coloured stones?
[17:27] <apollo> with the opl spectroscopes
[17:27] ars (~ars@207.81.185.81) joined #go.
[17:27] <Colin2> Yes. But it is important to use the right technique and to have some idea of what to expect so that delicate adjustments can be made to enhance what you see. This is particularly true of the 653.5 line in colourless zircon. ok
[17:27] ars (~ars@207.81.185.81) left irc: ars
[17:27] <Alain> Colin, do you have plans to create a special spectroscope eyepiece for gemmological microscopes?
[17:28] <Colin2> Microscopes have so many different sizes of eye piece tube that it is unlikely we could produce anything universal. ok
[17:29] <apollo> maybe some adapters can be made?
[17:29] <Frank> question
[17:29] <Colin2> Highly possible. I have always tried to keep the retail price low so that students on a low budget are able to enjoy the instruments too. ok
[17:29] <Alain> yes Frank
[17:29] <Frank> Are the gem-a labelled spectroscopes supplied by OPL?
[17:30] <Colin2> If they are labelled OPL then yes, but otherwise no. ok
[17:30] <africanuck> question
[17:30] <Alain> Go ahead Frank
[17:30] <Alain> uh africanuck

[17:30] <africanuck> how do you go about taking such good pictures of the spectra

[17:31] <Colin2> These are not pictures, they are computer generated by the illustrator Hilary Taylor who is also sitting here with us to answer any questions. ok

[17:31] <Frank> similar question

[17:32] <Alain> yes Frank

[17:32] <Frank> Do you ever take photo's of spectrum and if so which type of setup do you use?

[17:32] <Colin2> Yes we have but not very successfully certainly not good enough for teaching or using in a book. ok

[17:33] <africanuck> question

[17:33] <Alain> yes africanuck

[17:33] <africanuck> have you ever considered inventing one that projects the spectra on a white wall or screen? For teaching or those who have a hard time seeing it in it's original size.

[17:34] <Colin2> Yes but once again commercial considerations have to be taken into account. Also the larger the spectrum the less clear it becomes like a rainbow. ok

[17:34] <Alain> I have a question

[17:35] <Alain> Could you give some pointers for seeing better in the blue?

[17:36] <Colin2> Blue is a difficult region to see in particularly for beginners. Try using a copper sulphate filter as described in the book. Or use a gelatine filter over the eye piece. ok

[17:36] <Alain> Follow-up question

[17:37] <Alain> Have you tried the blue LED torches as a substitute for the Cu sulphate and what are your observations?

[17:37] Guest (~Guest@207.81.185.81) joined #go.

[17:38] <Colin2> No because I prefer not to introduce anything which might create optical illusions in the spectrum, any form of fluorescence in the stone or which may have its own characteristic spectrum. ok

[17:39] <Alain> Colin, on page 12 there is a blank spectrum, is that free for download?

[17:39] <Alain> (so we can create our own additional libraries)

[17:40] <Colin2> I have not thought about this before. If specific requests come in I would be happy to consider it, but copyright laws and intellectual rights apply. ok

[17:40] <dav> question again pls when it is my turn about the turquoise: if a faint Cu abs spect is seen for a suspected Turquoise, the material is Natural Turq OR Gilson Imitation Turq OR Plastic? ok

[17:40] <africanuck> question

[17:40] <Alain> yes africanuck

[17:40] <africanuck> what led you to specialize in the spectroscope?

[17:41] <Colin2> Students requirements in the early 1970's. ok

[17:42] <Alain> Was dav's question answered?

[17:42] <Frank> question

[17:42] <Colin2> Yes we thought so

[17:42] <dav> not about ther Gilson imitation.

[17:42] <Frank> Do you think pattern recognition is more important than memorising all the nm values and trying to match them to the viewed spectrum?

[17:43] <Colin2> Yes generally speaking unless a specific wavelength line or band is a key feature. ok

[17:43] <africanuck> I think dav was hoping for more information about the Gilson imitation

[17:43] <Alain> I have a question

[17:44] <Colin2> Dav can we come back to the turq question later. I cannot give more information because in my opinion the whole group of stones that are or imitate turq in any of their forms are a minefield without laboratory facilities. ok

[17:44] <dav> u right africanuck.

[17:44] <Alain> Colin, which setup works best for you when in the field?

[17:45] <Colin2> I use a small spectroscope, a pen torch and sometimes polaroid glasses. Other gem instruments like refractometer etc I leave in the lab. ok

[17:46] <africanuck> question

[17:46] <Alain> Could you explain the polaroid part, I never was taught that technique

[17:47] <Sara> question

[17:47] <Colin2> Polarising filters allow you to see dichro or pleochroism as well as single and double refraction, strain and discreet difference in spectra in different directions in some doubly refractive stones. ok

[17:48] <Alain> africanuck, you had a question

[17:48] <africanuck> do you plan on writing any guides of other instruments?

[17:49] <Colin2> Yes there is a guide to the polariscope and refractometer in the pipeline; see back cover of students guide re follow ups. ok

[17:49] <Alain> Sara

[17:50] <Sara> Do you use the opl for rough? would it be useful to identify specimens after you mine?

[17:50] <Frank> question

[17:50] <Colin2> Please note that these guides are intended for students up to FGA level and not for those who are already running or working in gemmological labs. Sara, I will respond in a sec. ok

[17:50] <Sara> bring the pickax and spectroscope sort of scenario

[17:51] Dick joined #go.

[17:51] <Alain> Hi Dick

[17:51] <Dick> Hi, a bit late, sorry.

[17:51] <Alain> (Richard I presume?)

[17:51] <Colin2> Yes I use the OPL for rough providing the external skin allows light to pass through but generally speaking the locality appearance of the rough and heft etc form the majority of the immediate identification. eg possible crystal shape or faces, texture of Water worn surfaces etc. ok

[17:52] <Dick> Yes

[17:52] <Alain> Frank, you had a question

[17:52] <Frank> I've read that some stones show discreet differences in their spectrums when viewed in different directions.

[17:52] <Frank> Can you recommend any stone which will show this best for study purposes?

[17:53] <Colin2> Absolutely, they are all capable if they are doubly refractive, strongly coloured and pleo or dichroic, but the spectroscope may not pick up subtle difference of wavelength shift and your eyes may be incapable of seeing the differences. more

[17:54] <Dick> Alex and emerald show quite directional spectra

[17:55] <Colin2> green zircon may provide differences to a beginner as might untreated tanzanite of a strong colour, iolite too but please remember that these techniques are not really student orientated more for the advanced or research gemmologist. ok

[17:55] <Alain> Maybe I should mention that Dick is Richard Hughes

[17:55] <Colin2> Hi Dick how is the devil himself?

[17:55] <africanuck> MoDo is going to be so disappointed to not be here this time ;)

[17:56] <Dick> Ah, my cover blown already. I'm doing great. BTW, John Koivula and I love your big OPL unit. We both use them daily.

[17:56] <Colin2> Great keep singing the praises!

[17:57] <Alain> Sorry, didn't mean to take your fun away

[17:57] <Alain> I have a question

[17:57] <Dick> The best spectroscopes we know of for gem use. Now if you could attach a scale, it would be a perfect world.

[17:57] <Colin2> See above!

[17:57] <Alain> Colin, what is the main difference between the teaching and the small version (other than size ofcourse)?

[17:58] <Colin2> Very little expect that the larger teaching model was designed specifcally for a classroom environment where stones could be set up with spectra for multiple viewers without needing to make any adjustments. ok

[17:58] <Frank> question

[17:58] <africanuck> so the field of view is bigger?

[17:58] <Dick> Sorry, gotta go, my wife and daughter calling for xmas shopping. Anyway, OPL rules!!

[17:59] Dick left irc: Dick

[17:59] <Alain> Bye Dick

[17:59] <Colin2> The field of view on both is about 11 degrees ok

[17:59] <africanuck> seems you have a big fan

[17:59] <Colin2> We have known each other for many years

[17:59] <Alain> Frank, you had a question

[17:59] <Frank> Have you ever considered moving in on the prism spectroscope side of things?

[17:59] <Sara> someone ought to use that hughes quote "OPL rules!"

[17:59] <africanuck> maybe OPL

[18:00] <Colin2> We will! We have no desire to get involved in prism spectroscopes ok

[18:00] <africanuck> why not?

[18:01] <Colin2> Prisms are generally much more expensive to make and do not produce linear spectra. ok

[18:01] <Alain> Official quote from AGTA-GTC "opl rules!", great review

[18:01] <africanuck> better yet, "the devil himself says that OPL rules!"

[18:01] <africanuck> I do have one question that has to be asked

[18:02] <africanuck> what kind of wine to you prefer?

[18:02] <Colin2> Spanish Rioja...

[18:02] <Alain> Colin, how did the diffr. grating spectroscope come about?

[18:02] <Alain> Noted.

[18:02] <Colin2> Historically or the opl?

[18:02] <Alain> Yes.

[18:02] <Alain> Historically, sorry.

[18:03] <Colin2> Thanks!. Historically only when defraction gratings became fine enough to produce spectra capable of showing fine absorption lines without excessive loss of light due to intereference. ok

[18:04] <Alain> Was it something you stumbled upon?

[18:04] <Colin2> I did not invent it, but fine tuned it for gemmology students ok

[18:05] <Alain> Maybe more important.

[18:05] <Frank> Do you have any intention of producing other gem instruments in the future?

[18:05] <keemoog99> Comment.

[18:06] <Colin2> We produce a calcite dicroscope but there are so many around now that the market doesn't demand me to make any others ok

[18:06] <Alain> Yes keemoog99
[18:06] <keemoog99> Hilary's graphics are absolutely helpful as well as beautiful. Thank you.
[18:06] <Alain> The whole book is great.
[18:06] <Colin2> Thank you!
[18:06] <Crystal> question
[18:07] <Alain> Go ahead Crystal
[18:07] <Crystal> If you don't have a fiber optic light, which is better, tungsten or halogen?
[18:07] Mark (~Guest@66.109.134.88) left irc: Mark
[18:07] <Colin2> Tungsten and halogen are very similar but I would prefer to use the latter which is what the opl high light is. ok
[18:08] <Crystal> Thank you :)
[18:08] <Alain> Does anyone have more questions for our guestspeaker?
[18:08] <Colin2> The other items that we sell or produce are on the OPL website.
[18:08] <Frank> Is the highlight adjustable for intensity?
[18:09] <Alain> Oh that reminds me Colin ..
[18:09] <Colin2> No it would require a larger body and more complicated electronics. ok
[18:09] <Alain> Will there be colourfilters available for the small version aswell?
[18:09] <Frank> and how big is the beam that comes out of the trailing fibre optic?
[18:10] <Colin2> The eye piece of the smaller spectroscope prevents us from making a dedicated filter. But you could always use a small piece of photogrpahic gelatine filter ok
[18:10] <Alain> Thanks.
[18:10] <Crystal> question
[18:10] <Alain> I believe Frank had one.
[18:11] <Colin2> The fibre optic terminal is about 3mm diameter. It is ideal for stones in jewellery particularly rings. ok
[18:11] <Frank> I posted already...sorry
[18:11] <Alain> Go ahead Crystal.
[18:11] <Crystal> What color gelatine(s) would we want?
[18:12] <Colin2> A red filter that absorbs from middle green to violet, helping you to see in the red and orange AND a blue filter that absorbs from middle green to deep red to help you to see in the green and the blue ok
[18:12] <Crystal> Wow! Thank you.
[18:12] <Alain> This was a great chat Colin.
[18:13] <africanuck> Thank you very much
[18:13] <Frank> yes thank you
[18:13] <Crystal> Absolutely, I learned a lot. Thank you so much.
[18:13] <africanuck> Colin, did you have anything you wanted to add that we didn't ask?
[18:13] <Alain> Does anyone else have questions?
[18:13] <Frank> do you run courses?
[18:13] <Colin2> We all thoroughly enjoyed it too. Yes, read the book and try to recognise spectra rather than worrying about individual wavelengths and line more
[18:14] <Alain> Then we should let you enjoy the remainder of the Saturday and thank you very much.
[18:14] <africanuck> he wasn't finished Alain (i think)
[18:15] <Alain> Nikki, drop me an e-mail and I'll send the transcript tomorrow, the rest through the direct e-mail ofcourse.
[18:15] <Colin2> Use the best lighting you can afford and spend time setting up your equipment to get the best results. I used to teach when

we had our own school, but am now semi retired. I am always happy to help so if anyone has any more questions they can email. more

[18:15] <Alain> Oh sorry, I was too busy typing.

[18:16] <Colin2> Alain, I am grateful for the opportunity to hold this chat with you. Let me know if you want to do it again. Nikki's email will follow. vok

[18:16] <Frank> Thanks colin....Seems I need to invest in a new light...Look for me on your site..

[18:16] <Alain> We are very honoured that you wanted to be here with us.

[18:16] <Catrix> Yes Thanks very much..:)

[18:17] <Colin2> My pleasure Happy Christmas and New year to everyone

[18:17] <Crystal> This was wonderful, Colin. I look forward to you returning again. :)

[18:17] <africanuck> Colin, Nikki, Hilary and everyone else, you are always welcome to drop into the forum if you like too

[18:17] <Catrix> And a Cool Yule

[18:17] <Sara> the same to you and yours, Colin

[18:17] <africanuck> a very merry Christmas and a Happy New Year

[18:17] <Alain> Same to you and your family and Hilary ofcourse.

[18:17] <Crystal> Merry Christmas and Happy New Year to all

[18:18] <Colin2> Ok, signing off now. Thank you once again

[18:18] <africanuck> sure on the spanish wine?

[18:18] <Frank> Bye Colin...Nikki...Hilary

[18:18] <Alain> Bye

[18:18] <africanuck> bye

[18:18] Colin2 left irc: Colin2