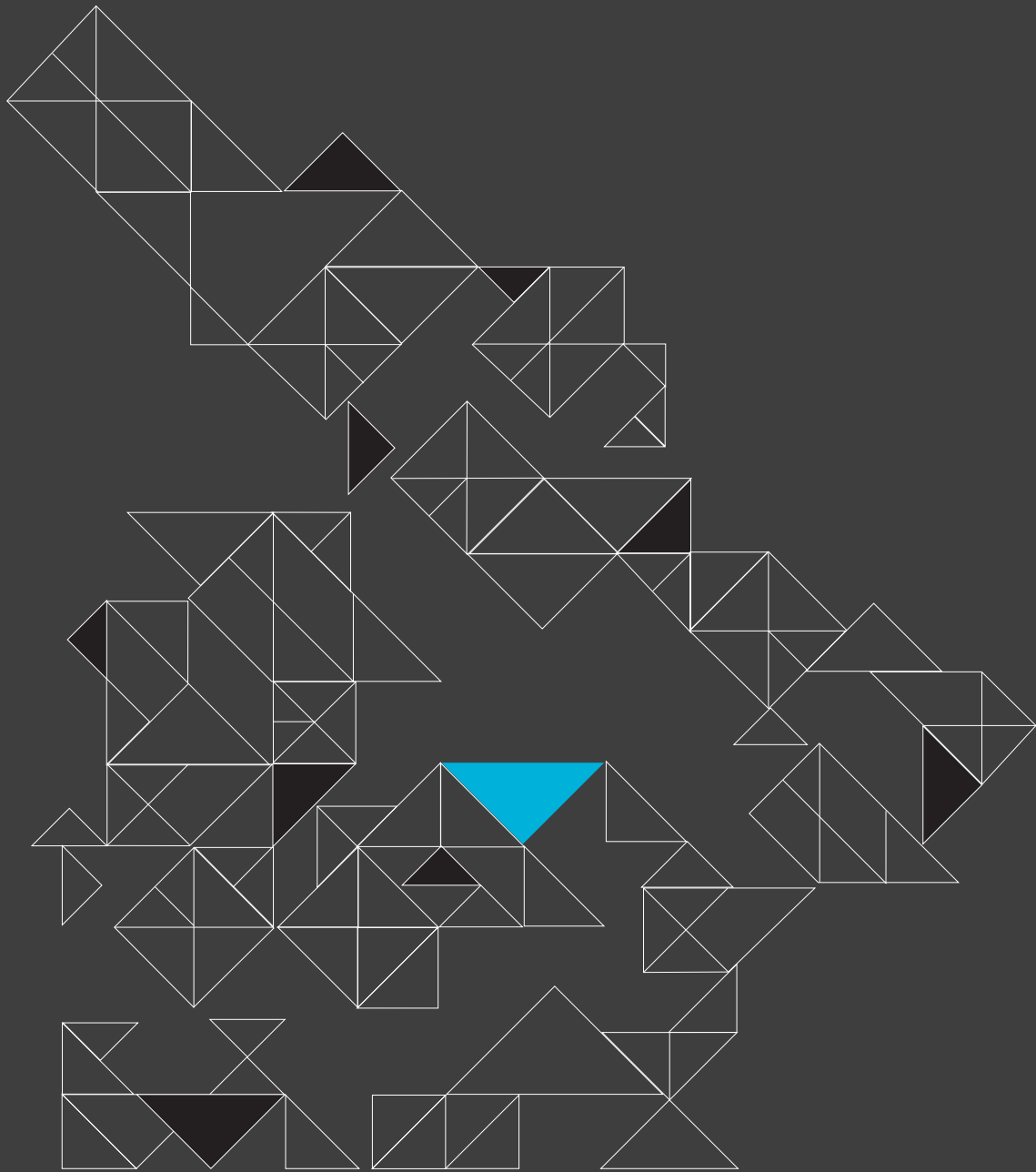




GAA

Gemmological Association of Australia



TED THEMELIS

Seminar Series August 2010

AN UPDATE ON THE HEAT TREATMENT
OF RUBY AND SAPPHIRE

The GAA is proud to present a seminar series. An update on the heat treatment of ruby and sapphire: by TED THEMELIS

We are delighted and fortunate that Ted Themelis, who has had first-hand experience in the treatment of ruby and sapphire, is able to visit Australia to present this important seminar.

Ted's decades of 'hands-on' experience treating ruby and sapphire, will ensure each full day workshop will be extremely comprehensive providing a mix of theory and practical components and will provide attendees with the most up to date information currently available.

This is a wonderful opportunity to learn from an international leader in the field and a must-attend seminar for all gemmologists and especially any who buy, sell or value ruby and sapphire.



ABOUT TED THEMELIS

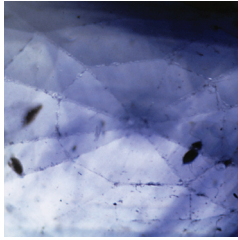
Ted Themelis graduated with a BSc from the City University of New York in 1975.

He has worked extensively in development, engineering and manufacturing of innovative gemmological testing instruments and apparatuses.

Since 1979, he has been involved in various experimental gemstone enhancement projects, primarily in the heat treatment of ruby/sapphire. He has travelled extensively, to the most inaccessible gem mining areas and has published over 120 articles on gem-related subjects. He maintains state-of-the-art gemstone enhancement laboratories in Europe, Thailand and in the USA, providing heat treatment technology, equipment, and services to the gem and jewellery industry. In his workshop in Bangkok he fabricates special gemmological LED microscopes.

SEMINAR PROGRAMME

An update on the heat treatment of ruby and sapphire



SESSION 1:

Diffusion and Heat Treatment of Ruby and Sapphire

Characterization of diffusion (old and new interpretations); type of diffusion in ruby and sapphire; gas diffusion, impurity diffusion; model of diffusion mechanism in ruby and sapphire; diffusion in untreated, natural ruby and sapphire; surface, subsurface colour and impurity diffusion in ruby and sapphire; comparison and conclusions of diffusion-treated rubies-sapphires.

SESSION 2:

Revisiting Beryllium-treated Ruby and Sapphire

Review of the first generation beryllium process; new developments of the second generation beryllium process — Be-treated blue, yellow, greenish sapphires; identification of the Be-treated ruby and sapphire using classic gemmological instruments; detection of beryllium in ruby and sapphire using LIBS, LA-ICP-MS and SIMS.

SESSION 3:

Classification of the Heat Treatment Process of Ruby and Sapphire

Additives — gas, solid and mixtures; heat treatment processes of ruby and sapphire classified into three major groups; methodology of the practical, commercial heat treatment processes; models of the heating processes of ruby and sapphire.

SESSION 4:

'Romancing the Geuda.'

A documentary film on the heating of geuda sapphires, filmed by Ted Themelis in Sri Lanka in 1986.

SESSION 5:

An update on the fracture-filling processes

Nature and classification of the fractures in ruby and sapphire; methodology and applications of the borax-filling and lead-filling processes; combination fracture-filling processes (borax-silica-lead, etc.); desolvation process; comparison features between borax-filled and lead-filled rubies; fracture-filled rubies — features, characteristics, identification, stability.

SESSION 6:

Value of the Heat-Treated Ruby and Sapphire

Pricing structure — a journey from the mines to the consumer; model of mining production and value of ruby and sapphire; cost effectiveness index of the heat-treated ruby and sapphire; value of the heat-treated ruby and sapphire

SESSION 7:

Conclusions

Considerations on the definition of a 'gem', 'treated gem'; examining the character of a "gem"; treated vs. enhanced gem; concluding thoughts and recommendations for gemmologists

SESSION 8:

Surprise!

Results on the ongoing experimentation in heat-treating new types of ruby and sapphire.



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SEMINAR TIMES

DATE	DAY	LOCATION	PRESENTATION	TIMES
11th Aug	Wed	Perth	Evening	5pm - 10.30pm*
12th Aug	Thur	Perth	Day	9.30am - 4.30pm
14th Aug	Sat	Brisbane	Day	9.00am - 4.00pm
15th Aug	Sun	Brisbane	Day	9.00am - 4.00pm
21st Aug	Sat	Sydney	Day	9.00am - 4.00pm
22nd Aug	Sun	Sydney	Day	9.00am - 4.00pm
24th Aug	Tues	Melbourne	Day	9.30am - 4.30pm
25th & 26th Aug	Wed/Thur	Melbourne	Evening	6.00am - 10.00pm

* Special price for shortened Perth evening session Student \$200 Member \$225 Non-Member \$275

SEMINAR COST

STUDENTS	MEMBERS	NON MEMBERS
\$275	\$295	\$350

Will include a special selection of sample stones consisting of:

1. Cabochon Glass-filled ruby.
2. Faceted Glass-filled ruby.
3. Blue surface diffusion faceted sapphire.
4. Beryllium diffused faceted yellow sapphire.

Attendees will also receive NCJV update points (8)

Ted's very recently published

"The Heat Treatment of Ruby & Sapphire"

will be available for sale and signing at **\$220 per copy +gst.**

OR

a special package of this book plus Ted's other amazing publication

"Gems & Mines of Mogok Burma"

(see Jobbins review at www.themelis.com/Books-Mogok-GGM.html#review1)

for a once only price of **\$250 +gst** for the two!

Normal Special price for these two books is **\$US 364.**



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BOOKING FORM

YOUR DETAILS

Name: _____ Company: _____
Address: _____ State: _____ Postcode: _____
Telephone: _____ Mobile: _____
Email Address: _____

PAYMENT METHOD

(PLEASE FAX OR POST TO YOUR STATE DIVISION. CONTACT DETAILS ON PREVIOUS PAGE)

WESTERN AUSTRALIA

Please indicate which seminar time you would like to attend and fill in payment details and send to your WA branch via fax or post
 Wednesday 11th evening shortened session **Student \$200 Member \$225 Non-Member \$275** Thursday 12th day session

Amount enclosed is \$ _____ Make cheques payable to "GAA W.A. Division Inc."

Or Please debit my Mastercard Visa Card No: _____

Expiry Date: ____ / ____ / ____ CCV No. _____ (the last 3 digits of the number printed in the signature panel)

Card Holders Name: _____ Signature: _____

Electronic Funds Transfer
Account Name: Gemmological Association of Australia (W.A. Division Inc) **BSB:** 016-281 **Account Number:** 3549-18302
Please send receipt by fax or email, with transaction details

QUEENSLAND

Please indicate which seminar time you would like to attend and fill in payment details and send to your QLD branch via fax or post
 Saturday 14th day session Sunday 15th day session

Amount enclosed is \$ _____ Make cheques payable to "Gemmological Assn of Aust Qld Div Inc"

Or Please debit my Mastercard Visa Card No: _____

Expiry Date: ____ / ____ / ____ CCV No. _____ (the last 3 digits of the number printed in the signature panel)

Card Holders Name: _____ Signature: _____

Electronic Funds Transfer
Account Name: Gemmological Assn of Aust Qld Div Inc Please put your surname in the 'description' field
BSB: 124-001 **Account Number:** 10627108 Please forward your application form to your state division

NEW SOUTH WALES

Please indicate which seminar time you would like to attend and fill in payment details and send to your NSW branch via fax or post
 Saturday 21st day session Sunday 22nd day session

Amount enclosed is \$ _____ Make cheques payable to "GAA (NSW) DIV"

Or Please debit my Mastercard Visa Amex

Card No: _____ Expiry Date: ____ / ____ / ____

CCV No. _____ (the last 3 digits of the number printed in the signature panel)

Card Holders Name: _____

Signature: _____

VICTORIA

Please indicate which seminar time you would like to attend and fill in payment details and send to your VIC branch via fax or post
 Tuesday 24th day session Wednesday 25th & Thursday 26th combined evening sessions

Amount enclosed is \$ _____ Make cheques payable to "Vic (Vic Division)"

Or Please debit my Mastercard Visa Card No: _____

Expiry Date: ____ / ____ / ____ CCV No. _____ (the last 3 digits of the number printed in the signature panel)

Card Holders Name: _____ Signature: _____

Electronic Funds Transfer
Account Name: Gemmological Association of Australia (Vic Division) Please put your surname in the 'description' field
BSB: 033-340 **Account Number:** 141708 Please send receipt by fax or email, with transaction details