

CALL FOR POSTERS

GIA GEMOLOGICAL
RESEARCH CONFERENCE
AUGUST 26 – 27, 2006



4TH INTERNATIONAL
GEMOLOGICAL SYMPOSIUM
AUGUST 27 – 29, 2006



NAVIGATING THE
CHALLENGES AHEAD

SAN DIEGO, CALIFORNIA

HOSTED BY



GIA
GEMOLOGICAL INSTITUTE OF AMERICA®

ABOUT SYMPOSIUM AND THE GEMOLOGICAL RESEARCH CONFERENCE



The International Gemological Symposium (IGS) is a prestigious forum that attracts professionals from every sector of the gem and jewelry trade. For three days in August 2006, leading researchers and industry experts will converge in San Diego, California, to address key economic, technological, and geopolitical factors of the industry in the 21st century.

In conjunction with this event, GIA also will host a two-day Gemological Research Conference (GRC). This forum will provide an exciting opportunity for scientists and other specialists from around the world to exchange information and gain a better understanding of the technical challenges facing modern gemology.

The 4th International Gemological Symposium and the GIA Gemological Research Conference will be held in conjunction with GIA's 75th anniversary. Come join the world's most influential gemologists, researchers, business leaders, and innovators as they address the critical issues of today and provide a glimpse of tomorrow.

NAVIGATING THE CHALLENGES AHEAD

In the last 10 years, the landscape of the jewelry industry has changed dramatically. We have seen radical new supply and distribution channels. New consumer purchasing trends. The fallout from beryllium-diffused sapphires. More synthetic diamonds in the gem marketplace.

The International Gemological Symposium will address the sweeping changes that have occurred at every level within the gem and jewelry industry. During this important event, scientists, educators, and business leaders will offer their findings and insights on a vast array of topics, including:

- Latest gem treatments
- New gem occurrences
- Synthetic and imitation gems
- Marketing and economics in the jewelry industry
- Diamond and colored stone manufacturing and distribution
- Challenges for the retailer
- Contemporary jewelry design
- Antique and estate jewelry
- Pearls

The exciting program will also feature lavish social events and provide networking opportunities with key players in the industry.

IMPORTANT DATES

December 31, 2005	Early registration deadline for IGS
March 1, 2006	Abstracts due for poster sessions
May 1, 2006	Author notification of accepted/rejected abstracts
August 25, 2006	Pala mines field trip
August 26 – 27, 2006	GIA Gemological Research Conference
August 27 – 29, 2006	4th International Gemological Symposium

REGISTRATION FEES

Register for Symposium 2006 at 1999 prices!

Individuals: \$1,295*

Register by 12/31/05 and SAVE \$300 – \$995*

Register at the door – \$1,495

***Poster session presenters save an additional \$300!**

Individuals: \$995

Register by 12/31/05 – \$695

Gemological Research Conference

Individuals: \$295

Includes the International Gemological Symposium opening session and Sunday night gala

CONTACT INFORMATION

INTERNATIONAL GEMOLOGICAL SYMPOSIUM

E-mail: igs@gia.edu

GIA GEMOLOGICAL RESEARCH CONFERENCE

Tel: 760-603-4019

Fax: 760-603-4021

E-mail: gemconference@gia.edu

Check www.gia.edu for future updates and registration details on Symposium and the conference.

HOSTED BY



GIA
GEMOLOGICAL INSTITUTE OF AMERICA®

The Robert Mouawad Campus
5345 Armada Drive
Carlsbad, CA 92008

EFFECTIVE POSTER PRESENTATIONS

Each poster presentation will be assigned a 5 x 8 foot (1.5 x 2.4 meter) panel enclosed on three sides.

Successful poster presentations are based on good information, precise and easy-to-read design, a brief, legibly produced text, and thorough, careful organization. In contrast to a delivered talk, a poster presentation provides for a more relaxed atmosphere in which presenters can interact on a one-on-one basis with their audience. The official language of the 4th International Gemological Symposium and the GIA Gemological Research Conference will be English.

ON THE CUTTING EDGE OF SCIENCE

The GIA Gemological Research Conference will feature invited and submitted oral presentations together with a poster session. In addition, a one-day pre-conference field trip will provide a limited number of participants with the opportunity to visit the world-famous Pala pegmatite district.



SUBMISSION GUIDELINES

Potential poster presenters should submit an abstract of approximately 300-400 words in electronic format by **March 1, 2006**. One illustration or table may accompany each abstract. We also request a passport-size color photograph (or digital image) of the author(s) who will be presenting the poster, which will be used for identification purposes.

ABSTRACT FORMAT

Title of Paper: Center the title. Capitalize proper names only. Keep titles brief and descriptive. Spell out acronyms.

Authors and Affiliations: Center. Give general affiliation with location. Spell out acronyms. Provide e-mail address for the corresponding author.

Abstract: Type "ABSTRACT" on a line by itself, all capitals, centered, and boldfaced. The abstract itself should briefly describe the research project, background, study (e.g., materials and methods) and results. Please provide the following information for the corresponding author: name, address, telephone/fax numbers, and e-mail address. Also, include a brief description of how the information will be presented (e.g., using a poster display, laptop computer, and/or exhibits/displays). Details on the specific audio-visual, electrical, and other equipment needs will be requested upon notification of accepted abstracts.

Abstracts should be submitted to:

Poster Session Committee
Attn: Dona Mary Dirlam
Gemological Institute of America
The Robert Mouawad Campus
5345 Armada Drive
Carlsbad, CA 92008-4602
Tel: 760-603-4154
Fax: 760-603-4256
E-mail: ddirlam@gia.edu

SAMPLE ABSTRACT

Infrared spectroscopy as a discriminant between natural and manufactured glasses

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ABSTRACT

Glass, the great gem imitator, is still popular in today's fashion-conscious world. Natural glasses include obsidians, impactites (e.g., tektite/moldavite, Libyan Desert glass), and other naturally fused silica glass (e.g., fulgurite). Manufactured glasses include a wide range of materials with various colors, textures, and compositions. As a result, the gemological properties of manufactured glass may overlap those of natural glass. Some glasses are of dubious origin, such as "Mount St. Helens glass" and various transparent blue or green "obsidians." Standard gemological testing is usually sufficient to separate most natural from manufactured glasses, but occasionally, advanced techniques (e.g., Fourier-transform infrared [FTIR] spectroscopy) are necessary for identification.

Eighty-five samples of both types of glasses, which had been identified and characterized by standard gemological methods, were also studied by FTIR spectroscopy. Natural glasses suitable for use as gemstones are high in silica and relatively low in alkalis. Spectra obtained from the mid-infrared range (2000 to 6000 cm^{-1}) showed that major differences in the chemistry of natural and manufactured glasses are reflected in the infrared spectra. The absorption spectra of most obsidians show a saturated "hump" that rises sharply at about 3700 cm^{-1} and tails off to lower wave numbers (about 3000 cm^{-1} , but this is quite variable). Moldavite and Libyan Desert glass show an asymmetrical absorption peak at 3700 cm^{-1} .

Manufactured glasses show a wide variation in chemical composition, which is reflected in a much greater variation in their infrared spectra, as compared to those of natural glasses. They commonly show a broad plateau from about 3600 cm^{-1} to the absorption edge at approximately 2100 cm^{-1} , with superimposed broad peaks at 2830 cm^{-1} and about 3520 cm^{-1} . The intensity of the superimposed peaks is variable. A number of specialty glasses show unusual complex spectra that are indicative of their manufactured origin. All of the brightly colored "obsidians" in this study showed spectra that were consistent with manufactured glass. There are, however, some slag glasses and fused silica glasses that have spectra that are too similar to those of natural glass for a conclusive identification with FTIR spectroscopy alone.

Figure or table (optional)

Name
Address
Phone/Fax/E-mail
Description of presentation media

CALL FOR POSTERS

The Poster Session will provide a forum for communicating scientific and technical information through poster displays, multimedia technology (e.g., laptop computers), and exhibits. Gemological microscopes will be available for use by presenters and participants.

Individuals wishing to participate in the Poster Session at either or both conferences should submit an abstract by March 1, 2006. Presentations intended for the **GIA Gemological Research Conference** should present innovative research within any of the six conference themes:

- Geology of Gem Deposits
- New Gem Occurrences
- Gem Characterization Techniques
- Diamond and Corundum Treatments
- Laboratory Growth of Gem Materials
- General Gemology (Including Pearls)

Posters that are presented at the GIA Gemological Research Conference may also be presented or left on display during the International Gemological Symposium.

Poster presentations intended only for the **International Gemological Symposium** may cover a broader array of topics, including appraisals and other gem evaluation programs, gem cutting, jewelry history, jewelry design and manufacturing, branding, marketing, museum collections, and legal issues in the gem and jewelry industry. Note that the Poster Session is non-commercial in nature, and although exhibits may be product-oriented, their emphasis must be on the product's intrinsic educational or scientific value. All abstracts will be evaluated by the Poster Session committee for appropriateness and technical merit. All accepted abstracts of posters that are presented at the conference(s) will be published in a Proceedings volume, and will be copyedited prior to publication.

