

A monthly publication of the Clear Lake Gem & Mineral Society

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NEXT MEETING: May 20, 2019
TIME: 7:00 p.m.
LOCATION: Clear Lake Park Building
 5001 Nasa Parkway
 Seabrook, Texas

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May Meeting	1	<p><u>MAY MONTHLY MEETING</u></p> <p>Bob Wilkinson will present the May program, "Spectroscopy Tools for Gem Id and Other Useful Stuff." Bob Wilkinson, certified GIA Graduate Gemologist (GG), will discuss his quest to develop a useful tool to identify gems. This will include a general overview of gem spectroscopy tools used in gem identification. The Gem identification tool will be demonstrated, and we will look at the visible spectra. This will be a talk for a general audience. Visitors are always welcomed. clgms.org</p>
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Photo Credit: [Color Origin Of Gems: UV- Visible Spectra](#)

MINUTES OF THE APRIL 29, 2019 CLGMS BOARD MEETING

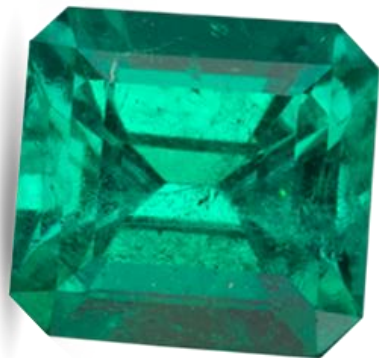
Storage: We are planning to move to a new larger unit within the same storage company location. We are currently occupying a 10' x 20' and we are moving into a 10' x 30'. Throughout the years we have been accumulating so many stuffs and hopefully we can be a better organize in separating the show material from the rest. We are also looking into downsizing or repairing our display cases. We plan the move to be done in June and hopefully we can have quite a number of volunteers to help the move so it can be done in the morning before it gets too hot. Maybe we can do this on a Sunday.

Budget: We formed a Budget Committee (Morgan Davies, Cyndi McGowan, Jim Hawkins and John Caldyne) to have 2019 Operating and Capital Budgets for 2019 and also for long term budget/goal (5 years). Hopefully we will have the report for the May 2019 General meeting.

Scholarships: We would like for the recipient to give us the progress report on their study and let us know on how our scholarships money help them in their studies. We will do the selection and announce the winner as soon as possible once we received all the completed applications' requirements. *Note: Two completed applications have been received this month and one incomplete application. Scholarship awards are planned for next month.*

Treasury: We are looking to consolidate a few of our CD accounts (make it simpler) to a higher rate and also trying to establish a Savings Account with a higher interest rate.

Other items: Ways to attract more people/public to become members: - More community outreach (such as schools and libraries activities). We had 3 successful schools events. Hopefully more to come. – Club's activities such as field trips and more hands-on programs (quarterly if possible) .



Emerald, [GIA Encyclopedia Website](#)

Emerald is May birthstone, a green beryl, & mineral species includes aquamarine.

Upcoming Program Listing - We are looking forward to programs.

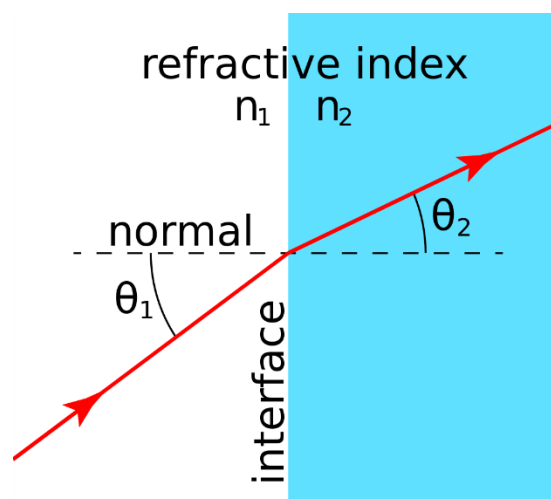
2019 Program drafted listing is updated below with additional topics to make this an exciting year.

Date of Program	Topic	Presented by
May 20, 2019	Spectroscopy Tools for Gem Id and Other Useful Stuff	Bob Wilkinson
June 17, 2019	Gems in the Rough, Carbonate Stomatilites	Jacob Proctor
July 15, 2019	Show and Tell	Open
August 19, 2019	The healing power of various stones/rocks	Theresa Lowdermilk
September 16, 2019	Identifying Ancient Settlement Patterns through LiDAR in the Mosquitia Region of Honduras. ID of historic patterns of settlement and landuse for a critical valley within the Mosquitia derived from airborne LiDAR scanning and field investigation	Juan Carlos Fernandez Diaz, PhD Senior Researcher University of Houston National Center for Airborne Laser Mapping ncalm.cive.uh.edu/berkeley.edu Airborne Operations Coordinator / Electronics Engineer
October 21, 2019	Magnetic Mars	Christine Shupla, Lunar and Planetary Institute, Universities Space Research Association, Houston, Texas;
November 18, 2019	Show and Tell	Open
December 16, 2019	Show and Tell	Open



Gem Refractive Index (Wikipedia)

In gemology, the gemstone refractometer is one of the fundamental pieces of equipment used in a gemological laboratory. Gemstones are transparent minerals and can therefore be examined using optical methods. Refractive index is a material constant, dependent on the chemical composition of a substance. The refractometer is used to help identify gem materials by measuring their refractive index, one of the principal properties used in determining the type of a gemstone.

Gem Identification has been made possible by the way light refraction occurs in the stone. The refractometer is a relatively simple device for measuring the angle of refraction at the liquid-solid phase interface. The angle of refraction depends on the composition of the solution, which allows the use of refractometers for quick evaluation of concentration of dissolved substances. They can be also used, although to a lesser extent, to study the structure of chemical compounds.



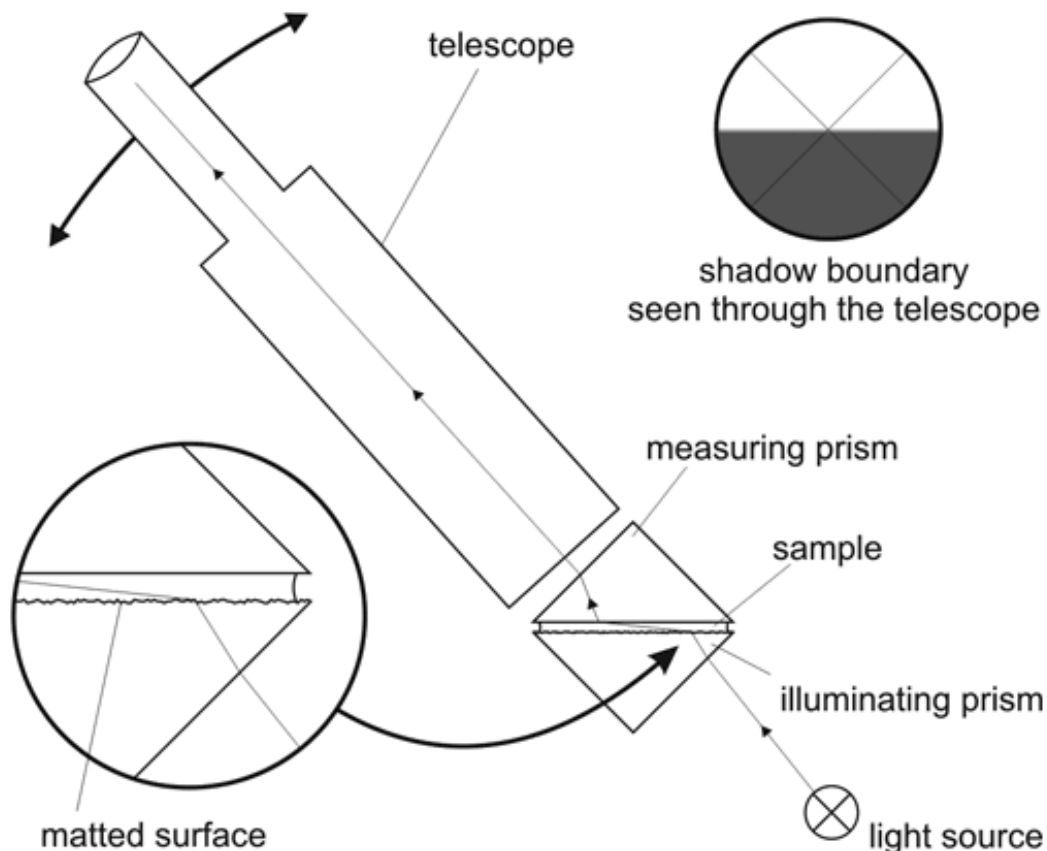
There are several principles used in refractometers. Most common are critical angle refractometers, in which we measure position of the border between a bright and dark. There are refractometers in which we also measure position of the border between bright and the dark, produced by the cuvette shape. Refractive index can be used for identifying some representative refractive indices for stones:

Material	N (refractive Index)	Photo
Diamond, GIA Encyclopedia Website	2.417	
Sapphire	1.77	

Tools used to identify gems (Wikipedia)

There are many refractometer designs, differing in accuracy, ease of use and applicability for different types of measurements of reactive indices (solids, liquids, gases). Two most popular types, used for measurement of refractive index of liquids, are Abbé and Pulfrich refractometers. However, while at the end of the 19th century and at the beginning of 20th century both names were assigned to refractometers produced by Carl Zeiss Jena, after WWI similar models became available from other producers. Each model was modified in many ways, so at present names Abbé refractometer and Pulfrich refractometer are not precisely describing device, and in some cases classification of the refractometer as "Abbé" or "Pulfrich" can be misleading.

There are four main types of refractometers: traditional handheld refractometers, digital handheld refractometers, laboratory or Abbe refractometers (named for the instrument's inventor and based on Ernst Abbe's original design of the Refractometer used (typically) for measuring the refractive indices of gases). Gemstone refractometers are available both as classic optical instruments and as electronic measurement devices with a digital display.



UPCOMING SHOWS AND PROGRAMS

SCFMS and MEMBER CLUB GEM SHOWS			
			May 4-5, 2019 Waco, TX: Waco Gem and Mineral Show; Extraco Exhibits Building; 4601 Bosque Blvd.; Waco, Texas
May 25-26, 2019 Ft. Worth, TX, Fort Worth G&MC, Will Rogers Memorial Center, www.forthgemandmineralclub.org	June 1-2, 2019 Lubbock, TX Lubbock G&MS, Lubbock Memorial Civic Center, www.lubbockgemandmineral.org	June 6-9, 2019 Austin, TX Natures Treasures of Austin, Norris Conf. Center, https://ntrocks.com/international-exposition-of-agate	July 5-7, 2019 Raleigh, NC: Treasures of the Earth, Inc.; North Carolina State Fairgrounds, 1025 Blue Ridge Rd
June 29 - 30, 2019 Arlington G&MC, Grapevine Convention Center, 1209 S. Main St.; Sat. 9-6, Sun. 10-5; Adults \$6, seniors and children over 12 \$5 www.agemclub.org	August 31 – Sept 2, 2019 Silver City, NM: Grant County Rolling Stones Gem & Mineral Society; Grant County Veterans Memorial Conference Center, 3031 Hwy 180 East https://rollingstonesgms.blogspot.com	Sept 14, 2019 Rockford, IL: Rock River Valley Gem and Mineral Society; Odd Fellows Club, 6219 Forest Hills Rd Email: tcdc78@comcast.net	Sept 21-22, 2019 Grand Junction, CO: Annual show; Grand Junction Gem & Mineral Club; Mesa County Fairgrounds, 2785 Hwy 50 www.grandjunctionrockclub.org
STONEY STATEMENTS Clear Lake Gem and Mineral Society, Inc PO BOX 891533 Houston, Texas 77289			

Meeting 3rd Monday of the Month
7:00 P.M.
Clear Lake Park Building
5001 NASA Parkway, Seabrook, Texas

Member of



Next Annual Show
February 20-21, 2020
Pasadena Convention Center

American Federation of Mineral Societies

South Central Federation of Mineral Societies

CLGMS is on the Web:
<http://www.clgms.org>

2/20-21/2020

Clear Lake Gem and Mineral Society, Inc

MEMBER: American Federation of Mineralogical Societies and South Central Federation of Mineral Societies

PURPOSE: To promote education and popular interest in the various earth sciences; in particular in those hobbies dealing with the art of lapidaries and the earth sciences of minerals, fossils and their associated fields.

2019 OFFICERS:	President	David Tjiok	
	Vice President	John Caldyne	
	Secretary	Trina Willoughby	
	Treasurer	Morgan Davies	
	Program Director	Vince Barrows	
	Board of Directors:	Sandra Christiansen	Sara Tanner
		John Caldyne	Donna Nelson
		Jim Edwards	Jim Hawkins
	2020 Annual Show	Sandra Christiansen	
	Newsletter Editor	Vince Barrows	

Show Chairman	John Caldyne	Membership.....	Mike Flannigan
Constitution & Bylaws.....	Sara Tanner	WWW System Admin..	Mike Flannigan
Community Benefits.....	Charlie Timme	Refreshments.....	John Caldyne
Historian.....	David Tjiok	Education/Field Trips.....	Annabel Brownfield
Publicity.....	Cyndi McGowen	Hands On.....	Theresa Lowdermilk
Facebook.....	Trina Willoughby		

Membership Dues Jan. to Dec. 2019: Adult \$15:00, \$5.00 per additional adult at same address, Junior \$5.00, \$5.00 per member with adult at same address, Family Dues \$20.00 (4+) at same address. Send Dues to CLGMS, PO BOX 891533, Houston, TX, 77289



Emerald, [GIA Encyclopedia Website](http://www.gia.edu/encyclopedia/)