



## **MENTOR/APPRENTICE PROGRAM** **January 8 on Zoom at 7:30 pm (link and password on page 9)**

We are delighted to welcome Nanz Aalund as our January program presenter. Nanz has worn many hats and received countless awards in the jewelry industry. She will guide us through the mentor/apprentice program she developed for MJSA (Manufacturing Jewelers & Suppliers of America, Inc.)

You might think “what has that got to do with the club.” If you have ever been to the shop, you see how a member often guides another member, either in polishing a perfect cabochon or soldering

a bezel. And, you probably have heard members say they want to open a store. Personally, I am from a country where there are apprenticeships for just about everything and understand the value of it.

Nanz Aalund’s wide ranging career as a jewelry designer, goldsmith, and educator, began in high school shop classes. After serving as a fine jewelry designer and marketing consultant for Nordstrom, Neiman Marcus, and Tiffany & Co., Aalund taught jewelry and metals classes as the “Artist-in Residence” the University of Washington under Mary Lee Hu and at the Art Institute in Seattle. Earning a Masters of Fine Art (MFA/Metals) and a Masters of Education in College and Technical Teaching Cur-

**LIVE FROM**  
**MJSA EXPO**

**MONDAY, MARCH 6**  
**4:15 P.M. EST**  
**HOST: ANDREA HILL**

**APPRENTICESHIPS, TRAINING & HIRING**  
**OH MY!**

**WITH**  
**NANZ AALUND**  
JEWELER, AUTHOR

**RICH YOUMANS**  
MJSA

**JOIN US LIVE AT THE JAVITS**  
**OR CATCH THE LIVESTREAM**

**REGISTER NOW**

The Culver City Rock & Mineral Club brings together persons interested in the Earth Sciences to engage in research and study, to assist members in the collection and preservation of rocks and minerals, and in the study and practice of lapidary and related arts.



## The MJSA Mentor & Apprenticeship Program

Training Package for Apprentice Bench Jewelers

**INCLUDES:**

- Competency-Based Occupational Framework for Bench Jewelers
- Jewelry Apprentice Curriculum (with Study Guides)
- Apprentice Assessment Tools & Tests
- Guide to Creating a Shop Culture That Retains Employees

Developed by Benji Wood for the AIAA Education Foundation

### Study Sheet

DATE	PROJECT NUMBER, MATERIALS PRICE	MATERIALS USED
DESCRIPTION		
SKILLS	STEPS	ESTIMATED TIME TO COMPLETE
START AND FINISH	<input type="checkbox"/> 1	
	<input type="checkbox"/> 2	
	<input type="checkbox"/> 3	
	<input type="checkbox"/> 4	
	<input type="checkbox"/> 5	
	<input type="checkbox"/> 6	
	<input type="checkbox"/> 7	
	<input type="checkbox"/> 8	
	<input type="checkbox"/> 9	
	<input type="checkbox"/> 10	
	MATERIALS VALUE	LABOR CHARGE

### How to Read the Jewelry Apprentice Curriculum

WEEK	LEARNING OBJECTIVES	SKILLS TO BE ACQUIRED	PROJECTS ASSIGNED	ASSESSMENTS & ACCOMPLISHMENTS
WEEK 1	• Plan and Measure Identification	• Plan and Measure Identification	• Plan and Measure Identification	• Plan and Measure Identification
WEEK 2	• Structure for and	• Structure for and	• Structure for and	• Structure for and
WEEK 3	• Safety in the Shop	• Safety in the Shop	• Safety in the Shop	• Safety in the Shop
WEEK 4	• Safety in the Shop	• Safety in the Shop	• Safety in the Shop	• Safety in the Shop
WEEK 5	• Safety in the Shop	• Safety in the Shop	• Safety in the Shop	• Safety in the Shop

**Column 1, Week #**  
Indicates the week of the apprenticeship, which Job Function(s) from the Competency Based Occupational Framework (CBOF) are being addressed, and which competencies related to those functions will be addressed that week.

**Column 4, Focused Readings**  
This column lists the required readings the apprentice will need to complete. The readings resources are part of programs Related Training and Instruction (RTI) from the CBOF.

# The National Apprenticeship Act of 2021

Will invest \$3.5 billion over five years to expand apprenticeships across the country.

Is expected to create nearly one million new apprenticeship opportunities in addition to expected apprenticeship system growth.

riculum (CTTC).

Some of Aalund's many professional jewelry design awards include: an AGTA Spectrum Award, two Gemmy Awards, two Platinum Guild International Awards, two Saul Bell Awards, two DeBeers Diamond's Today Awards and in 2023 a CPAA Spotlight Award for her Pearl Nebula necklace. She authored the book, *Masters Gold*, published by Lark Books in 2009 and served as technical author and associate editor for *Art Jewelry Magazine*. Nanz's most recent publication, "A Jeweler's Guide to Apprenticeship" for MJSA, an AM&P Excel Awards, (a national book award) in 2018.

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## ***PRESIDENT'S LETTER***

Greetings Culver City Rock & Mineral Club members and happy new year!



May 2024 be filled with lots of new rock-centric activities for all and good health. We had a delightful holiday party where guests feasted on delicious food, showed off some favorite specimens, and even revived our Bad Santa gift exchange.

Great thanks to everyone who showed up at our November Zoom meeting to vote on the year-end allocation of funds and slate of Directors. We have filled many of the important positions of our club but still need to fill a few slots such as .....

We need members to make more of a time commitment going forward. The pandemic harshly affected our club's collegial gatherings and we must try to return to more in-person meetings and gatherings to re-awaken that community spirit which brought us all together in the first place.

Zoom only works partially as a secondary option, as there is no real substitute for a handshake, a hug, a shared story, or a show of one's new cool pieces of jewelry or rocks — happening in real time, together in the same physical space. Where creative people gather, creative juices flow. Ideas for field trips or

workshops are sparked when like-minded friends share! But we need folks to step up and plan/organize/manage these field trips and workshops.

It's true that CCRMC has a fully equipped lapidary shop with dedicated instructors — a great reason to join the Club. With that amenity also comes some shared responsibility to keep the Club viable and vibrant! Seriously consider taking on a volunteer role for yourself in 2024.

The premiere event of the CCRMC is the annual Fiesta of Gems show. Year after year, the same volunteers suit up and do all of the heavy lifting to put on a fine well attended show that vendors clamor to be a part of. Please make a note to volunteer for the Show but also, in addition, take on another job to help reinvigorate our wonderful Club. Your involvement is more important now than ever.

We need you!!!  
Alexa

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## ***HOLIDAY PARTY***

Thank you to all that came for the CCRMC 2023 Holiday Party! It was a great time and a wonderful opportunity to spend time together to meet members, old and new. Check out some pics from our event on the next page!





*...and a Happy New Year!*

## BENCH TIPS FOR JANUARY



### OCHRE APPLICATOR

Yellow ochre is used when you want to be sure the solder won't flow on an area of your piece while you're soldering another area. The only problem with ochre is coming up with a good way to store and apply it.

I use recycled nail polish bottles. They seal well and have a built-in brush applicator. Just clean them out with a little acetone or nail polish remover, and they're ready to go.



### DENTAL TOOLS

A ready source of free tools is your local dentist. Dental picks can be reworked into wax tools or

straightened and sharpened to make a stylus for marking and layout. The steel in these tools is high quality, and the handles are designed for comfort.

A special note however - If you want to modify the shape of the tool, don't try to just bend it with pliers. Working this alloy of steel while it's cold will cause it to snap. Changing its shape can only be done when it's hot. I work it like a blacksmith. Prop your torch up on the bench so that you can use both hands for the work. Have a hammer and bench block ready. Heat the tip red hot and hammer it straight or bend it with pliers.

And don't forget to ask your dentist for some of the cutting burs they throw out. These are useful for a variety of things. It's best to call a week or two before your visit and ask the dentist or hygienist to put some of these tools aside for you. It's good practice also to ask that they run them through the sterilizer for you. If that's not possible, pop them in an oven at around 250 F

Happy hammering,

Brad Smith  
BradSmithJewelry@gmail.com

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## Lapidary Workshop Hours

The shop is open Saturdays and Sundays from 12 noon to 4 pm.

To see if there is room, send an email, do not just show up.

Saturdays: Lynne Lukert  
Sundays: Jette Sorensen

If you have not made a reservation, you can call the shop during open hours to see if there is room, 310-836-4611

Do not wear open-toed shoes. Wear old clothes. Bring eye and ear protection.

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## **MINERAL REPORT**

Minerals aren't just aesthetic accumulations of time in brilliant colors, facets, and densities - they are essential to the formation of life itself. This is the start of a six-part series that will explore the minerals considered essential for the emergence of life as [identified by physicist Michael J. Russell](#): Olivine, Pyrrhotite, Bridgmanite, Serpentine, Fougierite and Mackinawite. Identifying these minerals has not only been important for understanding how life developed on Earth but within the developing fields of exogeology and exobiology (the study of minerals and life on other worlds), they have become essential indicators for the possibility of life on these worlds. The mechanism through which these minerals are abiogenic (capable of producing life) lies in their electrochemical disequilibria. An easy way to understand this is that without exchange, without gradient, without difference, there is no ionic movement. Without movement, there is no life. Our bodies are effectively hyper-efficient machines running on ion exchange and this exchange begins with minerals.

### **Olivine**

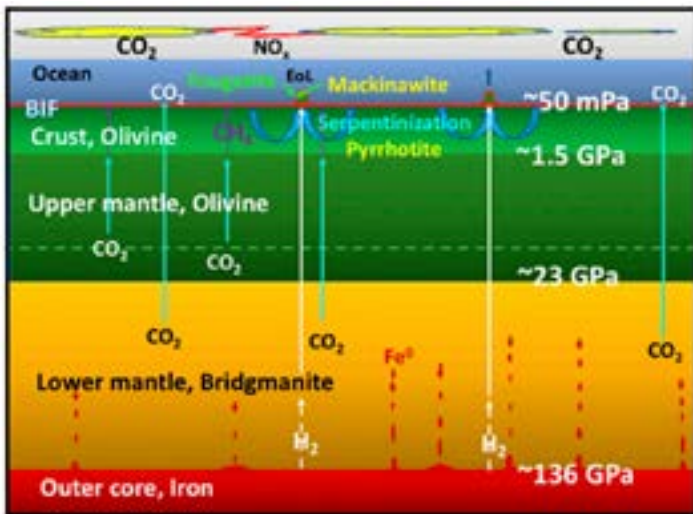
I initially joined the CCRMC to cut and polish sin-



gle crystals of olivine (above) in 2023 following a ten-month residency at the Swiss Federal Institute of Technology Lausanne where I worked with physicists to develop a new way to grow olivine crystals from natural material using the laser floating zone method. This involved focusing 5, 2 megawatt lasers on a rod of sintered material in an inert atmosphere and slowly moving the material through the melting zone over a period of 48 hours. This project appropriated a way of making a single crystal (a crystal consisting of a non-interrupted repetition of the unit cell in three dimensions) normally used for the in-

investigation of novel semi and superconductors. The reason for this was to learn more about the capabilities and qualities of this very common mineral which comprises 50-60% of the Earth's mantle (see final image) and is believed to comprise the majority of the crust on Mars and Venus. I wanted to use

The water then becomes slightly acidic through the creation of carbonic acid ( $H_2CO_3$ ), ultimately producing magnesium carbonate and silicon dioxide (quartz). Geologically speaking, this process is one of the fastest ways the Earth regulates the climate. Volcanic activity (which increases as atmospheric temperature rises), brings olivine to the surface, rain (which also increases as temps rise) brings carbon dioxide down from the atmosphere, allowing carbon dioxide to bond the magnesium in olivine. Olivine, as we'll see over the course of this series, can be considered the foundational mineral to a whole suite of minerals that will facilitate the development of life, a process I'll get into more next month!



an olivine single crystal to create a crystal oscillator, the way we keep time with our digital devices. If you've ever had a watch that said Quartz or have an iPhone, then you've used a quartz crystal oscillator to keep track of time. By sending an electrical impulse into a single crystal, the crystal will output a regular vibration via the piezoelectric effect which can then be converted into the seconds, minutes, and hours that define our movement through space.

Olivine, and its gem form known as peridot (image at right), is a magnesium ferro silicate ( $[Mg>Fe]-2SiO_4$ ), light green in color like the verdancy of freshly emerged leaves, and is a 6.5-7 on the Mohs hardness scale. It is often found coincidental with basalt and in certain volcanic areas around the world like Hawaii (the lead image is of Green Sand Beach on Big Island), the Galapagos Islands, and Norway, green beaches of olivine can be found sloshing back and forth. These sites have gained the attention of climate scientists for their ability to sequester large amounts of carbon dioxide. However, the energy required to mine and crush olivine, and then agitate it with water exceeds the amount of  $CO_2$  it would sequester. So, it is doubtful this natural process of carbon dioxide sequestration can be industrialized and made to work for our planet. Olivine is able to do this when carbon dioxide is in solution with water (think rainwater or seawater).



So next time you are setting a faceted peridot, remember olivine's essential role in allowing not only the formation of life but the continued viability of Earth as our host planet.

Joel Kuennen, Mineral Chair  
<https://www.joelkuennen.com>

## EXECUTIVE REPORT

There was no Executive, Membership, or Club Business Meeting in December.

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## Upcoming Shows



There is only one CFMS show in January, the Gemboree in Exeter, CA, but Quartzsite, Arizona is in full swing all month long with around 200 vendors indoors and outdoors.

This year's Gem and Mineral Show Pow Wow is January 17 through January 21

<https://quartzsitetourism.com/events/>

Gemboree, January 20-21, 2024 – Exeter, CA

Tule Gem and Mineral Society  
Exeter Veterans Memorial Building, 324 North Kaweah Ave., Exeter, CA 93221  
Hours: Saturday 10 AM – 5 PM, Sunday 10 AM – 4 PM

2024 Gemboree  
Contact: Gayle Bingaman, Show Chairperson,  
(559) 802-6029, [bandgbing@aol.com](mailto:bandgbing@aol.com)  
Website: <http://www.tulegem.com>

## January Member Birthdays

Leslie Chen  
01/03/23  
Rick Renie  
01/08/23  
Carole Zakkour  
01/08/23  
Callie Herf  
01/12/23  
Stephanie Sprester  
01/14/23  
Karie E Schroder  
01/16/23  
Teenie Mitchell  
01/18/23  
Katie Feld  
01/18/23  
Zachary Ruzzin  
01/23/23

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to our newest members:

Mercedes Bonness  
Rida Qureshi  
Vladislav V Firtich



## ***The Nugget – Submissions***

The submission deadline is on the 15th of every month. Articles or notes without a byline are written by the Editor. Photographs without credits are shot by a CCRMC member. Email the Nugget submissions to the Editor: [nugget@culvercityrocks.org](mailto:nugget@culvercityrocks.org)

## ***The Nugget – Advertisements***

The Nugget accepts paid advertisements. The cost for an eighth of a page is \$7 per insertion, payable in advance. Size is about 2" high x 3.5" wide. Ad location is at the discretion of the Editor.``  
Ads, copy, or business cards must be received by the 10th of the month.  
Email submissions to the Editor:  
[nugget@culvercityrocks.org](mailto:nugget@culvercityrocks.org)

### **Mailing Address**

Culver City Rock & Mineral Club  
PO Box 3324  
Culver City, CA 90231  
[info@culvercityrocks.org](mailto:info@culvercityrocks.org)  
310-836-4611

See local field trips posted on LA-Rocks at  
[facebook.com/groups/411978609512229](https://www.facebook.com/groups/411978609512229)

More field trips are posted on SoCal Rocks [www.facebook.com/groups/2605376056257691](http://www.facebook.com/groups/2605376056257691)

### **Zoom Address**

<https://zoom.us/j/3108364611?pwd=WnRTclZTS-3RJMEdWdlV2c01mQWxqdz09>  
Meeting ID: 310 836 4611  
Password: rocks

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## **2024 Elected Officers**

President - Alexa Hunter  
Vice President - Steven Dover  
Treasurer - Darrell Robb  
Recording Secretary - Stephanie Dangott  
Parliamentarian - Ana Maria Strambi Guimaraes

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## **2024 Committee Chairs**

Education - Vacant  
Federation Director - Ellen Moe  
Field Trips - Vacant  
Librarian - Joannie Ripner  
Membership Co-Chairs - Bradford Smith and Regina Lozano  
Minerals - Joel Kuennen  
Photography - Vladislav Firtich  
Programs - Jette Sorensen and Lorna Herf  
Publications Committee - Jette Sorensen, Brad Smith, Joel Kuennen  
Publicity - Vacant  
Sunshine - Karen Wallen  
Trading Post - Gary Mitchell  
Webmaster - Bart Gampe  
Zoom Host - Darren Cokin

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## **Board of Directors**

2024  
Gary Mitchell  
Karen Wallen

2025  
Ana Maria Strambi Guimaraes  
Bradford Smith

The CCRMC is a nonprofit 501(c)(4) organization.