

ROCK ON!

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Have you ever thought about photographing one of your beautiful gemstones for a wall display but put it off because you weren't quite sure how to do it? Or perhaps you wanted to post one of your photos online or create a photographic catalog of your collection, but didn't know what equipment you'd need. If so, this article may be able to help you.

I've been approached by numerous people, both society members and others who have seen my work and ask me how I take such beautiful photographs of my agates. My first admission is that very few of my images are of "my" agates. Most of them belong to very good friends who had the eye to select a very beautiful or exceptional gemstone and I was the fortunate beneficiary who was allowed to photograph it. My methods of photographing these beautiful gems are not unique. and I'm certain anyone, armed with the right equipment, can duplicate my results quite easily.

Let's try and get the equipment question answered first. The first thing we have to think about when choosing equipment is how large do we want the final image or print to be. Will you be satisfied with a 4"x6" post card sized image or smaller? If so, a good high pixel count cell phone will probably be acceptable. But as we move up the size chart, the quality of the equipment likewise rises. I've adopted the mindset that every photograph I take may eventually become a framed 17"x22" print. That means, for me who's fanatical on sharpness, using a high pixel count camera is a must. I'm not going to get bogged down on brands of cameras here, but just about any of the newer 24MP or higher digital SLR's will do just fine. Let me inject something that everyone asks me and my answer's been the same for 40 plus years; *it's the lens that makes the difference.* Trust me, there's a difference between a lens costing \$2500 and a similar focal length lens costing \$400. I realize that not everyone can run out and buy a bevy of \$2500 lenses, but whether you're shooting landscapes or close up (macro) photography, try to use the best lens you can afford. For my close-up photography on gemstones I use one of two macro lenses; a 60mm/2.8 or a 105mm/2.8. The large aperture size, 2.8, rarely plays a role in any of my photography, whether it be ghost town photography or macro photography, and in truth, the larger the aperture the costlier the lens is going to be. But if you're planning on doing any outdoor macro photography where winds might well be present, the larger aperture helps to reduce blurred images. With most of today's cameras, the aperture and shutter speeds are set automatically. If you're content using the "auto" setting and you're satisfied with the photos you're producing, then go with it. Few newcomers to photography are aware of the aperture/shutter speed relationship and the effects the aperture setting has on something called "depth of field." If parts of your image appear blurry, it could be an improper depth of field setting. Read up on depth of field

and it may solve your problem. Here's another truism: if you're old and feeble, as I am, a good tripod and a cable release are your best friends. In fact the manufacturer of my 36MP camera advises using these accessories for maximum image sharpness. They know much more than I do, so I heed their advice.



Add a tripod and a light box, pictured below, and that's my setup.

All right! So we've decided on the final image size and what type of camera and lens that'll be required to get a sharp image. We've got the best macro lens we can afford, and we're ready to start snapping the shutter. Whoa Nellie, hold on! Here's one of the last little secrets that'll help you enormously. This wonderful little device is called a "light box." Light boxes come in all sizes and price ranges, including some requiring securing a second on your home to purchase them. Not needing a light box large enough to photograph my pickup and desiring to avoid foreclosure, I possess a wonderful little 16"x16" model that works beautifully with any of the beautiful gemstones I wish to photograph. It's called a "LimoStudio, 16" x 16" Table Top" and comes with everything required to take outstanding close up photos, including two LED lights, light stands, and changeable colored backgrounds. And the best news is that it's affordable. Check it out on Amazon.



The Limo Studio 16"x16" light box. You get everything pictured plus a nifty carrying case. The cell phone pictured does not come with the package.

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I know some of you are going to try and start photographing some of your prized gemstones without a lightbox. I wish you the best of luck. I've tried that method on hundreds of rocks and was only rewarded with frustration. I've tried using flash photography—only to get bright spots on the stone where the flash bounced back into the camera. I got the exact same results using bounce flash. I tried natural light, both in sunlight and shade—only to discover that anywhere I went, there was always a bright spot and it invariably showed up on the stone's surface and hence, in the photo. Oh, it can be done and I have had some success, but it was a terribly long and frustrating exercise to get an acceptable end result. Believe me, this light box method will save you a lot of gray hairs.

Okay, you've taken the photograph and you're more or less happy with the result. What now? As you scan the image is something in it that you wish wasn't there? Like a stand or something else you needed to use to prop up your precious gem and it ended up in the picture? Or maybe you wish there was something that would make your gemstone "jump" out more at the viewer. I've seen many photos featuring precious gems and most of them have had photo effects applied that made the stones "jump" out its viewers. I've proudly had one of my images printed in a fairly renowned International calendar and they even retouched the background on my original image a bit. The good news is that this can be accomplished quite easily with a little modern day technology and yes, I'm going to say the most hated word in the art world: **PHOTOSHOP!** Every time I even slur the word, I have



Here's my setup. What's out of view is the tripod and the cable release.

fears of bolts of lightning exploding out of the skies and striking me down. As one of our ex-Presidents once said, "Let me be perfectly clear" *Photoshop* can be a photographers best friend. Yes, you can have fun with *Photoshop*, like having a Great White shark jumping out of the water in San Francisco Bay, an image we've probably all seen,

but *Photoshop* can also easily introduce backgrounds and such that help to make a picture "jump". It takes a little practice to master, but once mastered it's a Godsend. An instructor in a digital photography class I attended in junior college said that the full range of *Photoshop's* capabilities can't be covered in four years of college. I'm not talking about the full range of *Photoshop's* abilities here, but just some of the basics. Unless you're a full-fledged professional photographer or graphics artist there's no need to once again take out a second on your house to pay for the high end version of *Photoshop*. There's a smaller version called *Elements* that can be bought for under \$100 that does most of the things any good amateur photographer would ever want or need to do. I've used both versions and I can attest that *Elements* is an excellent entry level version of the program.

Taking quality photographs now has never been easier. Today's cameras make it almost impossible to take a bad picture. No longer do photographers need light meters, knowledge of the inverse square law, or extensive knowledge in the aperture/shutter speed relationships to get an acceptable image. With today's digital cameras we can immediately view our images without the hassle of having the expense of developing our negatives and getting prints made before we can see what we've shot. If you're planning to frame and display your photographs, I have one last bit of advice. I've entered several photo contests and done quite well in them. I've won awards when, in my opinion, far better photos in the show than my own didn't win anything. And they didn't win because either the matting or the framing, or often both, *took away from the actual photo*. It's really easy to have the viewers' attention focused on the frame or the matting if they overpower the photo. Try to have those two features blend with the photograph, but keep them low key. *Make the photograph be the focal point, not the frame or the matting.*

Now go out and let your imagination and creativity go wild. Have a ball photographing all those beautiful gemstones! And if there's anything further I can help you with, or if you just want a friendly chat, don't hesitate to stop by.

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One of the great resources for our hobby is the website Mindat (www.mindat.org). It is a comprehensive database of all recognized mineral species and their properties, known locations, and so forth including thousands of wonderful pictures. There is a lot more to it as well: message boards, topical information, book downloads, etc. It is widely used in education, particularly in earth science classes, and rockhounds around the world rely on it. It is a charitable effort (501c3) and they are in a desperate spot right now. You can find out more at <https://www.mindat.org/donate.php>. There is a page at the end of the above article to help make your donation as easy as possible. Any donation, no matter how small, will help.