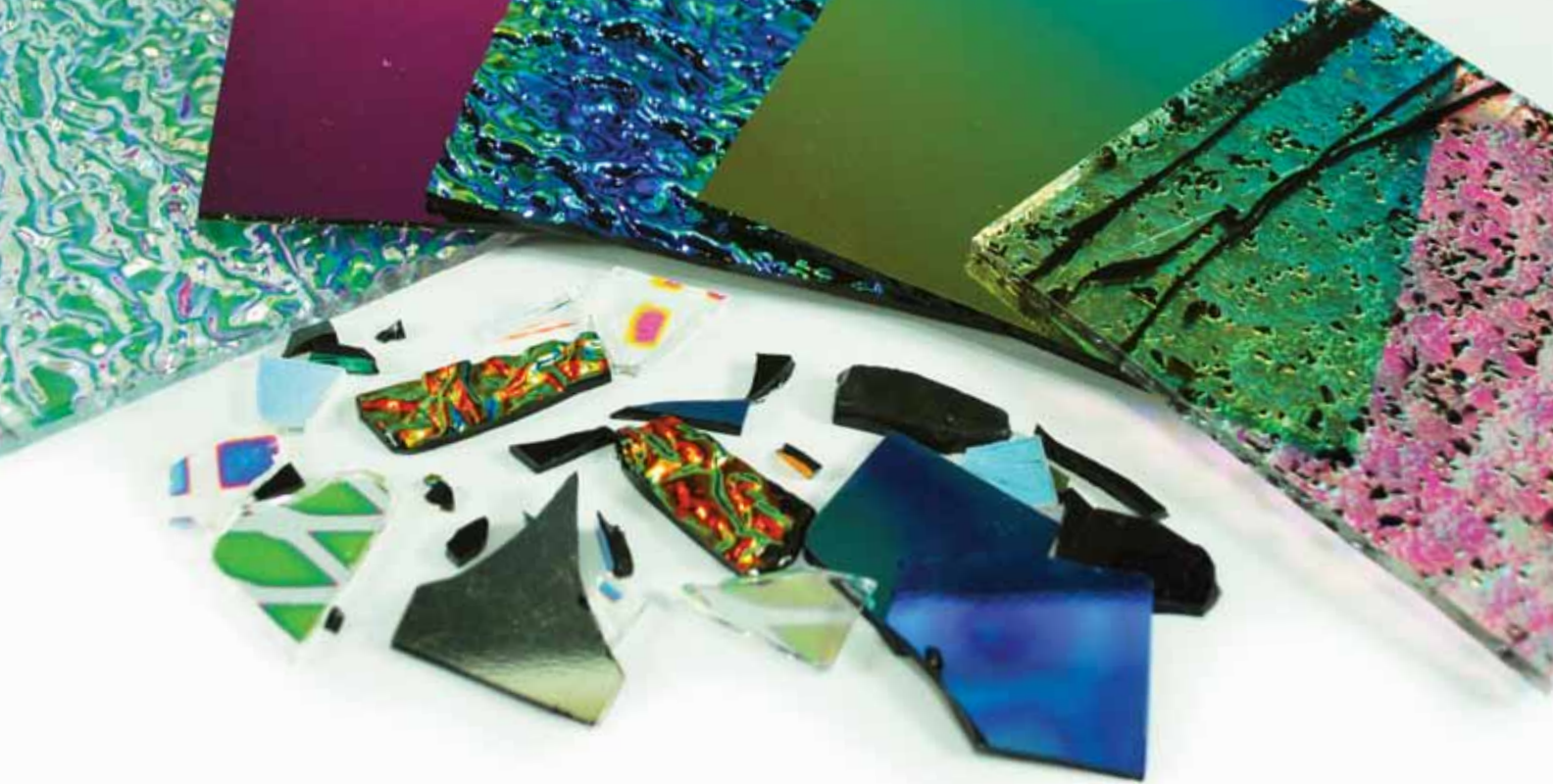


Just add Glass!



If dichroic glass is out of your price range but you love the metallic look, another option is to use iridized glass. It's more affordable and has a shimmering metallic finish, creating hues from gold to blue to shades of green and red, depending how it's held and what it's near. Chips of irid glass were placed around the center of this traditionally banded platter that was glazed and fired previously. Once taken through the full-fuse program, it showcases nice metallic finishes with dimension. As discussed earlier, this platter is for decorative purposes and not intended for use with food. The same glass was used in the bottom of this square box along with a sprinkling of pink frit just prior to adding the irid glass.



By Michael Harbridge

Some of the creations I'm sharing this month may look familiar, because I introduced them a few months back in my ceramic engraving art article. But something is different — I've added glass! Every time I come up with a technique, I sit back and look at the final product and ask myself how could it be improved or altered to fashion a different or more creative method. I can't tell you how many times the phrase, "I wonder what would happen if ..." goes through my head. The hard part is finding the time to experiment with all of these thoughts. Sometimes they work, and sometimes they don't.

This isn't the first time I've combined ceramics and glass. I've done it numerous times, even though many artists tell me it can't be done. Well, it can, and again, here is the proof. This time I decided to play around with traditional and dichroic glass to add a little bling to different ceramic shapes. I've discovered through experimentation some very costly things you *can't* do as well as fun and easy ways to jazz items up — and for studio owners, ways to generate more revenue.

I've done articles in the past showing ceramic shapes with glass added to the surface and fired during the glaze firing, causing the glass to melt and flow down the sides of vases and into the bottoms



of bowls. I've also done a variety of tack-fusing lessons on glazed surfaces, so that the glass adds dimension to the ceramic surface. Both readers and students loved it when I combined glass with raku designs. We've even reached inside 1,800-degree kilns with glass rakes to swirl glass inside clay shapes.

So when I decided to play around with dichroic glass, I figured I could adapt the same methods I had already used. Dichroic glass goes through a special coating process which gives it metallic finishes — and makes it a pretty costly product. An average 6-inch-square piece of dichroic glass can cost between \$20 and \$50. It's not something you generally use to make a big 36-inch glass bowl. It's more often added to base pieces of standard fusing glass as accents or in small patterns. You'll most often see it incorporated into jewelry to add sparkle and dimension.

My first experiment with combining dichroic with ceramics was a bowl about 24 inches across that I planned to raku fire. I thought I knew all the ins and outs of merging the two, so I felt confident starting out with such a large shape. As it turned out, it was one of the most costly mistakes I ever made. The bowl was constructed with about 25 pounds of clay, so it was heavy on its own. Then I heaped a boatload of glass in the bottom of the bowl after glazing, adding several more pounds. I probably added about a couple hundred dollars' worth of dichroic glass before starting the raku firing. I was using a 27-inch-tall kiln, so I put a shelf up on posts to raise the shape to the top of the kiln so it would be easier to reach and remove it from the hot kiln, rather than having to struggle to pull it up from the bottom.

But there were a few things I didn't anticipate. This bowl was going to be very heavy and difficult to lift from the kiln. As a result, there was a risk that the shelf holding the bowl up might wobble and crash to the bottom of the kiln. Well, the bowl was heavy, and as I struggled to lift it from the kiln, the shelf did crash to the bottom. In the end, I had a very heavy bowl with great raku color on the outside but no color to the glass. My kiln, on the other hand, had serious issues. The shelf and posts were shattered and the edge of my kiln had broken brick where the tongs slammed down and the shelf gave way. It was about a \$500 boo-boo!



For my next experiments, I placed small pieces of dichroic glass, along with traditional fusing glass colors, in the bottoms of glazed bisque boxes and fired them just hot enough to melt the glass into the glaze. With regular, non-dichroic glass, the edges round and the results are normally favorable. But with dichroic, the edges tended to be sharper and the surface was somewhat rough and in some cases not quite as dimensional as you would normally see with dichro capped with clear glass.



So I then decided to cap the dichro glass with clear glass, basically making cabochons, and then fusing them to the glazed surface. The bowl vases shown here were created using shapes that had been glazed and fired in the normal manner. Then glass cabochons were placed around the edges and fully fused. The results are dimensional glass with smooth, colorful surfaces.

Once that was completed, I started thinking about how you could attach glass cabochons to vertical shapes, since the glass won't stick to a vertical surface during firing. Even if you glued them in place, the glue burns away in firing and the glass would fall off. And then I had one of those "Duh!" moments. If I glue the glass on, why would I need to fire? Just glue the cabs on a finished piece and leave it at that!



This square dish has a free form engraving art pattern on the entire interior. After glazing and firing, dichroic glass and a coating of clear frit were added in the bottom and fired to full fuse. Since glass and clay expand and contract at different rates, you'll almost always get crazing (small cracks) in the glass so this technique should only be used on decorative items, not shapes intended to hold food or drink. The metallic finish along the edge of the bowl was done using a fired overglaze product.

Overglazes come in small containers and are costly, but the product goes a long way. One little bottle of gold could be used on the edges of 20 or more of these bowls. Since not every customer wants to purchase an entire bottle of gold overglaze, many studios will instead charge a fee for its use, depending on the amount of color used. A few dollars here and there can add up quickly, more than covering the cost and increasing profits. I fire my gold overglaze at the same time as the glass. Overglazes can also be used on top of glass for bright metallic finishes.

Perhaps you're not into all the metallic bling, but you like the dimensional glass technique. You can work with regular COE 90 or 96 fusible glass on your ceramic surfaces. This large pottery bowl was completed with low-fire glazes on bisque shapes and fired. Then glass was placed around the edges and fired according to the full fuse program.



Notes

To learn about the ceramic engraving techniques used on many of these shapes, refer to the January 2014 issue of *Fired Arts & Crafts*.

The following shapes used in this article were provided by Bisque Imports:

BI 1290 Cube Box with Lid

BI 1296 Big Box

BI 214 Picasso Bowl

BI 2129 Cross Plaque

BI313 Perfect Pasta Bowl



This dragonfly plate was made with a clay slab where clay coils were attached with slip to make the dragonfly shape. I've done this as a successful workshop by sprinkling various colors of frit in the cavities. But I looked at this one and decided it would be so much better to place various pieces of dichroic glass in the wings and coat with clear frit before firing to a full fuse temperature. Since the pieces of dichro don't necessarily cover every single spot of the wings, you want to be sure to have a black glaze behind that glass. That way it will show up black if the glass shrinks up at all. I missed that on my first attempt and has some white areas showing around the edges of the glass which really stood out.



Do you have a hard time keeping nice square edges when you construct and fuse glass crosses? Here's an easy cure for that! Ceramic crosses can be glazed in any colors and have glass fused to the top. Since the cross does not melt, it keeps its shape, but glass chips add color and dimension.

Full Fuse Firing Schedule

The items shown here were all glazed, finished, and fired before glass was added. The following firing program was used to fuse the glass:

Segment	Heating rate per hour	Temperature	Hold time
1	300 F	1,150 F	30 min.
2	200 F	1,370 F	20 min.
3	400 F	1,480 F	20 min.
4	max	950 F	60 min.
5	150 F	800 F	10 min.

Allow kiln to cool to room temperature before opening

I wanted to give my boxes a little more appeal, so I added dichroic glass. But this time, I also wanted to cap the dichroic with clear glass so I'd get the best finish and depth to the colors. So I added a coating of clear medium frit to the top. When first applied, the frit appears to obscure the glass underneath, but when fired, it becomes transparent and allows the colors below to show through.

Glass and ceramics really do accent one another. Many possibilities exist for combing the two. Experiment with using scraps of glass to accent your items, whether fusing directly to the surface or making beads, balls, or cabochons. Glass can add color, depth, and intrigue to a shape, and spark new interest from existing and potential customers. It's also a way for studio owners to upsell. If you display samples in your studio showing these options, your customers will want to replicate the look. Another \$10 or \$20 add-on is an easy move for many customers, and all those additional sales will make a difference in your cash drawer!

Michael Harbridge has been teaching fired-arts workshops for more than 35 years and is the educational arts manager for Royal & Langnickel Brush and the creator of clay puzzling. He can be contacted by mail at P.O. Box 108, Iola, WI 54945, by phone at (715) 281-6450, or by e-mail at info@claypuzzling.com. Visit his website at www.claypuzzling.com.

Sources

Bisque Imports: www.bisqueimports.com



Quality Molds Original Designs
Our Speciality: Sweet

3 of 21 new molds for Easter and Summer 2014

Gangbuster 3635
Fairies Extra Small Gift

3651 "Iris" 3652 "Aster"

Printed Catalog \$12.00 Postage Paid within the US
P.O. Box 148 Rockwood, MI 48173
734-379-3400 www.claymagicinc.com

CLAY Magic INC. CERAMIC PRODUCTS



NEW MEXICO CLAY

NMclay.com "We Make Clay" Mica Red Clay
Sheepdog Fiber Clay low usps shipping by the box
See www.nmclay.com or call 1-800-781-2529

 New Casper Porcelain
Scary white and translucent
nmclay.com/casper 



Duncan Glazes, Stains, Tools, Brushes.
Get 10% off! Buy 24 items and get 20% off!
Discount will show in the shopping cart.

We take School and Community Center PO's
and Credit Cards Call to get set up!



800-781-2529