

History of Crystalline Glazes

Pottery making is one of the world's oldest crafts and has been around since pre-history. But, on a scale of things, crystalline glazing is only in its infancy. Before 150 years ago, there were probably no crystalline glazes, or if there were, they were probably achieved through accidental means and were not understood.

During the mid-eighteenth century, most ceramic work was made in large factories and was usually cast. A separate worker did each step along the road of production so an individual piece could have been handled by dozens of workers. A chemist would design the glaze in his lab and chemists at the various ceramic factories would compete to produce the most interesting glazes. In 1885 at The Sèvres National Porcelain Factory in Paris, crystalline glazes were first developed. Two chemists at Sèvres, Charles Lauth and George Dutailly realized that glazes made with an over-saturation of zinc silicate could develop crystals. They issued an alarm about these contaminants to the chemists in other porcelain factories, and warned others how to avoid this 'problem'. Perhaps intrigued, many of the large ceramic manufacturers started producing these glazes. But it wasn't until 1897 that Sèvres also started to produce crystalline glazes.

After the turn of the 20th century, most of the porcelain manufacturing factories were experiencing financial problems with crystalline glazes. Production costs for individually glazed pieces were relatively high and the technique was unpredictable. With the outbreak of World War I, most companies stopped making these glazes.

The idea of artist-potter changed dramatically during the 1920s and 1930s. Mass produced pottery where an individual worker was responsible for only one aspect of the production made in factories was losing its appeal. Individual potters now performed nearly all the production processes. They dug their own clay, designed and made the pot, then glazed and fired it in their own personally constructed kilns. The factories could mass-produce the functional ware; but the artist-craftsperson became a means of defense against the materialism of industry and its insensitivity to beauty.

Potters such as Bernard Leach, Shoji Hamada and Michael Cardew perhaps best exemplify this individualistic attitude that was now growing in both Europe and the United States. Alfred University in New York State established the School of Clay Working and Ceramics in 1900, and with pottery making now being taught at the university, credibility came to the craft.

Adelaide Alsop Robineau from Syracuse, New York started experimenting with crystalline glazes during the early 1900s until her death in 1928 using recipes from Sèvres and making up her own glaze recipes. She and her husband produced a magazine that discussed different glazing techniques and they published crystalline glaze recipes.

Herbert Sanders studied at Ohio State University, where he received the first PhD in ceramics in the United States. He began researching crystalline glazes while at Ohio State and developed his first crystalline glaze in 1931. He went on to become an educator and researcher and wrote a book called *Glazes for Special Effects*, which has a couple of chapters on crystalline glazes.

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Marc Hansen was a student of Herbert Sanders and he developed some extremely beautiful crystalline glazes. He too went on to become a researcher and educator and he formulated his own frits using them as part or the entire glaze.

One of Marc Hansen's students was David Snair. David was a graduate of Ohio State University and in 1975 he wrote an article published in *Ceramics Monthly Magazine* called *Making and Firing Crystalline Glazes*. This was my first exposure to crystalline glazes, and probably hundreds of others like me became intrigued, and we started experimenting using David's glaze recipes. To this day, many crystalline glaze potters are still using David's glaze recipes or variations thereof.

In 1993, Derek Clarkson, a British potter, organized a show of crystalline glazes at the Manchester Art Gallery in England. Historical crystalline pieces were featured together with contemporary works of studio potters from England, Europe, United States, Canada and Japan.

In 1997, I wrote the first book dealing exclusively with crystalline glazes. Since then there have been several books written on the subject and interest is continually growing. The second edition of my book was published in 2005 to keep up with the rapid changes taking place with kiln technology, which simplified firing this glazing technique. The advent of the kiln temperature controller has taken much of the labor and guesswork out of this process, so there are many more potters now working in this glaze technique.

In the last several years, exhibits dealing exclusively with crystalline glazes have taken place in Europe and North America. These exhibits have allowed the public to see these fascinating glazes and have done much to promote their popularity. The show, *The Crystalline Glaze Spectrum, A Journey from Student To Master*, organized by William Schran and hosted by Northern Virginia Community College is a little different than other exhibits in that Bill Schran has invited anyone working in crystalline glazes to submit photos of their work to be juried for submission into the show. Students and those just starting in this glaze process will be showing their work along side the master and professional. Over 60 potters responded from the US, Canada, Chile, Australia and Europe. Bill and his community have selected from over 130 pieces to create an exhibit offering a variety of shapes and techniques which will create an exhibit as individual as the crystals themselves.

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Author of *Crystalline Glazes* published by A & C Black, 2nd edition, 2005. Diane has also published several articles in ceramic and craft magazines. Her work has been shown in galleries in France, England, Germany, the Netherlands, Canada and the USA. She works from her home studio, Wilton Pottery, Wilton, Ontario, Canada.
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