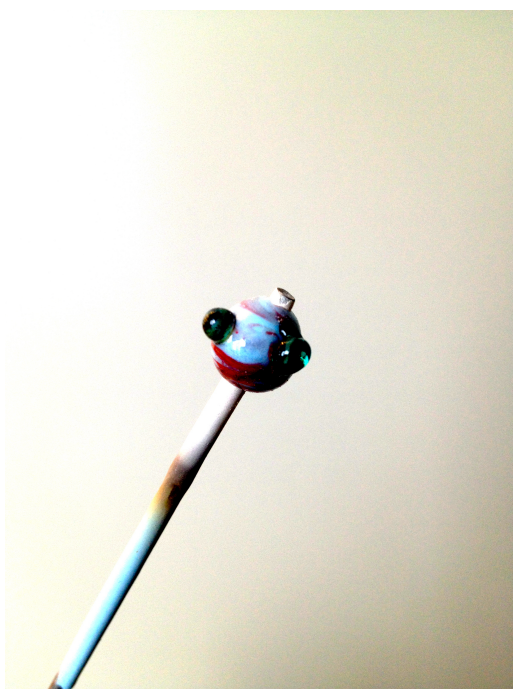


GLASSWORKING REFLECTION

BY: DANA STULL

In the first project, we created a lampwork bead made of molten glass. We used a torch to heat the glass to the glass transition temperature, where it softened and flowed like a liquid. Glass is categorized as a supercool liquid, so heating it brought it back to a flowing, liquid state. We wrapped the molten glass around a mandrel coated in heat-resistant clay to make the shape of a bead, and added a second layer of molten glass to make a dot pattern. Since glass has a high COE (coefficient of thermal expansion), the bead had to be annealed, or brought down to a lower temperature carefully and slowly. We set our beads in a hot container of vermiculite in order to prevent thermal shock, and were annealed later in a kiln. My finished bead can be seen in (a).

(a)



(b)



<http://en.wikipedia.org/wiki/>

<File:Glass.sculpture.kewgardens.london.arp.jpg>

This technique has been used in the artistic community for centuries. Even ancient Egyptians utilized glassworking for their jewelry making, and the technique of core-forming to make vases and cups. In the modern art community, artists like Dan Chihuly have mastered the craft and created stunning pieces like *The Sun*, shown in (b). Glassworking studios apply the same technique we used in lab on a much grander scale, with large mandrels and large containers containing molten glass.

This project helped me to understand chemical concepts through the construction of art. This project was particularly difficult technically, and one had to be extremely attentive to ensure that the glass didn't heat too quickly and shatter. The end project was well worth the effort!