Obsidian is a unique geologic material with physical and chemical properties that make it an ideal subject for archaeological investigation. It has been utilized to create sharp-edged tools, knives, weapons, ritual objects, and jewelry, and its visual and mechanical properties have continued to capture the attention of people throughout human history. The homogeneous chemical properties of obsidian sources and their subsequent artifacts have enabled archaeologists to characterize and trace networks of its acquisition, exchange, and use. As such, obsidian has become a hallmark of provenance-based archaeological inquiry. Obsidian provenance data are used to answer anthropological questions pertaining to lithic resource procurement strategies, mobility and cultural exchange, and technological developments over time and space. Obsidian also has the time-dependent property of absorbing water making it potentially useful for dating artifacts made from obsidian. A variety of analytical methods have played an integral role in advancing this research. At present, researchers have characterized more than 800 geologic sources of obsidian in at least 40 different countries worldwide. We invite colleagues from around the world to share results from their current obsidian research.