Vogel M. B.  Des Marais D. J.  Jahnke L. L.  
*Mineralogy and Organic Preservation Acid Sulfate Fumaroles and Thermal Features: Analog for Mars Early Aqueous History* [#5355]

Modern volcanic solfotara at the Valles Caldera, New Mexico can serve as an analog for sulfate deposits on Mars.

Warner N. H.  Farmer J. D.  
*Sub-Glacial Hydrothermal Alteration Minerals in Sandur Deposits, Iceland: Implications for the Detection of Habitable Hydrous Environments on Mars* [#5602]

In this study we examine the mineralogical signatures of sandur deposits associated with a basaltic, sub-glacial volcanic system in southern Iceland. Similar Icelandic localities have been considered analogs for volcano-ice processes on Mars.

Walton A. W.  
*Are There Multiple Communities of Euendolithic Microboring Organisms in Basalt Glass of the Ocean Basins? Examples from Hawai’i* [#5196]

Three distinct kinds of microborings occur in samples from the HSDP core from Hawai’i. The forms differ in behavior and timing in the alteration sequence. The suggestion is made that the forms represent activity of different microbes or consortia.

*Differential Bacterial Colonization of Volcanic Minerals in Deep Thermal Basalts* [#5257]

There are reports of microbial weathering patterns in volcanic glass and minerals of both terrestrial and Martian origin. Volcanic minerals are colonized differentially in subsurface hydrothermal environments by a variety of physiological types.

Honma A.  Roden E. E.  
*Chemolithotrophic Microbial Oxidation of Basalt Glass* [#5367]

A Fe(II)-oxidizing, nitrate-reducing enrichment culture is being used to evaluate the potential for lithoautotrophic microbial growth coupled to oxidation of basalt glass, and to distinguish signatures of biotic vs. abiotic mineral transformation.