



A different kind of volcano

Tanzania's Oldoinyo Lengai (whose name means "Mountain of God") is unique among currently active volcanoes: It is the only one that spews carbon-based lavas. Most lavas are rich in silicates, but that from Oldoinyo Lengai is dominated by carbonates and contains almost no silicates. As a result, the lava has a lower temperature—around 550°C —and, as seen in this July 2005 photograph, looks more like motor oil than the familiar glowing red of hotter, silicate lavas. The source of the carbonatite lava had been an outstanding question: Is it due to differential melting of typical mantle rock under specific conditions, or to the presence of rock with unusually high carbon content? A new analysis by an international team of researchers has shown that the gases emitted by the volcano are indistinguishable from those found at mid-ocean ridges and continental rifts, and that the upper mantle underlying all three environments has similar composition. (T. P. Fischer et al., *Nature* **459**, 77, 2009; image courtesy of Tobias Fischer, University of New Mexico.)

To submit candidate images for Back Scatter, visit <http://www.physicstoday.org/backscatter.html>.