

MICROWAVE MELTING AND DRILLING OF BASALTS

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The paper presents two experimental methods for basalt processing by microwaves, and their results. One method employs a single-mode cavity to melt basalt, and to produce a volcanic glass (obsidian). The other method uses an open-end applicator (i.e. a microwave drill [1]) to form holes in basalt rocks. Experimental observations of the basalt interactions with microwaves in these two schemes are described, and their significances are discussed.

REFERENCES

1. E. Jerby, V. Dikhtyar, O. Aktushev, and U. Groszlick, "The Microwave Drill," *Science Magazine*, Vol. 298, pp. 587-589, Oct. 18, 2002.

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