

ESR research of shocked samples from the Wolfe Creek meteorite crater in Western Australia

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Shocked samples from the Wolfe Creek meteorite crater, Western Australia, were investigated by x-ray and ESR spectroscopy.

Quartz extracted from the samples showed cell volume expansion about 1-3 percent.

Uniquely strong ESR signal at $g = 2.0041$ was observed as well as signals of E' center and peroxy center.

Shocked samples from the Wolfe Creek meteorite crater in Western Australia (S19- 18', E127-47'), were investigated by x-ray and ESR spectroscopy. Quartz extracted from samples at the rim of the crater showed cell volume expansion about 1-3 percent. Sample rock was crushed and grains about 100-125 micron were etched by hydrochloric acid, then 5 percent hydrofluoric acid for 48 hours before ESR study. Uniquely strong ESR signal at $g = 2.0041$ was observed.