

## Tracking of evolution of microcrack connectivity via electrical impedance spectroscopy

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The migration of fluids through low-porosity rocks in the Earth's crust plays an important role in a wide variety of mechanical and chemical processes. The microcrack connectivity is an important factor governing the fluid migration. We are examining the evolution of microcrack connectivity by electrical impedance spectroscopy. Impedance measurements are conducted on brine-saturated granite samples, which were deformed under a brittle condition. The maximum axial stress was systematically varied. The electrical conductivity increases by about 3 orders of magnitude with the increase in the maximum axial stress. It suggests that the microcrack connectivity greatly increases with deformation. The frequency dependence of impedance will be discussed in our poster.