

## Friction and deformation experiments under high-temperature and high-pressure conditions with the gas-medium apparatus at AIST

# Koji Masuda[1], Koichiro Fujimoto[1]

[1] AIST

<http://www.gsj.go.jp/~masuda/myhome.html>

In order to construct a constitutive formulation for an earthquake generation process, we need the information on friction, deformation and flow characteristics of fault materials under the seismogenic zone conditions. We designed and developed a gas-medium high-temperature high-pressure tri-axial apparatus. We have started experimental studies with this apparatus under the conditions of max 200MPa confining pressure, max 1000C in temperature, and max 200MPa pore pressure. We will study effects of grain size of fault gouge on frictional characteristics and carry out deformation experiments of mylonite samples.

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