

# High-Strain Zones

## Structure and Physical Properties

Edited by

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This collection of research and review papers addresses the question of structural evolution during deformation to high strains and the physical properties of rocks that have been affected by high-strain zones. The discussions range from natural examples at outcrop to microscopic studies. They include experiments and numerical models based on the active processes in high-strain zones as well as studies on the physical properties of highly strained rocks in the field and laboratory. Specific questions addressed include magnetotelluric imaging of faults, magnetic fabrics, fabric development, seismic properties of highly strained rocks, change of rheology with strain, influence of melt on the localization of deformation, the relationship between deformation and metamorphism as well as new methods in the analysis of deformation. The book is aimed at an interdisciplinary group of readers interested in the effects of high strain in rocks.

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### Cover illustration:

Shear zone bordered by nearly symmetrical strain gradients, which display the evolution from granular, undeformed gabbro protolith to strongly foliated and fine-grained mylonite (darker band). White feldspar-rich veins bent into the right-hand side strain gradient highlight the progressively increasing strain from protolith to mylonite.

Photograph by Jean-Pierre Burg