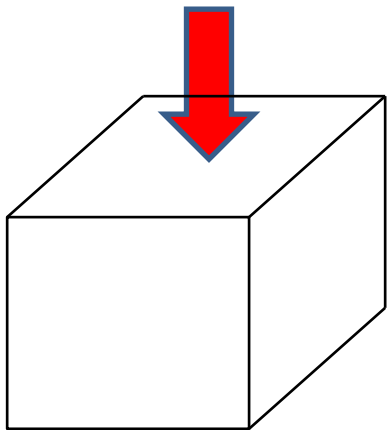


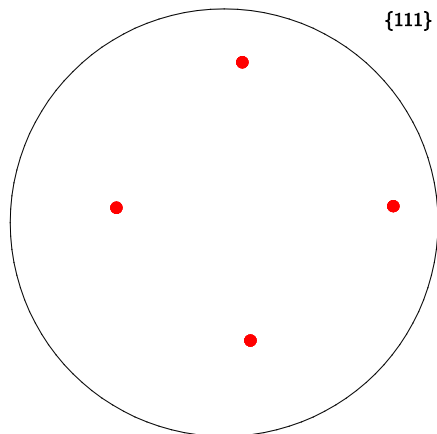
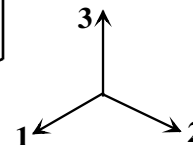
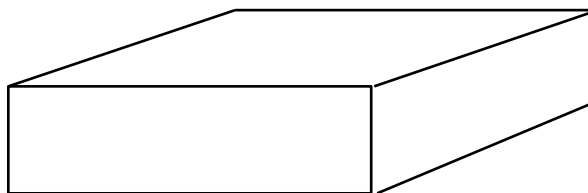
Crystal Plasticity FEM: The Mechanical Response and Texture Evolution of Aluminum Single Crystals / Polycrystals Using One- Element Simulations

Q. Ma, E.B. Marin, M.F. Horstemeyer

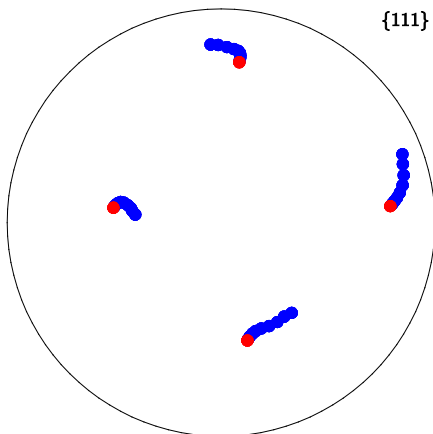
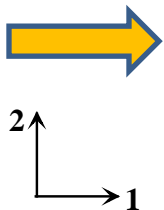
deformation



compressed state at 75%



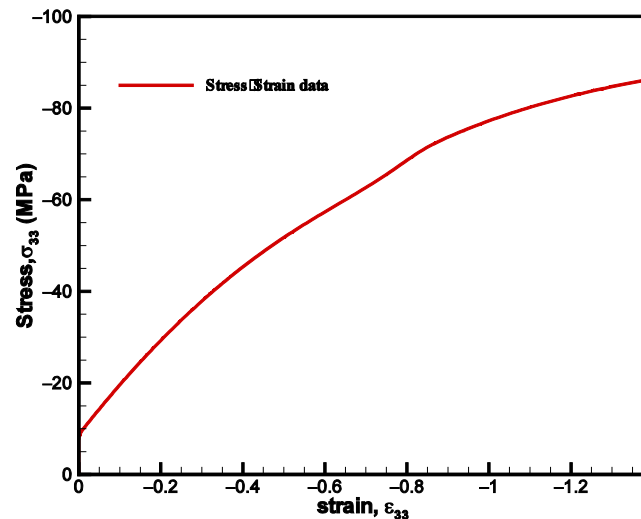
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{111}

initial orientation
[35°, 16°, 79°]

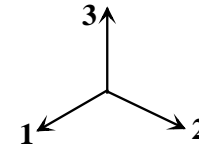
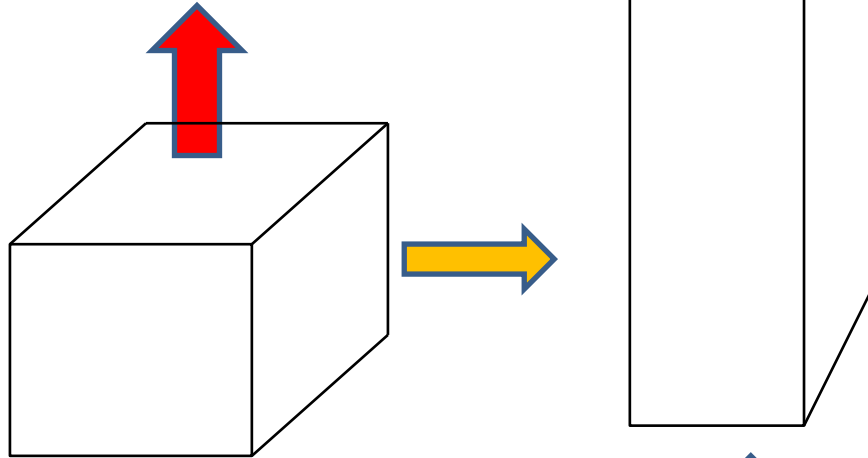
orientation rotation
at 75% strain



stress-strain behavior

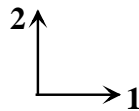
tension state at 75% strain

deformation

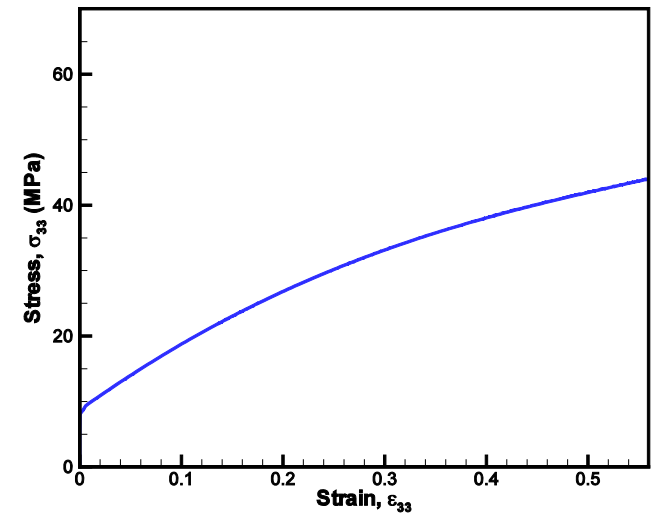


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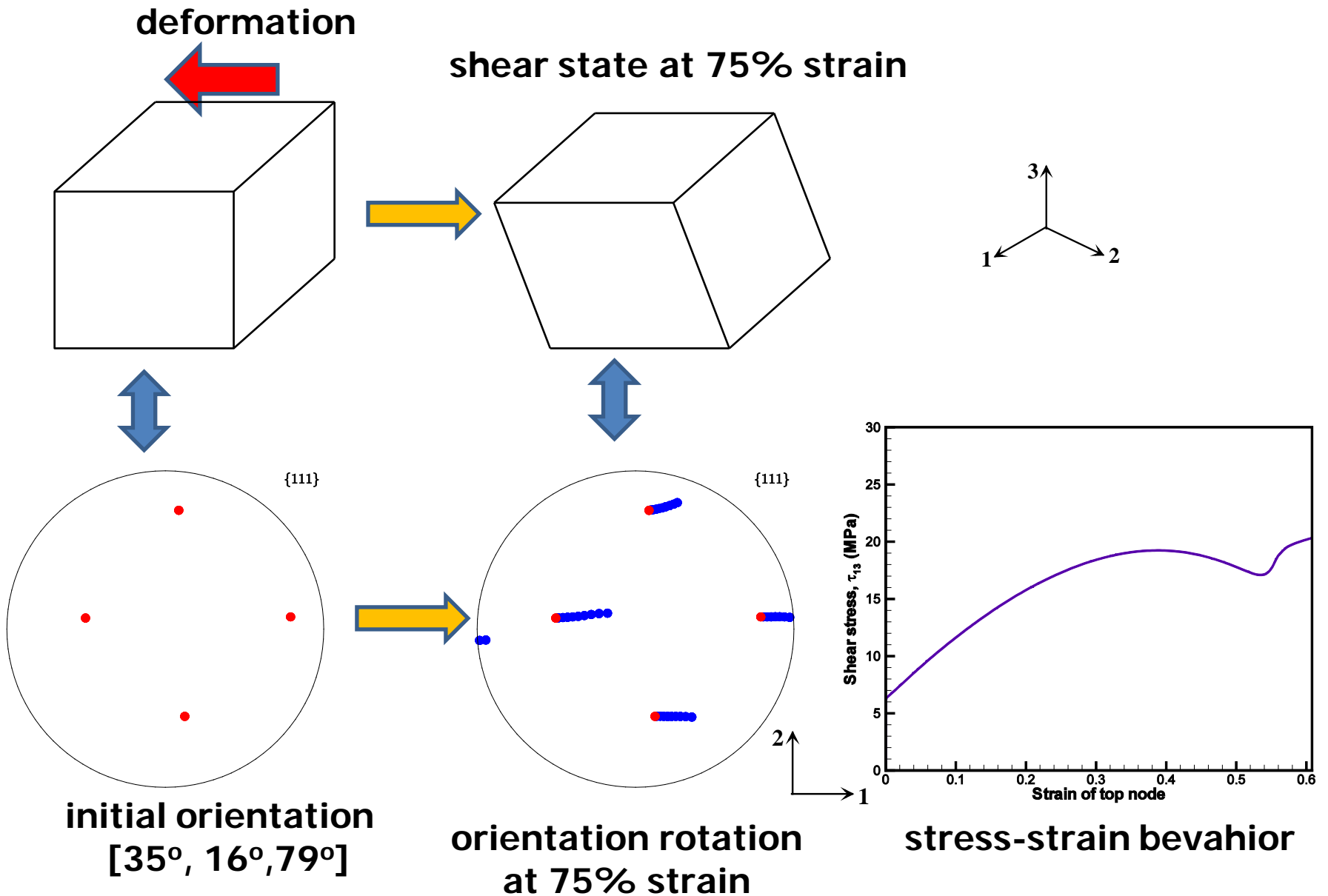


orientation rotation
at 75% strain



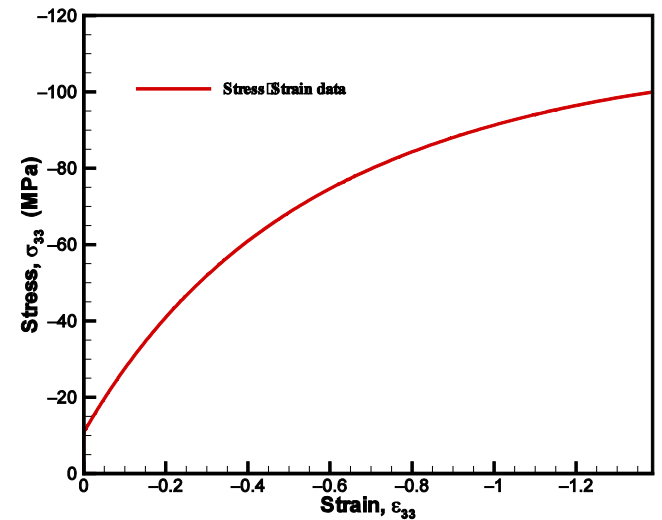
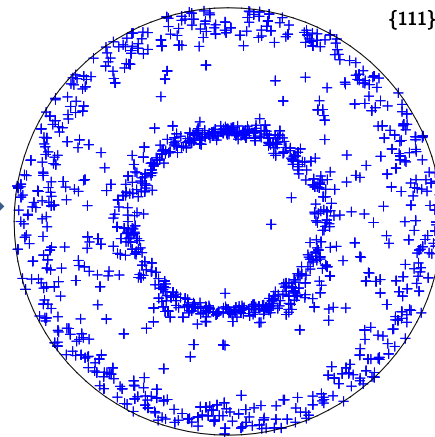
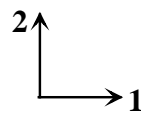
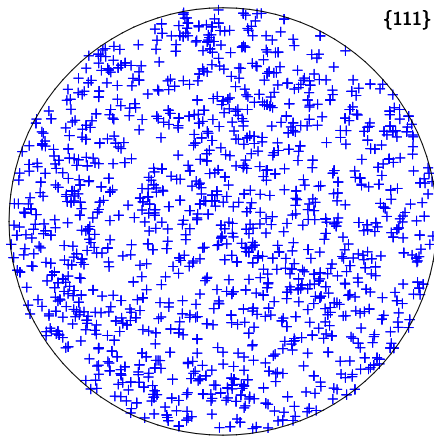
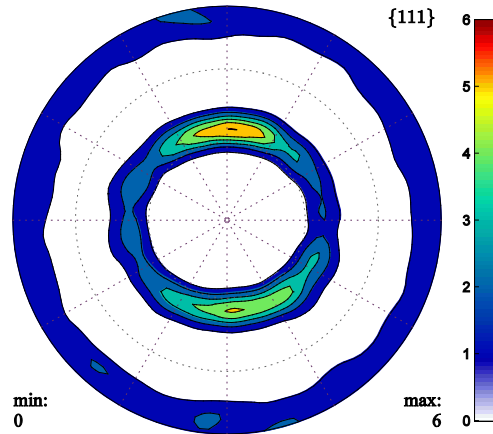
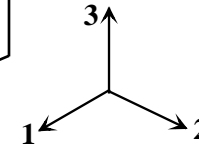
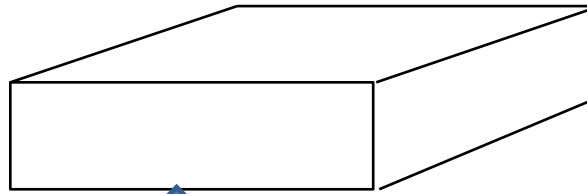
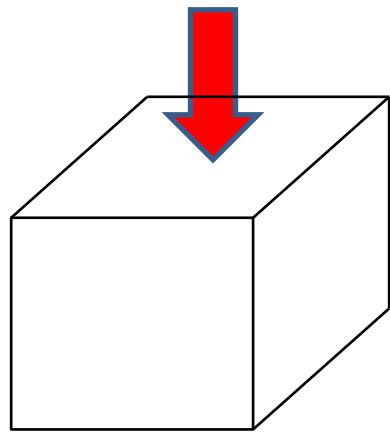
stress-strain behavior

initial orientation
[35°, 16°, 79°]



deformation

compressed state at 75% strain

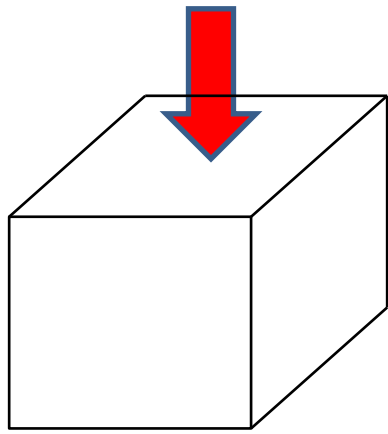


initial distribution

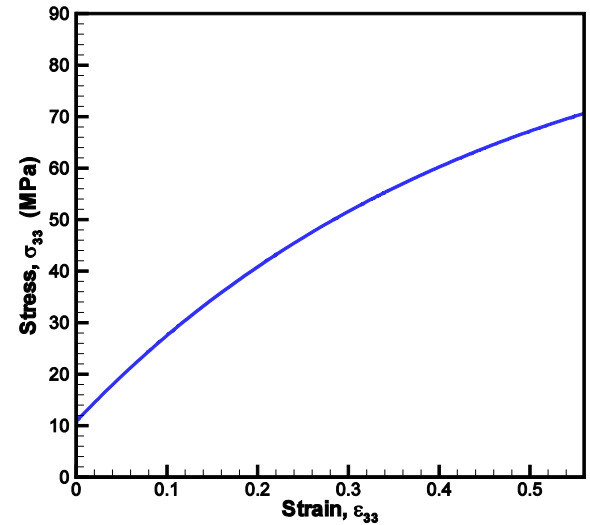
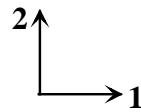
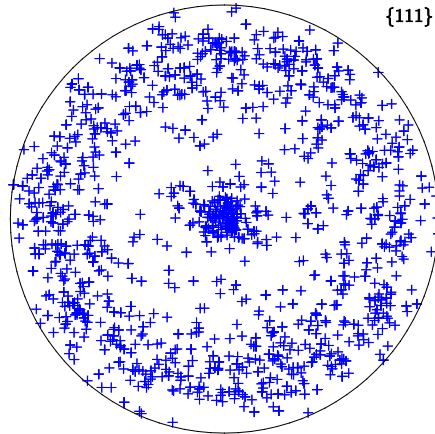
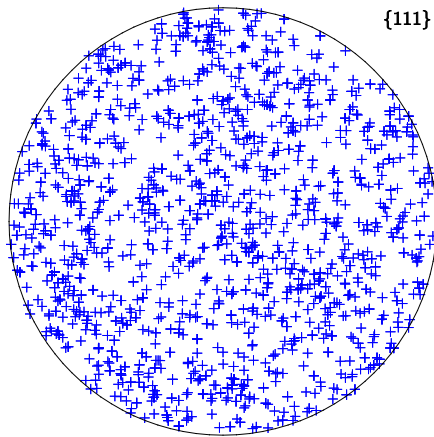
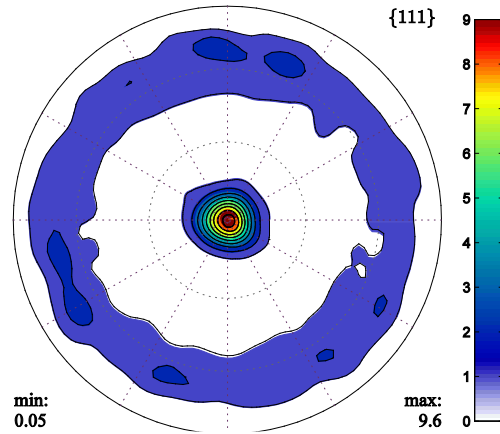
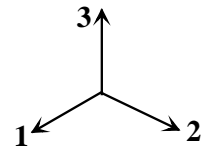
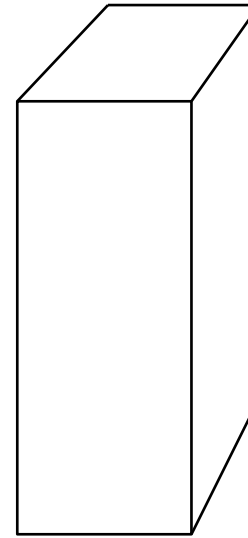
texture at 75% strain

stress-strain behavior

deformation



Tension state at 75% strain

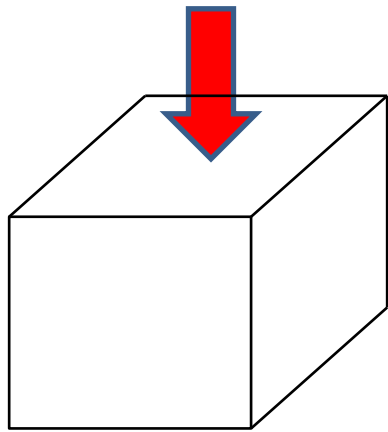


initial distribution

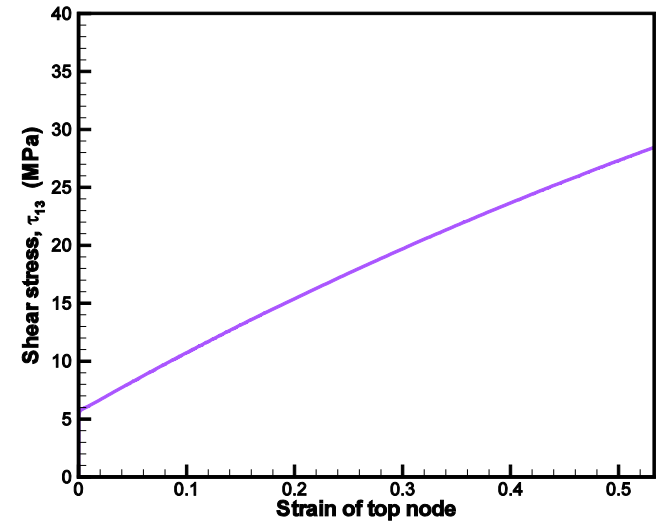
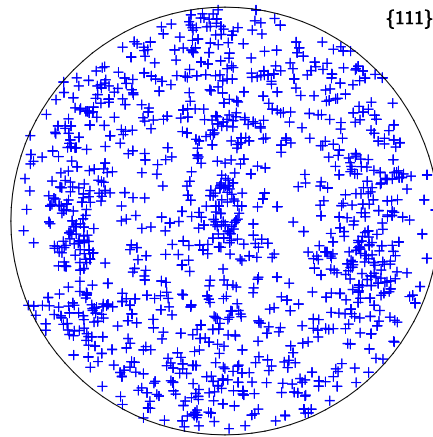
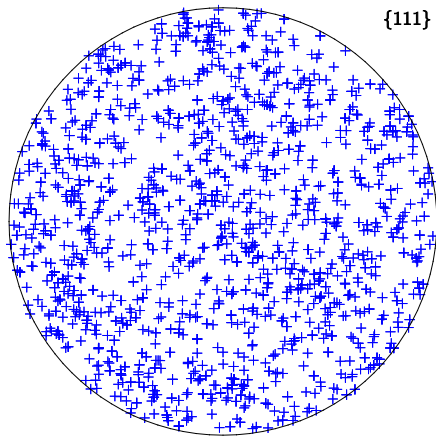
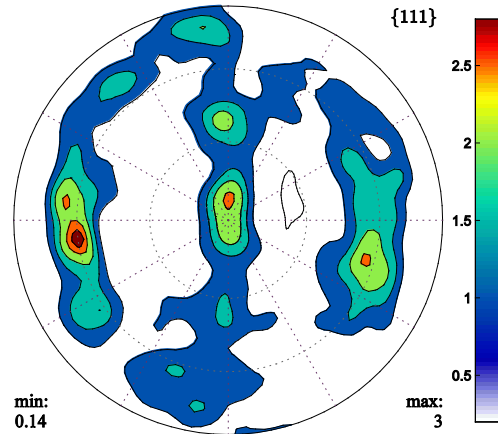
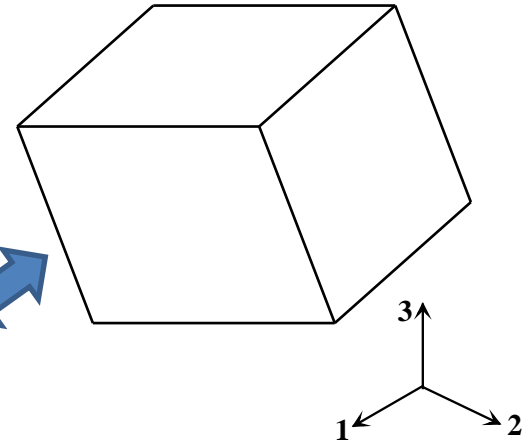
texture at 75% strain

stress-strain behavior

deformation



shear state at 75% strain



initial distribution

texture at 75% strain

stress-strain behavior