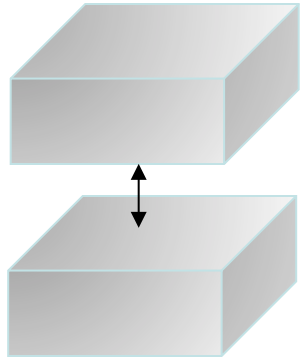


2. Microscopic mechanisms of deformation behavior

J.E. Medvedeva, Missouri S&T

(i) Fracture

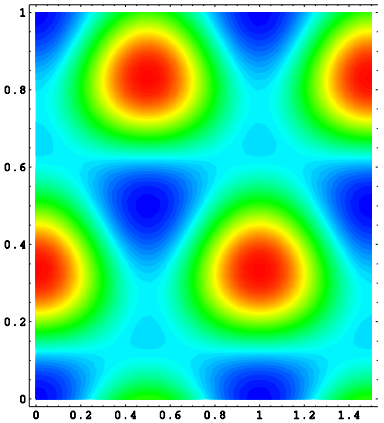
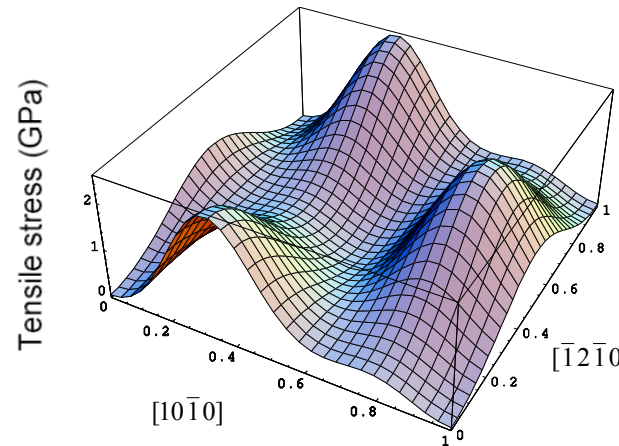
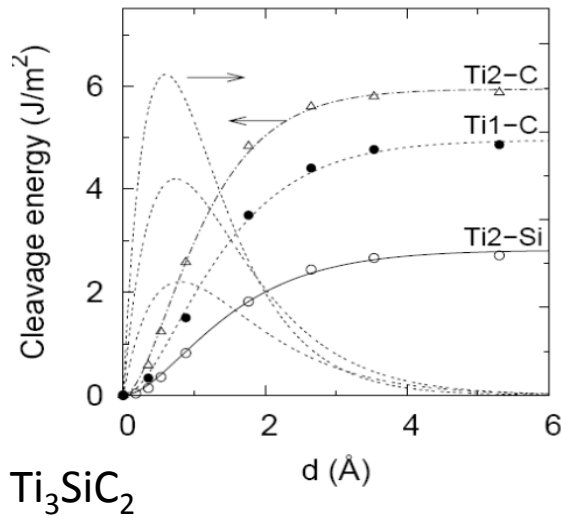
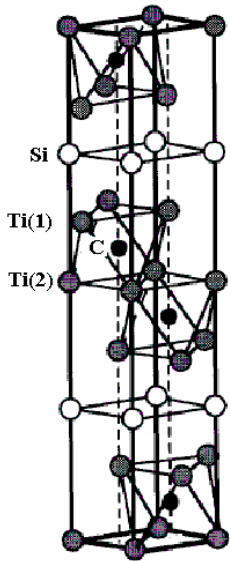
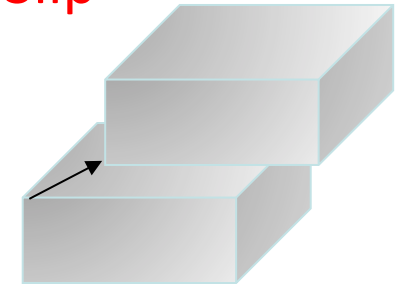
γ_s, σ_{max} - cleavage energy and stress



Brittle/ductile fracture criterion:
 $D = 0.3 \gamma_s / \gamma_{US} > 1$

(ii) Slip

$\gamma_{US}, \sigma_{shear}$ stacking fault energies



Dislocation characteristics