Plasticity as the Γ-limit of a Nonlinear Dislocation Energy with Mixed Growth

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Plasticity describes deformation of materials undergoing non-reversibles changes.
At atomic level dislocations play key role in this effect.

Main result:
Variational model for straight, parallel dislocations $\Gamma, \varepsilon \to 0$ \rightarrow Macroscopic plasticity model.

Key words:
- $\Gamma$-convergence,
- Geometric Rigidity / Korn’s inequality for fields with non-vanishing curl,
- Ball Constructions.