

- Part I General introduction
- Formal geometry of crystal lattices
- The theory of reaction rates
- The thermodynamics of irreversible processes
- The structure of real metals
- Solids solutions
- The theory of dislocations
- Polycrystalline aggregates
- Diffusion in the solid state
- The classical theory of nucleation
- Theory of thermally activated growth
- Formal theory of transformation kinetics
- Part II Growth from the vapour phase
- Solidification and melting
- Polymorphic Changes
- Precipitation from supersaturated solid solution
- Eutectoidal transformations
- Order-disorder transformations
- Recovery recrystallisation and grain growth
- Deformation twinning
- Characteristics of martensitic transformations
- Crystallography of martensitic transformations
- Kinetics of martensitic transformations
- Rapid solidification
- Bainite steels
- Shape memory alloys