

Milestones in the History of Dislocations

Illustration

Here are a few of the major milestones in the discovery of dislocations:

- **Theory of Elasticity** Timpe (1905)
Volterra (1907)
- **Theoretical shear limit** Frenkel (1926)
- **"Verhakungen"** Dehlinger (1929)
- **Postulate of (edge) dislocations** Orowan (1934)
Polanyi (1934)
Taylor (1934)
- **Postulate of screw dislocations** Burgers (1939)
- **Multiplication mechanisms of dislocations** [Frank-Read](#) (1950)
- **Direct observation of dislocations (TEM)** Hirsch et al. (1956)
- **Dislocation free Si crystal growth** Dash (1960)

These discoveries solved the **3000** year old puzzles of metallurgy! But no Noble prizes were awarded and mankind hardly noticed that something big has happened.