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Dislocations

And now the rest of the story!

Mechanism of plastic deformation connected with existence of defects in atom arrangement known as dislocations

Ideally, atom arrangement within a crystal repeats perfectly

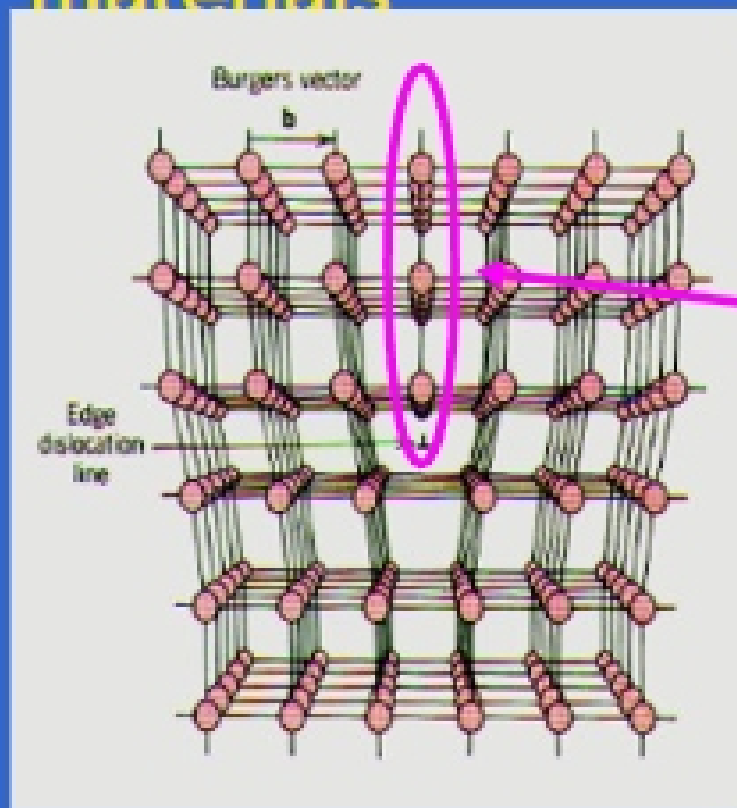
Mistakes (defects) in repetition occur in reality

Dislocations

Situation is this:

strength of a material w/ no dislocations is

20-100 times greater than ordinary materials



Think of edge dislocation as extra plane of atoms partially inserted into crystal