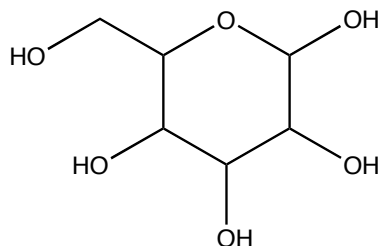
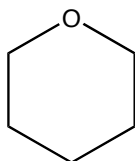


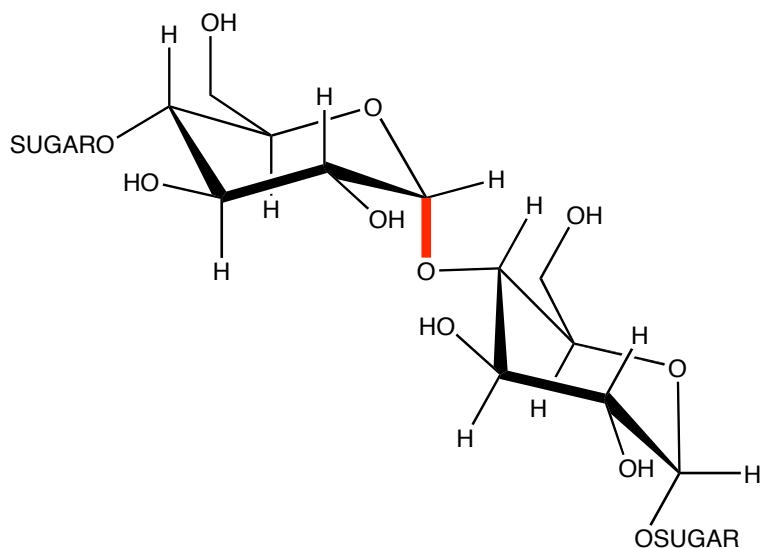
Stereochemistry–Organic Structures in 3D

Stereoisomers have identical connectivity
but differ in their spacial orientations of atoms or groups

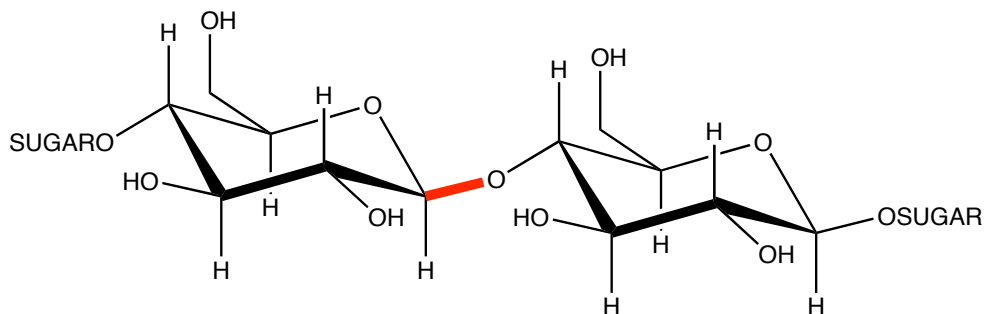
pyran
1 stereoisomer



a six carbon sugar
32 stereoisomers



amylose: a constituent of starch, helical, readily digested to provide energy

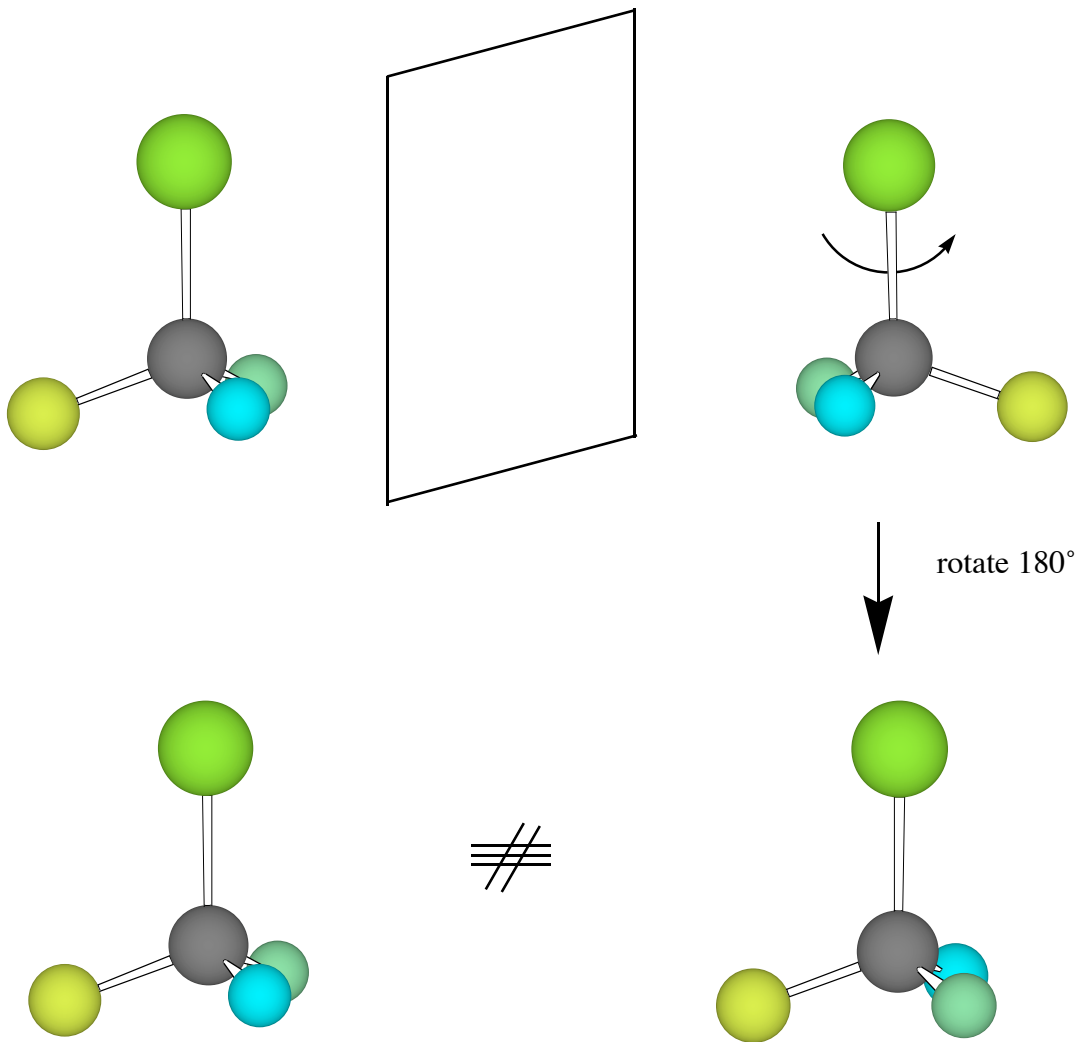


cellulose: a structural component of plants, linear, not digestable
(unless you are a cow)

Chirality

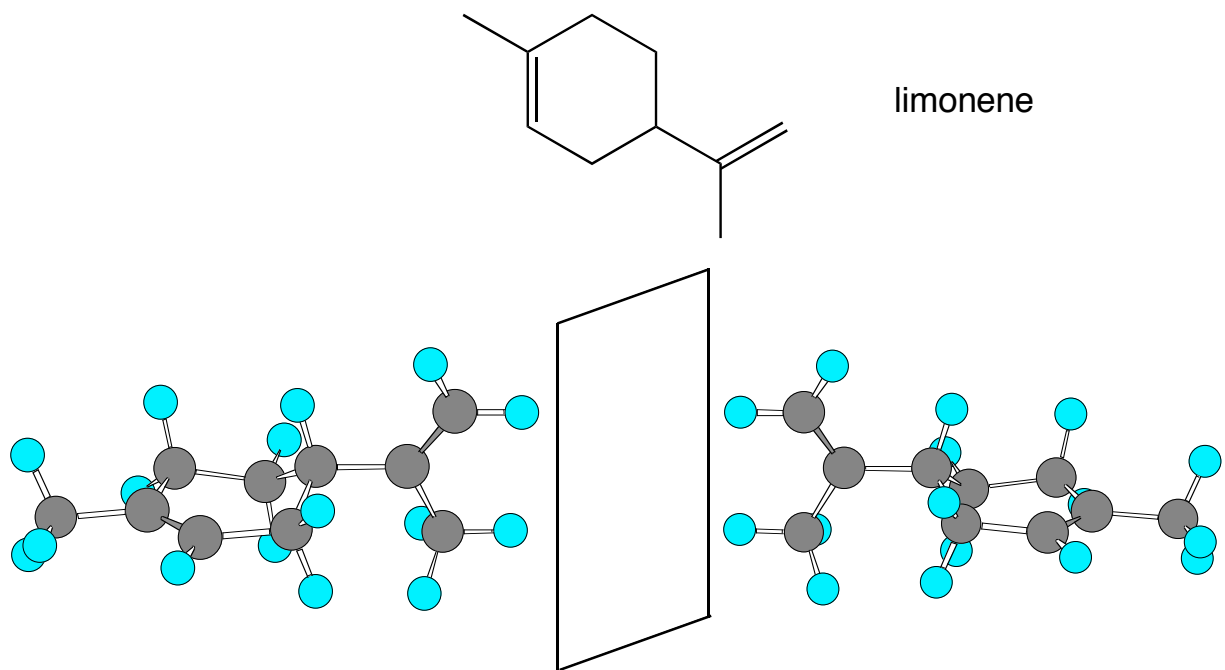
Chiral objects are **NOT** superimposable on their mirror images

A tetrahedron with four different points is chiral



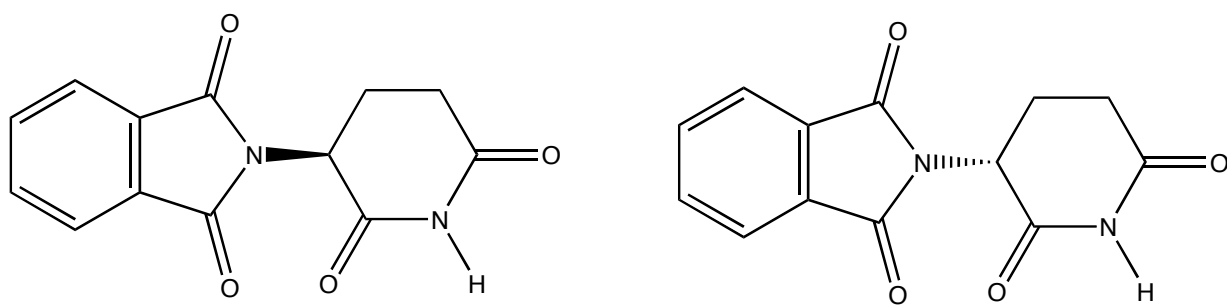
Enantiomers

Enantiomers are non-superimposable mirror images



limonene

one enantiomer of limonene smells like lemons...but the other smells like oranges



thalidomide

one enantiomer cures morning sickness...but the other causes birth defects