If the interchange of two ligands on an atom in a molecule results in a stereoisomer of the molecule, the atom is called a stereocenter or stereogenic center.

eg. 1:

Interchange of, say, the ethyl group and the hydrogen atom on the carbon atom shown in red in 1 results in 2, which is a stereoisomer of 1. (1 and 2 are enantiomers.)

Thus, the highlighted carbon atom in 1 is a stereocenter.

eg. 2:

Interchange of the two ligands on the carbon atom shown in red in 3 results in 4, which is a stereoisomer of 3. (3 and 4 are diastereomers.)
Thus, the highlighted carbon atom in 3 is a stereocenter.

see also chiral center

Contributors

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