

relative configuration

1. The *configuration* of any *stereogenic (asymmetric) centre* with respect to any other *stereogenic* centre contained within the same molecular entity. Unlike *absolute configuration*, relative configuration is reflection-invariant. Relative configuration, distinguishing *diastereoisomers*, may be denoted by the configurational descriptors R^* , R^* (or l) and R^* , S^* (or u) meaning, respectively, that the two centres have identical or opposite configurations. For molecules with more than two asymmetric centres the prefix *rel-* may be used in front of the name of one enantiomer where R and S have been used. If any centres have known absolute configuration then only R^* and S^* can be used for the relative configuration.

See also α (*alpha*), β (*beta*) (1 and 3).

2. Two different molecules $Xabcd$ and $Xabce$, may be said to have the same relative configurations if e takes the position of d in the tetrahedral arrangement of ligands around X (i.e. the pyramidal fragments $Xabc$ are superposable). By the same token the *enantiomer* of $Xabce$ may be said to have the opposite relative configuration to $Xabcd$. The terms may be applied to *chiral* molecular entities with central atoms other than carbon but are limited to cases where the two related molecules differ in a single ligand.

Both definitions can be generalized to include *stereogenic units* other than asymmetric centres.

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