

E, Z

The approved *stereodescriptors* of stereoisomeric alkenes $R^1R^2C=CR^3R^4$ ($R^1 \neq R^2$, $R^3 \neq R^4$; neither R^1 nor R^2 need be different from R^3 or R^4), cumulenes $R^1R^2C[=C=C]_n=CR^3R^4$ and related systems e.g. $R^1R^2C=NOH$, $HON=C\{[CH_2]_n\}_2C=NOH$. The group of highest *CIP priority* attached to one of the terminal doubly bonded atoms of the alkene, oxime, etc. or cumulene (i.e. R^1 or R^2) is compared with the group of highest precedence attached to the other (i.e. R^3 or R^4). The stereoisomer is designated as *Z* (zusammen = together) if the groups lie on the same side of a reference plane passing through the double bond and perpendicular to the plane containing the bonds linking the groups to the double-bonded atoms; the other stereoisomer is designated as *E* (entgegen = opposite). The descriptors may be applied to structures with a fractional bond order between one and two; and to double bonds involving elements other than carbon. They are not used to describe ring substitution relationships.

See also *cis-trans isomers*.

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