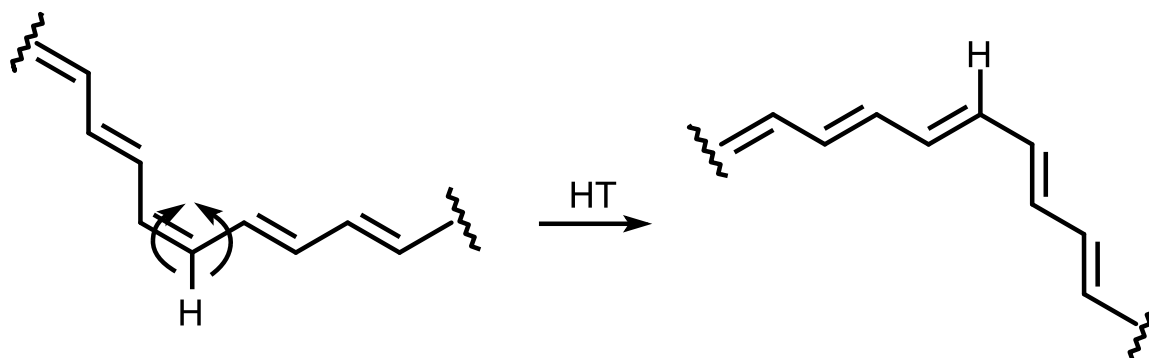


hula-twist (HT) mechanism

Volume-conserving mechanism of photoisomerization of a double bond in a conjugated system involving simultaneous configurational and conformational isomerization, e.g., the photoinitiated concerted rotation of two adjacent double and single bonds.



Note:

Under unconstrained conditions, the conventional *one-bond-flip* (OBF) process is the dominant process with the hula-twist (HT) being an undetectable higher energy process. It has been proposed that under confined conditions (e.g., a conjugated double bond *chromophore* in a protein cavity or in a solid matrix), the additional viscosity-dependent barriers makes the OBF a less favourable process, allowing the volume-conserving HT to be the dominant process for photoisomerization.

Source:

PAC, 2007, 79, 293 (*Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)*) on page 352