Alkenes

- General formula: \( C_nH_{2n} \)
- \( sp^2 \) hybridization

Isomers

Structural isomers
- Their atoms are the same, but are arranged in space in different order.

Stereoisomers
- Atoms are attached in the same way, but are arranged in space in different order.

Enantiomers
- Chiral molecule stereoisomers that are mirror reflections of each other.

Diastereomers
- They are not mirror reflections.

Chirality
- Any tetrahedral atom (e.g., C) with four different groups attached to it and not superposable (e.g., hands).

\[ \ast \text{stereoisomers} = 2^n \]

\( n \) = \* chiral atoms.
**Nomenclature**

- Ethene: $\text{CH}_2=\text{CH}_2$
- Propane: $\text{CH}_3\text{CH}=\text{CH}_2$
- 1-Butene: $\text{CH}_3\text{CH}_2\text{CH}=\text{CH}_2$

- 5,5-Dimethyl-2-hexene: $\text{CH}_3\text{C} = \text{C}\left(\text{CH}_3\right)\text{C}_2\text{H}_3$
- 2,3-Dimethyl-2-buten: $\text{CH}_3\text{CH} = \text{C}\left(\text{CH}_3\right)\text{C}_2\text{H}_3$
- 2-Methyl-2-buten: $\text{CH}_3\text{C} = \text{C}\left(\text{CH}_3\right)\text{C}_2\text{H}_3$
- 3-Methyl-2-buten: $\text{CH}_3\text{CH} = \text{C}\left(\text{CH}_3\right)\text{C}_2\text{H}_3$

(Translated from Arabic to English)