

# Free Radical Reactions

## 1 Reactions Shown by Free Radical

### i. **Combination**

Joining of two radicals,  $2^\circ$ ,  $1^\circ$  majorly show combination.

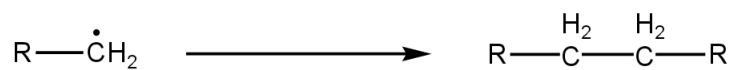
### ii. **Disproportionation**

In case of  $3^\circ$  radical combination is not possible, hence disproportionation occurs.

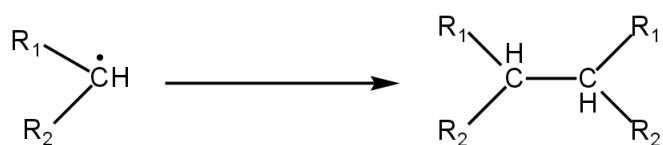
## 2 Important facts about Free Radicals

- Incomplete octet, 1 unpaired  $e^-$
- Highly unstable
- Paramagnetic
- Can be stabilized by both EDG and EWG.
- Neither a Lewis base nor a Lewis acid.
- $sp^2$  hybridized.
- Trigonal Planer Geometry.

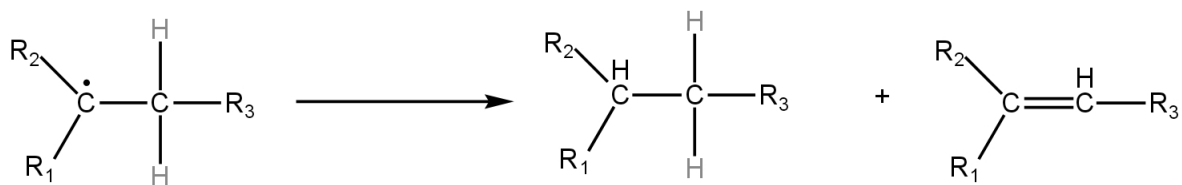
1° Radical Combination



2° Radical Combination



3° Radical Disproportionation



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