

onium compounds

1. *Cations* (with their counter-ions) derived by addition of a *hydron* to a mononuclear *parent hydride* of the nitrogen, chalcogen and halogen families.

H_4N^+ ammonium	H_3Se^+ selenonium
H_3O^+ oxonium	H_2Br^+ bromonium
H_2F^+ fluoronium	H_4Sb^+ stibonium
H_4P^+ phosphonium	H_3Te^+ telluronium
H_3S^+ sulfonium	H_2I^+ iodonium
H_2Cl^+ chloronium	H_4Bi^+ bismuthonium
H_4As^+ arsonium	

2. Derivatives formed by substitution of the above parent ions by univalent groups. The number of substituted hydrogen atoms is, especially in the case of *hydrocarbyl* substituents, indicated by the adjectives primary, secondary, tertiary or quaternary. E.g. Cl_2F^+ dichlorofluoronium, $(\text{CH}_3)_2\text{S}^+\text{H}$ dimethylsulfonium (a secondary sulfonium ion), $\text{Cl}(\text{CH}_3)_3\text{P}^+$ chlorotrimethylphosphonium, $(\text{CH}_3\text{CH}_2)_4\text{N}^+$ tetraethylammonium (a quaternary ammonium ion).

See also *arsonium compounds*, *halonium ions*, *oxonium ions*, *phosphonium compounds*, *quaternary ammonium compounds*, *stibonium compounds*, *sulfonium compounds*.

3. Derivatives formed by substitution of the above parent ions by groups having two or three free valencies on the same atom. Such derivatives are, where possible, designated by a specific class name. E.g. $\text{RC}\equiv\text{O}^+$ hydrocarbylidyne oxonium ions,

$\text{R}_2\text{C}=\text{N}^+\text{H}_2 \text{X}^-$ iminium compounds,

$\text{RC}\equiv\text{NH}^+$ nitrilium ions.

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