

Methylation Encyclopedia Article

Methylation

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Methylation

A chemical reaction in which the methyl radical (-CH_3) is added to some substance. The most common mechanism by which methylation occurs in the **environment** is **biological methylation**, which involves the action of living organisms. Bacteria in oxygen-poor soils, for example, can convert metallic **mercury** to an organic compound, methyl mercury. Similar reactions occur with other metals, including **arsenic**, selenium, tin, and **lead**. These reactions are significant because they convert non-soluble metals of low toxicity into soluble forms with high toxicity. Light can also induce methylation. Photomethylation has occurred in the laboratory, but its relative importance in environmental systems is not yet well understood.