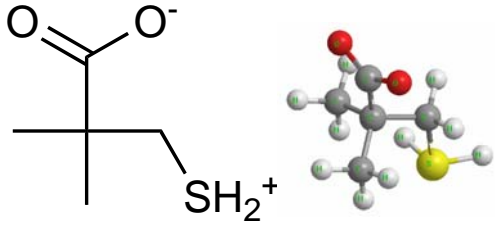

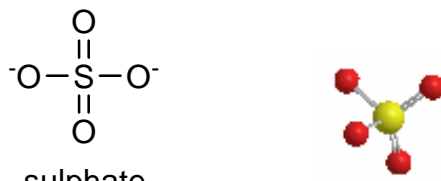


## The Connection between the Smell of the Sea and the Clouds Above It

 <p>dimethyl sulphonio propionate C<sub>5</sub>H<sub>10</sub>O<sub>2</sub>S</p>	<p>1. In a hypertonic environment such as the ocean, the water within an unprotected cell would quickly leak out as collisions between its water molecules would be more frequent than those outside of the cell, which are attracted to the sea's ions. Algae fight this potentially lethal problem with dimethyl sulphonio propionate (DMSP), which keeps them isotonic without maintaining a high concentration of harmful salts.</p>
 <p>Dimethyl sulphide</p>	<p>2. When algae either die or are eaten, DMSP decomposes into acrylic acid and dimethyl sulphide (DMS), which escapes into the atmosphere and gives sea air its characteristic sweet smell.</p>
 <p>sulphate O<sub>4</sub>S<sup>2-</sup></p>	<p>3. DMS is then quickly oxidized into sulphates, which act as condensation nuclei for the formation of clouds. The weather that results from these clouds stirs the ocean and makes more nutrients available to algae.<sup>1</sup></p>

<sup>1</sup> This was taken from James Lovelock's *Healing Gaia*. His controversial Gaia hypothesis argues that the Earth's biological and physical systems act in a self-regulating way. The above is an example of how the living interacts with the environment in a way that benefits organisms in the long run. Suffering from allergies, I woke up one morning sneezing, wondering if pollen grains released by plants and dispersed by wind also act as condensation nuclei for clouds. Pollination, of course, eventually leads to fertilization and seed formation, and seeds won't germinate without rain. A [Danish study](#) provides evidence for this fleeting thought.