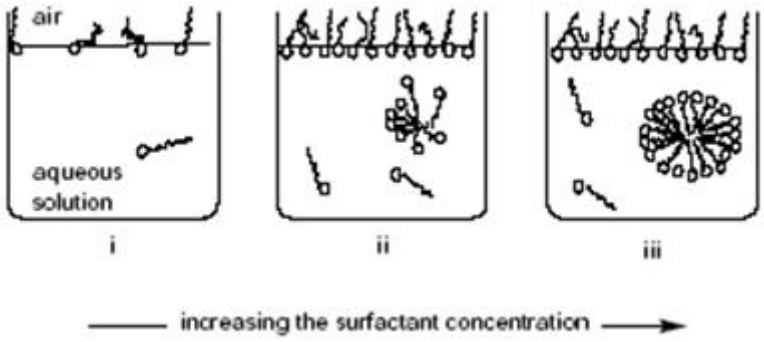
Answer on Question#38481 - Chemistry - Physical Chemistry

Question:

In molecular terms, explain how do surfactants reduce the surface tension of water after adsorbtion at the air-water interface.

Answer:

Surfactants are compounds that lower the surface tension at the interface liquid-gas, liquid-liquid or liquid-solid. These molecules can effectively interact with both phases, so they are mainly located on the interface, lowering surface energy, thus stabilizing it.



On the interface liquid-gas the molecules of surfactant are arranged such that the hydrophilic part of the molecule is located on the surface of water, and the hydrophobic is pointed in the air.