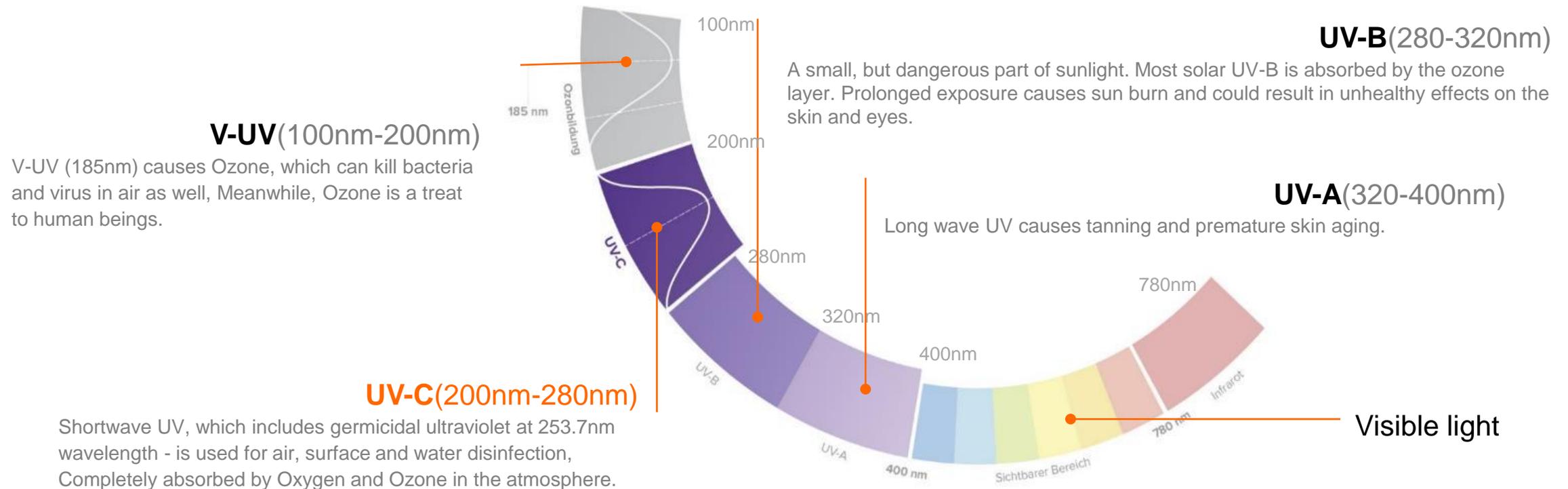
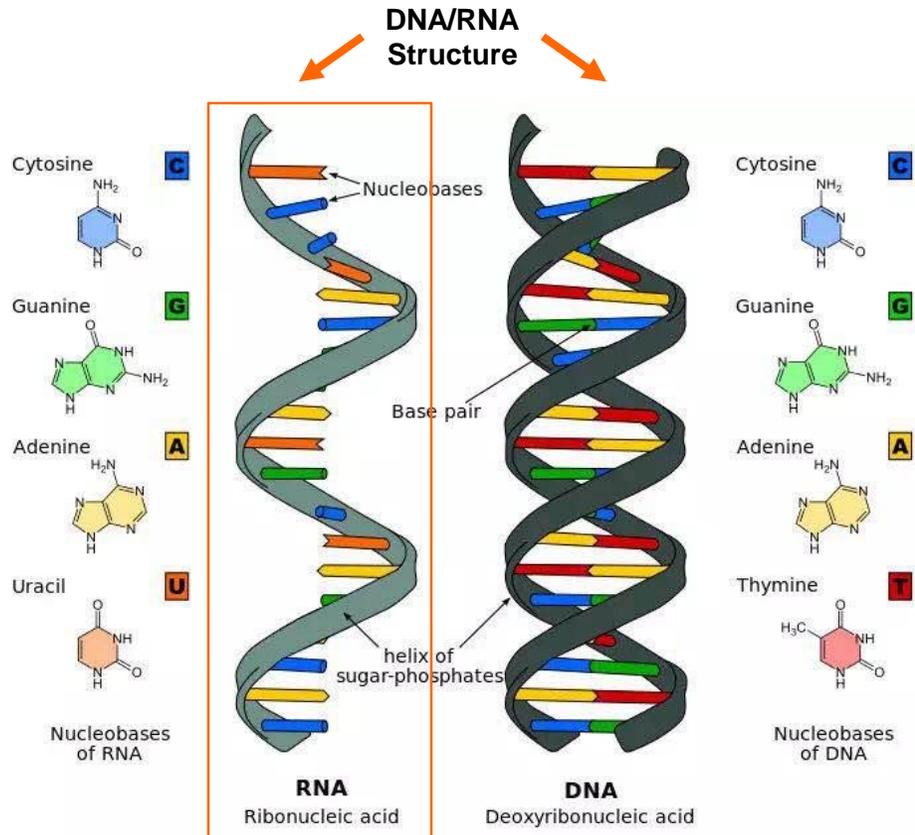


UV-C is proved a mature technology of killing micro-organisms efficiently

- As we all know, UV is part of sun light, which is an easy way of surface cleaning in our daily life.
- UV is a sort of invisible electromagnetic radiation, with wave length between 100-380nm.
- The very first artificial UV light source was introduced to the world in Germany 200 years ago.



How does UV-C kill micro-organisms(bacteria and virus)



The cell nucleus of micro-organisms(bacteria and virus) contains thymine, a chemical element of the DNA / RNA. This element absorbs UV-C at a specific wavelength of 253.7 nm and changes to such an extent (formation of thymine dimers) that the cell is no longer capable of multiplying and surviving.

- UV-C (253.7nm) penetrates the cell wall of the micro-organism
- The high energy photons of the UV-C are absorbed by the cell proteins and DNA / RNA
- UV-C damages the protein structure causing metabolic disruption
- DNA/RNA is chemically altered so organisms can no longer replicate
- Organisms are unable to metabolize and replicate, **CAN'T** cause disease or spoilage



Coronavirus (SARS-CoV-2) has typical RNA structure

Comparison

V-UV(185nm) also kill micro-organisms as well, but causes Ozone accordingly which is harmful for human beings. It is used for more industrial applications. UV-C is safer.