

PL0003

**Plasma in Everyday Life**

Wolfgang Viöl

HAWK University, Fraunhofer IST, Göttingen, Germany

wolfgang.vioel@hawk-hhg.de

In a brief journey from the beginnings to everyday applications of the novel technology, plasma as the fourth state of matter and, more important, as innovative tool in industry and the broadly based field of life sciences is presented. Directly from the surrounding atmosphere, cold atmospheric pressure plasma with high-energy electrons and ions is generated by strong electric fields. Recent developments ensure that using special plasma parameters the technology is safe and easy to use, can be applied to a huge range of different surfaces, and provides an answer to the increasing demand for treatment of specialized surfaces - even highly sensitive biological surfaces like human skin. The different treatment methods often aim on regulation of wettability or to the addition of certain chemical features to technical surfaces, to accelerate healing processes or to kill germs without chemical agents in biological environments. Tailored plasma technology can be utilized in the fields of environment, hygiene, health, production and energy.

**Keywords**

plasma  
atmospheric pressure  
cold plasma  
life sciences