

# POSITIVE COATING

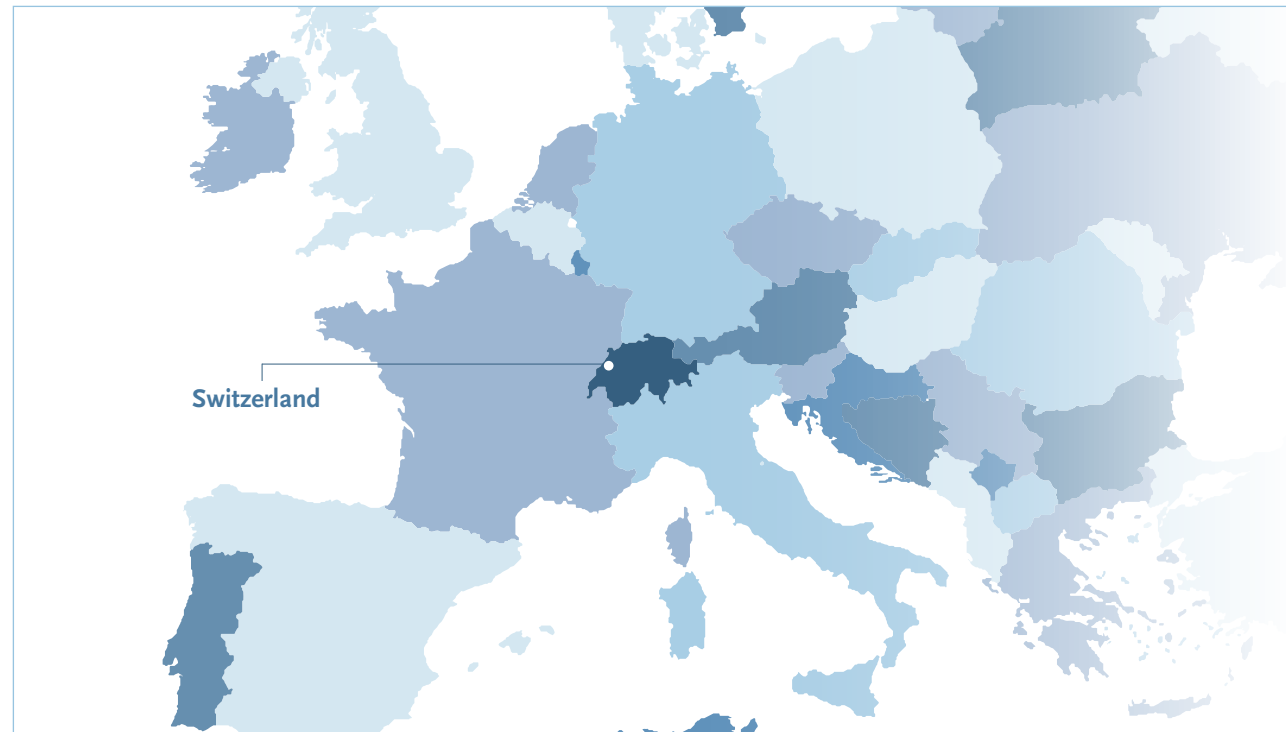
Founded in 2004, the Swiss company Positive Coating is an expert in the development and industrialization of innovative solutions in the coatings field. The main activities are based on PVD (Physical Vapor Deposition) and ALD (Atomic Layer Deposition) technologies for decorative and functional coatings on high-end components (metallic, ceramic, glass and plastic).



The company employs about 25 highly qualified collaborators on its production site on the cutting edge of technology. Extremely concerned about a professional service, Positive Coating places quality, reactivity and flexibility at the heart of its activities. Its reputation of reliable and dynamic key partner is recognized by the most famous companies in their respective sectors.

# POSITIVE COATING A Swiss Company

## NANODECO® Atomic Layer Deposition For Medical Devices



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YOUR KEY PARTNER FOR HIGH-QUALITY ALD COATINGS

**NanoDeCo®** ALD NanoDeCo® metal oxide coatings are performed at nanometric scale by the growth of successive atomic layers which lead to **high-quality ultrathin films**. The structure of the final coating is **pinhole-free, conformal, uniform** and therefore perfectly **hermetic and biocompatible**.

The application of ALD NanoDeCo® coatings on medical devices is compatible with a wide range of materials such as stainless steel, nitinol, cobalt-chromium alloys, titanium alloys, ceramic, plastic, and many more.

Encapsulation and colorization properties of ALD NanoDeCo® coatings are described below. However, many other characteristics such as cell adhesion and proliferation improvement, and tissue sticking reduction still need to be explored.

### Encapsulation

Ultrathin films produced by ALD technology are perfectly suitable for the encapsulation of **highly corrosive materials** and **miniaturized electronics** which require a reliable method of protection.

This leads to preventing the implanted devices from corrosion due to body fluids and to protecting the patient from allergic reactions and rejections caused by the foreign object in the body. Furthermore, this hermetic sealing protects the patient from possible metal ion release from the implant into the body.

These encapsulation properties can also be enhanced by combining ALD NanoDeCo® coatings with other technologies in order to create multilayers.

### Colorization

Colorization by anodizing is widely spread in the medical field, but is limited to titanium and aluminum components. In that sense, ALD technology is highly innovative as it can bring color to any material such as **stainless steel, nitinol, and cobalt-chromium** alloys.

Colorization of medical instruments and devices enables clear and reliable **identification** to avoid mistakes during the operating steps. This has the huge advantage of reducing the stress for clinicians and improving the safety for patients.

From a commercial point of view, in our fast paced environment, colorization by ALD NanoDeCo® coatings is a **powerful marketing tool** to distinguish products from competitors in the same field or to address specific markets.

