

# Functional coatings on wood and wood-based materials

## Transfer offer

Due to its aesthetics and naturalness as well as its excellent processing properties, wood and wood-based composite materials are in high demand - For example as a starting material for various products.

The requirement profiles result from the applications::

- **Glueability,**
- **Paintability and**
- **Durability.**

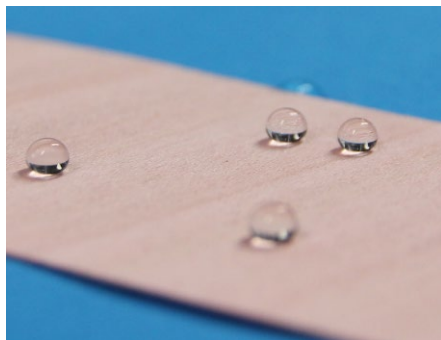


## Technical solution

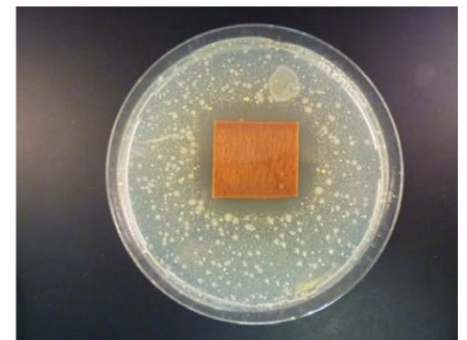
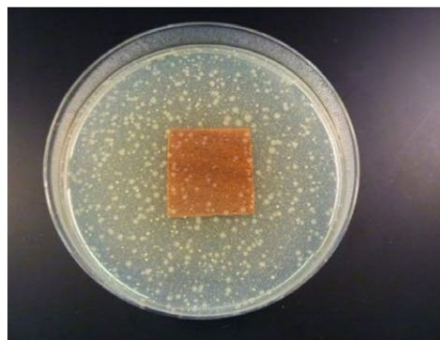
Surface treatment technologies such as atmospheric plasma coating technology or sol-gel technology offer opportunities to provide functional coatings directly on the material surfaces. According to the requirement profiles, surface properties such as

- **improved wettability of the surface for subsequent painting or gluing**
- **hydrophobic surfaces to reduce water-penetration and even**
- **antibacterial and antifungal properties for the protection towards microorganism**

Can be provided.



*Hydrophobic wood surface*



*Agarplate with E.coli and uncoated wood veneer (left) and agarplate with E.coli and silver-containing plasma-film on a wood veneer (right)*

## Advantages

- **quick and effective treatment of wooden surfaces**
- **specific surface properties can be created**
- **high durability of the coatings**

## Level of development and property rights

The named topic is a current subject of research. The methods shown are particularly interesting for products with high value and for applications in the medical field or in public areas with high public traffic.

The use of atmospheric plasma technology for film deposition is protected by a number of patents.



*Plasma-treatment on wooden google frame*



*Wooden railing in nursing home*

## Contact

Dr. Sven Gerullis  
Dr. Sebastian Spange

SG@innovent-jena.de  
SS2@innovent-jena.de

Phone +49 3641 2825-51  
[www.innovent-jena.de/en](http://www.innovent-jena.de/en)



Member of  
ZUSE-GEMEINSCHAFT