



# Licensing opportunity

## Wood coatings based on liquefied wood

### Field of use

Surface treatments;  
Coatings and Finishes

### Current state of technology

Laboratory test in progress

### Intellectual Property

Know-how

### Publication

KUMAR, Anuj, PETRIČ, Marko, KRIČEJ, Borut, ŽIGON, Jure, TYWONIAK, Jan, HÁJEK, Petr, SEVER ŠKAPIN, Andrijana, PAVLIČ, Matjaž. Liquefied wood based polyurethane-nanosilica hybrid coatings and hydrophobization by self-assembled monolayers of orthotrichlorosilane (OTS). ACS sustainable chemistry & engineering, ISSN 2168-0485, 2015, vol. 3, no. 10, str. 2533-2541.

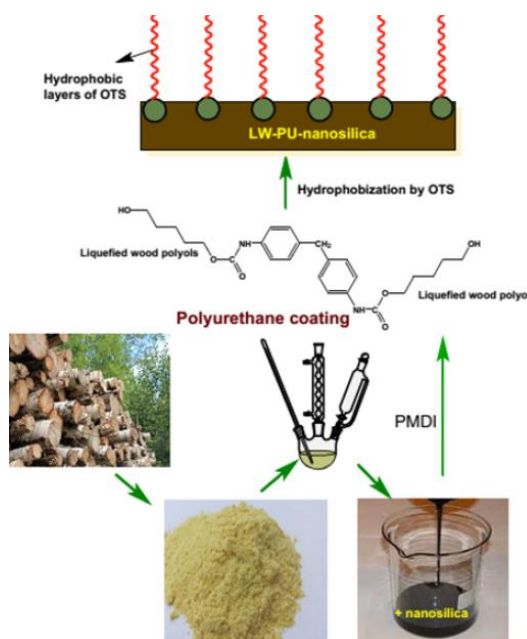
### Developed by

University of Ljubljana,  
Biotechnical Faculty,  
Department of Wood Science and  
Technology

### Contact details

Marko Petrič,  
Phone: +386 1 320 36 20  
E-mail: marko.petric@bf.uni-lj.si

[www.uni-lj.si](http://www.uni-lj.si)



### Background

The existing commercial wood coatings are mainly containing binders on the basis of synthetic resins. Both solvent- or water-borne coatings contain main ingredients made from non-renewable resources and so, their influence on the environment is considerable. Therefore, there is an intensive search for suitable binder alternatives on the basis of renewable resources. Such a potential alternative is also liquefied wood.

### Description of the Invention

There are reports and even products for wood bonding, based on liquefied wood, already described in literature. On the other hand, liquefied-wood based coatings for wood are very rarely mentioned and by our best knowledge have not been applied so far in practice. So, development and characterisation of liquefied wood based finishes for wood represent our invention.

### Main Advantages

Substitution of wood coatings with synthetic resins as a main ingredient with finishes that contain binders on the basis of renewable biomass.



»The investment is co-financed by the Republic of Slovenia and the European Union under the European Regional Development Fund.«

