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Involvement in the COST Action: Member of MC, Member of WG1

Research interest

Main research fields:

Characterization and development of low environmental impact wood preservatives. In the last years, there was a research activity on wood preservatives based on silica xerogel with added copper and boric acid.

Evaluation of natural durability of different genotypes derived from forests and from plantations. This research activity is focused on the durability, natural or conferred, of wood against wood-destroying organisms, especially fungi, insects and marine borers.

Development of innovative methodologies for the determination of natural durability.

Development of new method based on X-ray microdensitometry supposed to be accelerated, reliable and micro-invasive for the trees.

Specialized technique available in my lab

Natural and conferred durability against fungi and insects.

Impregnation of wood with preservatives .

Main equipment

2 Pilot plant for the Vacuum-Pressure-Temperature treatment of wood

- Vertical Laminar Flow cabinet
- Sterilization autoclave
- 2 Controlled temperature humidity rooms for conditioning of wood and for growing fungi and insects.
- Evaporation Tunnel in accordance with standard EN 73
- RX instrument
- Optical microscope
- Stereomicroscope
- Analytical equipment

Additional comment

Rearing in laboratory conditions of the most important timber pests (*Hylotrupes bajulus*, *Lyctus brunneus*, *Trichoferus holosericeus*) and of the certified fungal strains that degrade wood in different service conditions (Basidiomycetes, Ascomycetes, Deuteromycetes). These organisms are used for the evaluation of the protective effectiveness of wood preservatives and the natural durability of wood genotypes.