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## Finishing and modification of wood surface



Wood undergoes dimensional changes when exposed to moisture; it is susceptible to biological attack and degrades when exposed to solar ultra violet and visible radiation. To ensure long term performance, in both interior and exterior situations wood needs to be protected by appropriate finishing system. By various modification processes it is possible to change its chemical structure and improve wood surfaces properties including increasing adhesion, improving wettability, increasing water repellency etc. Traditional materials for wood protection and wood finishing are being replaced with alternate chemicals due to environmental considerations. No sufficient information is available on how these new finishes interact with wood substrate and how they perform during exterior exposure.

Focus of this project is light stability of wood surfaces and interfaces of wood/non-wood materials—including various VOC-compliant coatings and new nanocoatings. The research project should contribute to the better understanding of wood surface properties and interfaces of wood/non wood materials including ecologically acceptable materials for wood modification and finishing and nanocoatings. Research is expected to result in a better understanding of the wood surface properties and the interaction of unmodified and modified wood with with other materials (stains, paints, nanocoatings).

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**Responsible for project/Project Leader:** prof.dr.sc. Vlatka Jirouš Rajković

**Contact:** vzivkovic@sumfak.hr