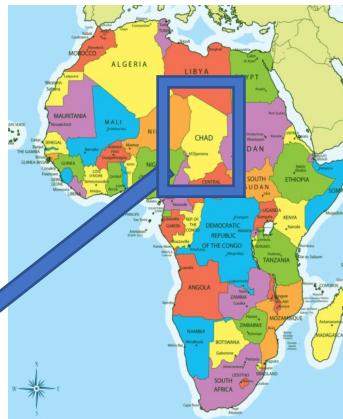


Personal Presentation



Assira KERALTA
From Chad
M2 Polymers for Advanced
Technologies
Centre de Recherche sur les
Macromolécules Végétales,
Grenoble, France



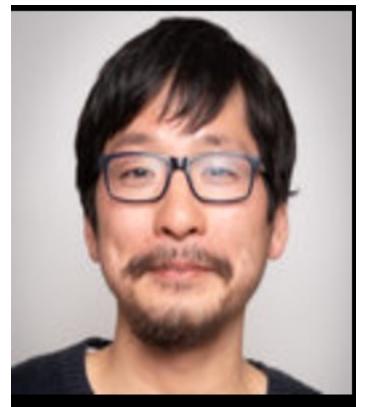
UGA
Université
Grenoble Alpes

Cermav

Dr. Yoshiharu NISHIYAMA

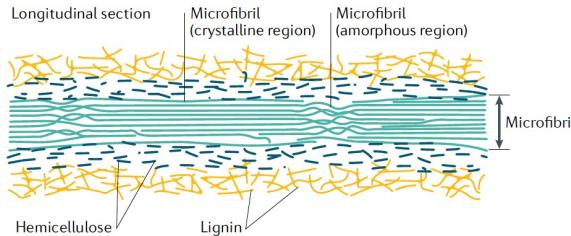


Dr. Yu OGAWA

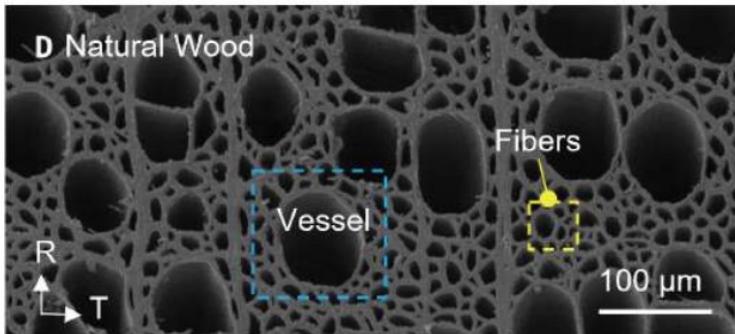


Controlled Lignin oxidation and hemicellulose deacetylation inside bulk beech wood

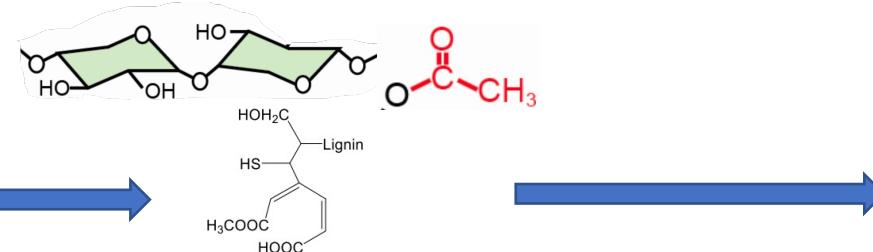
Major wood cell walls components



Lignin and hemicellulose: Rigidity and hydrophobicity



Wood a porous material



Selective chemical treatment:
Soft and enhance water uptake the cell wall

Many applications of
bulk modified wood:
densification

- Can vacuum impregnation avoid the diffusion problem inside bulk wood?
Wood is a porous material (40-75% porosity)
 - Peracetic acid (PAA) for lignin oxidation
 - NaOH for hemicellulose deacetylation
- FT-IR spectroscopy and CP/MAS ^{13}C solid-state NMR to follow oxidation and deacetylation as function of position and time.
- Homogeneous delignification
- Gradient of deacetylation from the surface

Looking for PhD position or financial support

Mail address: assira.keralta@cermav.cnrs.fr

Tel: 07 58 74 16 09

THANKS FOR YOUR ATTENTION