

**IRG Documents 2018**

**Section 1 Biology**

IRG/WP 18-10903

Colour changes in unpainted wooden façades – *Fifty Shades of Grey*

K Zimmer, L R Gobakken, O Flindall, M Nygaard

IRG/WP 18-10904

Imports of African logs, do they harbor wood-decaying alien fungi and bacteria that could become a potential threat at temperate latitudes? – First results

J Trautner, M Höpken, E Melcher

IRG/WP 18-10905

Impact of temperature and relative humidity on spatio-temporal fungal growth dynamics of Basidiomycetes

L De Ligne, G Vidal-Diez de Ulzurrun, J Van den Bulcke, J M Baetens, B De Baets, J Van Acker

IRG/WP 18-10906

Interactions between wood polyphenols and detoxification enzymes of the white rot *Trametes versicolor*

M Schwartz, T Perrot, E Aubert, S Dumarçay, F Favier, P Gérardin, M Morel-Rouhier, G Mulliert, F Saiag, C Didierjean, E Gelhaye

IRG/WP 18-10907

For the understanding of biological strategies to sustainable pest management: the case of *Nasutitermes corniger*

I Boulogne, N Amusant, R Constantino, M Falkowski, A M S Rodrigues, E Hoël

IRG/WP 18-10908

Elimination of colonies belonging to higher termite group using insecticide bait: A short review

P Dhang

IRG/WP 18-10909

Enhancing Our Understanding of Brown Rot Mechanisms through Catalytic Pretreatment and Cellulase Cocktail Treatments

S Tabor, L Orjuela, D Contreras, G Alfredsen, J Jellison, S Renneckar, B Goodell

IRG/WP 18-10910

Effects of teak, *Tectona grandis* Linn, heartwood extractives against *Heterotermes indicola* (Isoptera; Rhinotermitidae)

B Hassan, S Ahmed, M Mankowski, G Kirker, R E Ibach, M Misbah ul Haq

IRG/WP 18-10911

Response of the symbiotic flagellate protists community of subterranean termites to sublethal amounts of biocides

S Duarte, T Nobre, P Borges, L Nunes

IRG/WP 18-10912

Spanish termites standard UNE 56418:2016 “Protocol of action in urban areas affected by subterranean termite attacks”. Example of application of the standard in a real case in the old city of Vigo, Spain

D Lorenzo, A Lozano, M Touza, J Benito, M T de Troya, J Galván, L Robertson

IRG/WP 18-10913

Evaluation of the Virulence of the Termite Species Occurring in the French Tropical Overseas Territories

M Kutnik, I Paulmier, J Vuillemin

IRG/WP 18-10914

Biocontrol of wood decay insects and nematodes as an alternative to traditional chemical treatments  
L Robertson, J F Galván, F Llinares, R Viñambres, M T de Troya

IRG/WP 18-10915

Efficacy of Xotic Wood Preservative to control termites attack on *Pinus patula* wood  
H Jenya, G Meke

IRG/WP 18-10916

Liquefied wood polyols: Ecofriendly bio-based preservative for sustainable protection of wood from Termite attack  
A Kumar, A John, T S Mehra, A K Pandey, S Singh Chauhan

IRG/WP 18-10917

Termite resistance of wood-plastic composites made with acetylated wood flour, coupling agent or zinc borate  
R E Ibach, Y S Hadi, C M Clemons, S Yusuf

IRG/WP 18-10918

Response of *Terminalia mantaly* H. Perrier wood to beetles tunneling in Southern Nigeria  
G A Adedeji, U Zakka, A A Aiyeloja, A I Ochuba

IRG/WP 18-10919

Preliminary Investigation into the Natural Decay Resistance of Nigerian Grown *Hevea brasiliensis* and *Mitragyna ciliata* wood to *Phanerochaete chrysosporium* White-Rot Fungus  
J M Owoyemi, U O Emmanuel

IRG/WP 18-10920

Wood chemistry completes natural durability as criteria for shorting best provenances in the improvement of teakwood quality: case of five provenances from Ivorian Séguié's trial wood  
F B Niamke, N Amusant, A A Adima, A A Kadio, G Chaix, C Jay-Allemand

IRG/WP 18-10921

Understanding of the effect of ancestral and natural saltwater treatment on durability, fibers densification and chemical modification of palm wood  
M T Elaieb, A Namsi, M Tella, M-F Thévenon, K Chandelier

IRG/WP 18-10922

Impact of sapwood portions on the durability of adjacent heartwood of *Pinus sylvestris*, *Pseudotsuga menziesii* and *Quercus robur*. Part 1: Laboratory studies  
C Brischke, P Homann, A Gellerich

IRG/WP 18-10923

Use of x-ray microdensitometry for assessing the resistance to the fungus *C puteana* of a hybrid larches population  
S Palanti, F Alderighi, F Stefani, J P Charpentier, L E Pâques

IRG/WP 18-10924

Assessment of the durability of a lesser known species (*Borassus aethiopum* Mart.) against termite and fungi from different ecozones in Nigeria  
O O Yekin, A R Ojo

IRG/WP 18-10925

Natural resistance of *Bambusa vulgaris* to termite and powder-post beetle attack in laboratory and graveyard tests  
N A Sadiku, S O Bada

IRG/WP 18-10926

Natural durability, ethanol-toluene extractives and phenol content prediction of eight wood species from Madagascar using NIRS multispecific models

A R Razafimahatratra, H Rakotovololonalimanana, M-F Thévenon, C Belloncle, G Chaix, T Ramananantoandro

IRG/WP 18-10927

(Poster)

On the natural durability of RED MERANTI for window frames as a function of gross density wood  
K Hasse, W Unger, T L Woods

IRG/WP 18-10928

Study of the effect of extractives on the natural durability of *Eucalyptus bosistoana* wood

M Ibáñez, C Mantero, N Silva, F Resquín

IRG/WP 18-10929

Hibernation or spring awakening? – The research on wood durability and protection in marine environment

A Treu, K Zimmer, C Brischke, E Larnøy, L R Gobakken, F Aloui, S M Cragg, P-O Flæte, M Humar, M Westin

IRG/WP 18-10930

(Poster)

The anatomical determination of wood samples found in the “Fürstengräber” from Lübsow (Poland)

J Schuster, W Unger, T L Woods

IRG/WP 18-10931

Superior kempas hardwood protection with two proprietary microemulsion termiticides based on permethrin and cyermethrin against *Coptotermes* termite attack under H2 and H3 weathered conditions found in buildings

D Messaudi, A H H Wong, C A D Tawi, N Bourguiba, O Fahy

IRG/WP 18-10932

Absence of rubberwood protection dip-treated with a glycol/borate against drywood termite *Cryptotermes* spp

A H H Wong, C A D Tawi, P Dhang

IRG/WP 18-10933

(Poster)

Evaluation of the effect of zwitterionic buffers on termite gut protists

S Duarte, D Jones, L Nunes

IRG/WP 18-10934

Termite species associated with processed wood in South America

C Jorge, M Ibáñez

IRG/WP 18-10935

(Poster)

Efficacy of some soil termiticides tested according to “Modified Ground Board Test”

C Vongkaluang, K Charoenkrung, N Same Rain

## **Section 2 Test methodology and assessment**

IRG/WP 18-20632

In-service performance of wood claddings and windows – a Norwegian survey

L Ross Gobakken, G Alfredsen

IRG/WP 18-20633

Simulation and visualization of aesthetic performance of bio-based building skin

J Sandak, A Sandak, P Grossi, M Petrillo

IRG/WP 18-20634

Transfer of research results on the performance of wood and wood-based composites in outdoor applications into praxis

B Lesar, J Gričar, D Kržišnik, M Humar

IRG/WP 18-20635  
The impact of coatings on the service life of wood decking  
R Stirling, D Wong

IRG/WP 18-20636  
The Impact of Cryopreservation Techniques and of Water Quality on the Wood Degrading Ability of Fungal Strains: Recommendations for Maintenance and Culturing Procedures  
A Stum, M Montibus, I le Bayon, M Kutnik

IRG/WP 18-20637  
Testing the durability of timber products above ground using the block-test method – A critical review  
C Brischke, A Gellerich, H Militz

RG/WP 18-20638  
Towards durability classification of preservative treated wood – first attempts using different European standards  
S Bollmus, A Gellerich, C Brischke, H Militz

RG/WP 18-20639  
Certification system for treated wood and wood preservative in the relation to regulations in Japan  
K Yamamoto, I Momohara

RG/WP 18-20640  
Protocol of intervention against subterranean termites in urban areas  
J Galván, D Lorenzo, C Villagrà, L Robertson, R Viñambres, M T Troya

RG/WP 18-20641  
Can CCA be substituted as reference preservative?  
N Terziev, M Jebrane, P Larsson Brelid, N Morsing, P-O Flaete, P Tornainen, J S Kim, G Daniel

RG/WP 18-20642  
Above-ground testing methods – review of Rotorua, New Zealand test site results after ten years  
D Page, T Singh

RG/WP 18-20643  
Premature failure of wood structures in Use Class 3 caused by decay - some examples from Norway  
P-O Flaete

RG/WP 18-20644 (Poster)  
Rapid Screening test of potential antimicrobial agents for wood coatings  
J Stenbæk, E Morsing, T Østergaard Jensen

RG/WP 18-20645  
Material Resistance and Chemical Composition of Italian Stone Pine (*Pinus pinea*)  
M Humar, M De Angelis, M Romagnoli, V Vek, I Poljanšek, P Oven, N Thaler, B Lesar, D Kržišnik

### **Section 3 Wood protecting chemicals**

IRG/WP 18-30722  
Encapsulation of chlorothalonil with polylactic acid using nanoprecipitation method for rubberwood preservation  
T-J Teng, M N M Arip, R Kadir, E-P Ng, H-L Lee

IRG/WP 18-30723  
Chemical composition and termiticidal activity of *Khaya ivorensis* stem bark extracts on woods  
G A Adedeji, O Y Ogunsanwo, F S Eguankun, T O Elufioye

IRG/WP 18-30724 (Poster)  
Bio-preservative properties of technical lignins from South African pulp mills: An investigation towards a conceptualized development of natural compound-based wood preservatives  
A Alade, L Tyhoda, M Meincken

IRG/WP 18-30725  
Liquefied wood polyols: a bio-based preservative for protection of wood from fungal decay  
A Kumar, G Vijaylakshmi, S Singh Chauhan

IRG/WP 18-30726  
Glueline fungicides in veneer based engineered wood products – updated results from laboratory work for the H1.2 hazard class in New Zealand  
A Siraa, K Day, B Kibby

IRG/WP 18-30727  
Degradation of Eucalyptus transmission poles varies across regions in Zambia  
P Ng'andwe, D Chungu, E Ncube

IRG/WP 18-30728  
Effects of wood protecting biofinish and linseed oil on fire behaviour and leachability of the fire retardant  
S Rensink, E J van Niewenhuijzen, M F Sailer

IRG/WP 18-30729  
Self-Extinguishment Phenomena of Mass Timber in Medium-Scale Compartment Fires  
C Gorska, J P Hidalgo

IRG/WP 18-30730 (Poster)  
Mechanism of nano metal fluorides against fungi  
S M Usmani, K Klutzny, I Stephan, T Hübner, E Kemnitz

#### **Section 4 Processes and properties**

IRG/WP 18-40822  
Performance of acetylated wood in aquatic applications  
F Bongers, S Palanti, A Gellerich, J J Morrell, J Creemers, J Hague

IRG/WP 18-40823  
FTIR-ATR monitoring of chemical changes of thermo-chemically modified beech wood degraded by brown-rot fungus  
C Grosse, M Noël, M-F Thevenon, P Gérardin

IRG/WP 18-40824  
Resistance of modified wood to termite attack assessed in laboratory and field testing: A review of internal research  
L Emmerich, P Gascón-Garrido, H Militz

IRG/WP 18-40825  
Long-term performance of DMDHEU-treated wood exposed in ground, above ground and in the marine environment  
L Emmerich, H Militz, C Brischke

IRG/WP 18-40826  
Multiscale modification on water resistance and dimensional stability of *Populus cathayana* by alkali lignin combined with heat treatment  
H Zhou, J Li, E Ma

IRG/WP 18-40827  
Recent findings clarifying the mechanism of brown-rot decay protection in acetylated wood  
G Beck

IRG/WP 18-40828

Thermodynamic properties of furfurylated wood during moisture adsorption process  
J Wang, J Cao, T Yang, E Ma, W Wang

IRG/WP 18-40829

An examination of the potential for the use of the Maillard reaction to modify wood  
K Peeters, E Larnøy, A Kutnar, Č Tavzes, C A S Hill

IRG/WP 18-40830

Hydrolytic stabilization of chemically modified *Bambusa vulgaris* Shrad ex JC Wendl  
N A Sadiku, S M Akintayo

IRG/WP 18-40831

Reactivity of alkoxysilanes with cellulose and lignin in presence of catalysts  
J Siuda, W Perdoch, B Mazela, M Zborowska

IRG/WP 18-40832

(Poster)

Properties and potential use of *Irvingia gabonensis* and *Irvingia wombolu* kernel extracts as natural wood adhesives: Towards formaldehyde free wood composite products

A O Alawode, S O Amiandamhen, M Meincken, L Tyhoda

IRG/WP 18-40833

Interaction of Boultonizing and through-boring of Douglas fir sapwood  
F Gasteiger, J Lloyd, A Taylor

IRG/WP 18-40834

Performance of internal remedial treatments to arrest fungal attack in poles and large timbers  
J J Morrell

IRG/WP 18-40835

In-line quality control of the film thickness in industrial coating processes for exterior cladding  
U Hundhausen, M Slabohm

IRG/WP 18-40836

(Poster)

A Conceptual Review of Young People's Perceptions about Wood

I Usta

IRG/WP 18-40837

(Poster)

Depictions on Wood: Acceptation and Internalization of Wood, which is an intercultural interaction tool, as "A Valuable Object" (Wood is the Material of Endless Possibilities)

I Usta

IRG/WP 18-40838

Enhancing service life performance of oak decking and cladding using organosilicon treatments  
J Van Acker, J Van den Bulcke, J-P Lecomte

IRG/WP 18-40839

Wood Hydrophobic Modification by Mixed Wax Emulsions  
C Chen, W Wang

IRG/WP 18-40840

A Synergistically Stabilized Oil-in-Water Paraffin Pickering Emulsion Used in Wood Treatment  
J Jiang, J Cao

IRG/WP 18-40841

Visual appearance of unpainted wooden claddings during the first year of outdoor exposure: Evaluation of surface mould growth, lightness (L\*) and wasp attack

S K Lie, L Ross Gobakken, G I Vestøl, O Høibø

IRG/WP 18-40842

Improvement of short rotation teak wood properties through thermal modification

L A Pratiwi, I W Darmawan, B George, A Merlin, C Gérardin, S Dumarçay, T Priadi, P Gérardin

IRG/WP 18-40843

Wood-Plastic Composites preservation against fire: Nanofillers as fire retardant alternative

D Ben Ammar, A Koubaa, S Migneault, H Bouafif

IRG/WP 18-40844

Performance of wood exterior structures above ground in Spain built with softwood species. The situation case of a shelter bridge

D Lorenzo, M Touza, J Fernández-Golfín, A Lozano, J Benito

IRG/WP 18-40845

Preventive physical barriers against subterranean termites species for building protection: How to implement innovative materials to reach efficacy requirements

N Delourme-Fonseca, P Poveda, F Simon

IRG/WP 18-40846

Selection of heat flux value for wood fire retardants testing using MLC

B Mazela, W Perdoch, W Grześkowiak, A Batista

IRG/WP 18-40847

Developments within COST Action FP1303 related to the modification of wood

D Jones

IRG/WP 18-40848

The Study of the Preparation of Overlaid MDF with the Flame Retardant Impregnated Paper

W Qu, M Wu, Y-Z Wu

IRG/WP 18-40849

(Poster)

Thermally modified timber treated with methacrylate

O Karlsson, O Myronycheva, DJones, D Elustondo, D Sandberg

IRG/WP 18-40850

Study of the Factors Influencing the Treatability of Fir (*Abies alba*)

E Raphalen, J-D Lanvin, M Kutnik, T Delobel, D Michaud, C Dubois

IRG/WP 18-40851

(Poster)

Polyesterification of wood using sorbitol and citric acid under aqueous conditions

E Larnøy, A Karaca, L R Gobakken, C A S Hill

## **Section 5 Sustainability and environment**

IRG/WP 18-50333

Influence of different triazoles as co-biocides in wood preservatives on efficacy and the environmental impact

M Klamer, T Jensen, S Bang-Achton, E Morsing

IRG/WP 18-50334

The biodegradation of creosote oil by various species of white rot fungi and bacteria isolated from the contaminated soil

M Sydow, J Zabielska-Matejuk, E Kaczorek, A Stangierska, A Kropacz

IRG/WP 18-50335

Building with wood in the Arctic

J Ruddick

IRG/WP 18-50336

Long service life or cascading? The environmental impact of maintenance of wood-based materials for building envelope and their recycling options

M Petrillo, J Sandak, P Grossi, A Kutnar, A Sandak

IRG/WP 18-50337

Conversion by insects – alternative method for wood waste up-cycling

A Sandak, J Sandak, M Kutnik, I Paulmier, C Brunet, M Petrillo, P Grossi

IRG/WP 18-50338

Enhancing knowledge transfer in the wood protection sector

C Brischke, G Alfredsen, S Bollmus, M Humar, D Jones, L Meyer-Veltrup, L Nunes

IRG/WP 18-50339

Declaring life cycle inventory of toxicity related emissions in environmental product declarations of preservative treated wood products

L G F Tellnes, C Askham, P-O Flæte, M Klamer

IRG/WP 18-50340

Environmental protection and long term in-service sustainability of preserved wooden poles is secured by non-toxic barrier protection system – History and case studies in South Africa

A A W Baecker

IRG/WP 18-50341

Pest and pathogens threaten the sustainability of plantation forestry: Global research collaboration will define the future

M Wingfield

IRG/WP 18-50342

The Commercial Forestry and Forest Products Industry in South Africa – A brief overview

M Peter

IRG/WP 18-50343

An overview of The Wood Preservation Industry in South Africa

B Breedt

IRG/WP 18-50344

Preserved Wood in the Story of Sustainable Forestry

D Brookes

IRG/WP 18-50345

(Title missing)

F Bongers, S Uphill

## **Section 6 Other documents**

IRG/WP 18-60430

International Directory of Members and Sponsors 2017

IRG Secretariat

IRG/WP 18-60431

Annual Report 2017

IRG Secretariat

IRG/WP 18-60432

Agenda 2018 Plenary meeting

IRG Secretariat



IRG/WP 18-60433  
The 49<sup>th</sup> Annual Meeting of IRG. Poster abstracts  
IRG Secretariat

IRG/WP 18-60434  
Programme. The IRG49 Scientific Conference on Wood Protection  
IRG Secretariat

IRG/WP 18-60435  
Budget for 2018 (forecast May 2018)  
IRG Secretariat

IRG/WP 18-60436  
Budget for 2019  
IRG Secretariat

IRG/WP 18-60437\*  
Agenda Finance Committee Meeting 2018  
IRG Secretariat

IRG/WP 18-60438\*  
Agenda Scientific Programme Committee Meeting 2018  
IRG Secretariat

IRG/WP 18-60439\*  
Agenda Executive Council Meeting 2018  
IRG Secretariat

IRG/WP 18-60440\*  
Agenda Communications Committee 2018  
IRG Secretariat

IRG/WP 18-60441\*  
Reporting minutes of the Finance Committee Meeting 2018  
IRG Secretariat

IRG/WP 18-60442\*  
Reporting minutes of the Scientific Programme Committee Meeting 2018  
IRG Secretariat

IRG/WP 18-60443\*  
Reporting minutes of the Communications Committee meeting 2018  
IRG Secretariat

IRG/WP 18-60444\*  
Reporting minutes of the Executive Council Meeting 2018  
IRG Secretariat

IRG/WP 18-60445  
Reporting minutes of the Plenary Meeting 2018  
IRG Secretariat

IRG/WP 18-60446  
IRG Documents 2018  
IRG Secretariat

\*restricted circulation