

THE INTERNATIONAL RESEARCH GROUP ON WOOD PROTECTION

The 42nd Annual Meeting of IRG

Programme

**IRG Secretariat
Box 5609
SE-114 86 Stockholm
Sweden
www.irg-wp.com**

MONDAY 9 MAY

Coronet/Remarkables rooms

08.30-09.30

Opening of the 42nd Annual Meeting and Plenary session

President: Dr Mr Jack Norton Vice-President: Dr Jeff Lloyd Secretary-General: Mr Jöran Jermer

Opening of the IRG 42nd Annual Meeting

Opening addresses by Mr Jack Norton, President of the IRG, and Dr Max Kennedy, New Zealand Ministry of Science & Innovation

Plenary

1. Opening of the meeting
2. Approval of the agenda (IRG/WP 11-60303)
3. Membership issues
 - Moment of silence for passed away members
 - Awarding Honorary Life-Long Membership
 - Ratification of the election of new members since last year's Plenary
4. Announcement of the year 2011 Ron Cockcroft Award recipients
5. Approval of the Annual Report 2010 and Auditors' report (IRG/WP 11-60302)
6. Granting discharge for the Executive Council and Secretary-General from the administration and accountancy for 2010
7. IRG Strategic Statement and Framework – Progress report

MONDAY 9 MAY

Coronet/Remarkables rooms

09.30-10.30

Keynote Session

Chairman: Dr Jeff Lloyd

Timber framing – the full circle

Murray G Sturgeon, Managing Director, Nelson Pine Industries

IRG/WP 11-50282

Life Cycle Assessment Comparison of Treated Wood to Alternate Materials – Overview, Results and Lessons

T Stephen, P E Smith, C R McIntyre

11.00-12.30

Scientific Main Session

Chairman: Dr Jeff Lloyd Co-chairs: Dr Laurie Cookson, Dr Michael Kennedy, Dr Radu Craciun, Dr Christian Welzbacher

Announcements concerning the IRG 42 Scientific Programme

J Lloyd & Section leaders (co-chairs)

IRG/WP 11-10748

Gene expression analysis of a copper-tolerant brown rot fungus on MCQ-treated wood

J D Tang, A Perkins, S V Diehl

IRG/WP 11-20463

Decay hazard mapping for Europe

C Brischke, E Frühwald Hansson, D Kavurmaci, S Thelandersson

IRG/WP 11-30566

Copper Nanoparticles in Southern Pine Wood Treated with a Micronised Preservative: Nanodistribution of Copper in the Pit Membrane and Border of an Earlywood Bordered Pit

H Matsunaga, Y Kataoka, M Kiguchi, P Evans

IRG/WP 11-40541

The Effectiveness of Machined Profiles at Reducing the Checking of Wooden Decking

P Evans, I Cullis, P Morris

MONDAY 9 MAY

Coronet/Remarkables rooms

13.30-15.00

WP 3.4 Performance – field tests

Chair: Dr Thomas Mark Venaas

IRG/WP 11-30564

Standardized Field Trials with Micronized Copper

C R McIntyre, M H Freeman

IRG/WP 11-30565

Comparison of rates of wood decay from four different field test protocols following 4-5 years exposure at a site in New Zealand

P Lobb, K Day, A Siraa

IRG/WP 11-20473

Above ground testing at tropical test sites, what have we learned?

A Preston, A Zahora, Y Cabrera, L Jin, C Schauwecker, P Walcheski

IRG/WP 11-30580

Performance of Creosote/Chlorothalonil Preservatives

H M Barnes, M G Sanders, G B Lindsey, T L Amburgey

IRG/WP 11-30555

LOSP for glulam, when should the treatment be applied?

L J Cookson

Queenstown room

WP 4.2 Chemical wood modification

Chair: Dr Erik Larnøy and Dr Tripti Singh

IRG/WP 11-40543

Acetylation Properties of Southern Pine and Radiata Pine

J Allen, T Guinn, J Dickerson

IRG/WP 11-40562

Durability of modified wood in UC3 and UC4. Results from lab tests and 5 years testing in 3 fields

M Westin, G Alfredsen

IRG/WP 11-30560

The durability of acetylated radiata pine sapwood (Accoya). Results from five years testing

M Hedley, D Page, J van der Waals, K Nasheri, G Durbin

MONDAY 9 MAY

Coronet/Remarkables rooms

15.30-17.30

WP 2.1 Prediction of service life

Chairs: Ms Lesley Francis, Dr Christian Brischke

IRG/WP 11-20465

Quantitative design guideline for wood in outdoor above ground applications

S Thelandersson, T Isaksson, E Suttie, E Frühwald, T Toratti, G Grüll, H Viitanen, J Jermer

IRG/WP 11-20464

Service life prediction of wooden components – Part 3: Approaching a comprehensive test methodology

C Brischke, C R Welzbacher, L Meyer, T Bornemann, P Larsson-Brelid, A Pilgård, E Frühwald-Hansson, M Westin, A O Rapp, S Thelandersson, J Jermer

IRG/WP 11-20466

Methods of field data evaluation - time *versus* reliability

P Larsson-Brelid, C Brischke, A O Rapp, M Hansson, M Westin, J Jermer, A Pilgård

IRG/WP 11-20468

Improving our understanding of moisture and other durability-related properties of wood in building envelope performance prediction

Jieying Wang, P Morris

IRG/WP 11-20469

Decay initiation in plywood, OSB and solid wood under marginal moisture conditions

Jieying Wang, P Morris

IRG/WP 11-10758

Growth conditions for fungal decay in wooden constructions – practical experience *versus* literature

M Sand Sivertsen, J Mattsson

Queenstown room

WP 3.2 New wood protecting chemicals

Chair: Dr Xiao Jiang

IRG/WP 11-30578

The potential of silicone-based formulations to enhance wood properties through industrial treatment for outdoor use

F Simon, F Marchal, F Pochon, M Kutnik, I Le Bayon

IRG/WP 11-30562

Characterisation and evaluation of various chitosan oligomers, and decay resistance

I Hussain, C Chittenden, T Singh

IRG/WP 11-30575

The potential of propolis and other naturally occurring products for preventing biological decay

D Jones, N Howard, E Suttie

IRG/WP 11-10749

Isolation and evaluation of *Lactobacillus brevis* from chilli waste for potential use as a wood preservative

D O'Callahan, T Singh, I R McDonald

IRG/WP 11-30561

Novel Approaches to the Development and Testing of Anti After-glow Additives for CCA-based Treatments of Poles

L Jin, P Walcheski, A Preston

IRG/WP 11-30556

Influence of wood swelling agents on penetration and copper leaching of copper-ethanolamine based wood preservatives

M Humar, N Thaler, B Lesar

TUESDAY 10 MAY	
Coronet/Remarkables rooms	Queenstown room
08.30-10.30	
WP 1.1 Physiology of decay & WP 1.3 Bluestain and Moulds	WP 4.3 Wood composites and WPC
Chairs: Dr Tripti Singh and Dr Miha Humar	Chair: Mr Paul Merrick
<p>IRG/WP 11-10750 Basidiomycete colonization of Scots pine sapwood quantified by qPCR and TGA G Alfredsen, S Bollmus, T K Bader, K Hofstetter</p> <p>IRG/WP 11-10751 The effects of acetylation level on the growth of <i>Postia placenta</i> A Pilgård, G Alfredsen, C G Fossdal, C J Long II</p> <p>IRG/WP 11-10753 Measuring fungal cellulolytic enzyme activity in degrading wood S M Duncan, J S Schilling</p> <p>IRG/WP 11-10756 Molecular investigation of <i>Postia placenta</i> growing in modified wood B Schmöllerl, G Alfredsen, C G Fossdal, M Westin, A Steitz</p> <p>IRG/WP 11-10759 The influence of moisture content and wood pH variation on fungal melanin formation in wood substrates D Tudor, S C Robinson, P A Cooper</p> <p>IRG/WP 11-10754 Quantification of four dark colored mould fungi by real time PCR E Larnøy, L Ross Gobakken, A M Hietala</p>	<p>IRG/WP 11-40542 Biological and mechanical performances of particleboard panels made from maritime pine (<i>Pinus pinaster</i>) and glued with cornstarch-mimosa tannin-urea formaldehyde adhesive A Moubarik, F Charrier, A Pizzi, A Allal, B Charrier</p> <p>IRG/WP 11-40551 Physical properties of <i>Pinus radiata</i> veneers modified with hexamethoxymethyl melamine prepolymers C Molloy, W Rae, S Connor, T Henderson, A Siraa</p> <p>IRG/WP 11-40552 Biological properties of <i>Pinus radiata</i> veneers modified with hexamethoxymethyl melamine prepolymers A Siraa, S Millward, C Molloy</p> <p>IRG/WP 11-40548 Study of the durability of the Maderon® against wood decay fungi and insects M T Troya, F Llinares, P Jiménez, J I Fernández-Golfín, M Conde, R Díaz</p> <p>IRG/WP 11-40553 Decay resistance of a commercial pistachio twig-plastic composite M R M Farahani, M Safarzadeh</p>

TUESDAY 10 MAY

Coronet/Remarkables rooms

11.00-12.30

WP 1.5/2.5 Termites

Chairs Dr Magdalena Kutnik and Dr Berhan Ahmed

IRG/WP 11-10745

Termite Resistance of Different Wood Panels Treated with Bifex® under Laboratory and Field Trials

F Manzoor, S A Malik, B M Ahmed Shiday, A Liaquat, N Naz

IRG/WP 11-30570

Termite resistance of timber envelope treated with imidacloprid then modified by typical building site operations

K Day, A Siraa, P Lobb

IRG/WP 11-30573

The case for using borates in termite control in tropical Australia

B M Ahmed (Shiday), J R J French

IRG/WP 11-30557

Ten Year Field Tests of Borate-Treated Wood Against Subterranean Termites

P I Morris, J K Grace, K Tsunoda

Queenstown room

WP 4.5 Coatings, hydrophobic treatments and surface aspects

Chair: Dr Phil Evans

IRG/WP 11-40569

Wet and dry adhesion of coatings on modified and unmodified wood: influence of 18 months of natural weathering on the pull-off test and cross-cut test results

L Podgorski, G Grüll, M Truskaller, J D Lanvin, S Bollmus

IRG/WP 11-20470

Aesthetic service life of coated and uncoated wooden cladding - influencing factors and modelling

L Ross Gobakken, O A Høibø

IRG/WP 11-40561

Moisture protection and performance during 5 years exposure of 19 wood coating systems on a cladding in Vienna

G Grüll, I Spitaler, M Truskaller

TUESDAY 10 MAY

Coronet/Remarkable room

13.30-15.00

Special session Borates

Chair: Dr Mark Manning and Dr Radu Craciun

IRG/WP 11-20476

A Method for Studying Boron Redistribution and Leaching in Timber Framing

J A Drysdale, N Marston, M E Hedley

IRG/WP 11-30563

Fixed Borates Anyone?

C R McIntyre, M A Lake

IRG/WP 11-30577

Design, synthesis, characterisation and effectiveness of 'Locked-in-Boron' chemicals for H3.2 level of wood protection

R Franich, H Kroese, S Gallagher, S Hill, B Kelly, G Billett, R Meder, W Rae

Queenstown room

WP 2.3 Chemical/Physical analysis

Chairs: Dr Lehong Jin and Dr Ed Suttie

IRG/WP 11-20475

A comparative study and evaluation of methodologies used for determining wood preservative penetration

R Craciun, R Moeller, J Wittenzellner, T Jakob, J Habicht

IRG/WP 11-20461

Comparative investigations between thermal and microwave assisted digestion as a novel tool for the chemical analysis of inorganic wood preservative components

H Ahl, J Fromm, E Melcher

IRG/WP 11-40549

Further Studies on the Distribution of Copper in Treated Wood Using an XRF Microscope Technique

A Zahora

IRG/WP 11-40550

Quantification of mobile copper (II) levels in micronized copper treated wood

Wei Xue, P Kennepohl J N R Ruddick

TUESDAY 10 MAY

Coronet/Remarkables rooms

15.30-17.30

Special session Borates, cont'd

Chair: Dr Mark Manning and Dr Radu Craciun

IRG/WP 11-40556
Ambient-temperature borate dip-diffusion treatment of green railroad crossties

Jae-Woo Kim, A M Taylor, C Köse

IRG/WP 11-40571
Performance of Zinc Borate-Treated Oriented Structural Straw Board against Mold Fungi, Decay Fungi and Termites—A Preliminary Trial

Guangping Han, M Manning, Wanli Cheng, E Pierre, W Wasylciw

IRG/WP 11-30571
Protective Levels of Borates in timber Foundation Piles 5 – 18 Years after In-situ Remedial Treatment in Areas with Wet Clay Ground Conditions. The Jerbor and Eurobor Protocol, Part 1

M Theorin, K-M Bandh

IRG/WP 11-30574
Effectiveness of Water Based Bentonite-Borate Slurry for In-situ Remedial Protection of Historic Wooden Piles, The Eurobor Protocol, Part 2

M Theorin, K Fimmerstad, K M Bandh

Queenstown room

WP 1.7 Natural durability
WP 1.8 Cultural artefact protection

Chairs: Dr Andrew H H Wong, Prof Dr Wibke Unger

IRG/WP 11-10747
Natural durability of wood tested in different environments in Northern Europe

P O Flæte, G Alfredsen, F G Evans

IRG/WP 11-20472
Performances of Douglas fir in real outdoor use conditions

M Kutnik, S Lepetit, S Le Nevé

IRG/WP 11-10761
Durability testing of coconut shell according to ENV 807

J Jermer, A H H Wong, K Segerholm, T Nilsson

IRG/WP 11-10757
The decontamination of a historical xylotheque with liquid carbon dioxide

S Zoppke, A Unger, J Mankiewicz, M Eisbein

IRG/WP 11-10760
Cobblestone church in Gross Gievietz : Historic Wooden Construction and Potential for Conservation and Use

A Schulze, W Unger

WEDNESDAY 11 MAY	
Coronet/Remararkables rooms	Queenstown room
08.30-10.30	
Special session Phytosanitation and wood packaging	WP 4.4 Treating processes and treatability of timber
Chair: Prof Dr D Pascal Kamdem	Chair: Dr Hiroshi Matsunaga
<p>IRG/WP 11-30568 ISPM No. 15 and the Incidence of Wood Pests: Recent Findings, Policy Changes, and Current Knowledge Gaps R A Haack, E G Bockerhoff</p> <p>IRG/WP 11-40545 A Critical Review and Survey of the US Wooden Pallet Industry: Focusing on Market Segmentation & N. American Trends M H Freeman</p> <p>IRG/WP 11-30558 Phytosanitary standards and the potential for acceptance of chemical treatments as a phytosanitary measure A Uzunovic, R Stirling, J J Morrell, P I Morris, C F Schauwecker</p> <p>IRG/WP 11-10755 Wood protectors sensitivity of <i>Fusarium circinatum</i>, a quarantine organism in Europe Y Serrano, S Cobacho, A Navas, M Conde, R Raposo, M T Troya</p> <p>IRG/WP 11-30576 The overview of ISPM 15 implementation in Croatian wood-working companies R Despot, V Jambrekovic, M Hasan</p>	<p>IRG/WP 11-40547 Adsorption boundary curve influenced by step interval of relative humidity investigated by Dynamic Vapour Sorption equipment E Tang Engelund, M Klamer, T Mark Venås</p> <p>IRG/WP 11-20477 A new model for wetting and drying of wood end-grain – with implications for durability and service-life L-O Nilsson, K Sandberg</p> <p>IRG/WP 11-40563 Treatability variation of Scots pine heartwood from Northern Europe G Behr, E Larnøy, C-T Bues</p> <p>IRG/WP 11-40554 Evaluation of an optimized industrial process aiming to improve the natural durability and mechanical behavior of bamboo for outdoor use F Simon, M Kutnik, I Le Bayon, G Moisset, V Gatimel</p> <p>IRG/WP 11-40555 Challenges and new developments in testing electro osmotic pulsing technology (PLEOT) by means of conventional laboratory methods A Treu, E Larnøy</p> <p>IRG/WP 11-40557 Effects of Heat-Treatment in Hot Water and Steam Mediums on Gas Permeability of Beech Wood H Reza Taghiyari, A Talaei, A Karimi</p> <p>IRG/WP 11-40573 TRU-CORE Process for Treatment of Refractory Species and Engineered Wood Products A S Ross</p>

THURSDAY 12 MAY	
Coronet/Remarkables rooms	Queenstown room
08.30-10.30	
WP 2.3 Chemical/Physical analysis	WP 4.6 Thermal wood modification
Chairs: Dr Ed Suttie and Dr Lehong Jin	Chairs: Dr Christian Welzbacher and Dr Philippe Gérardin
<p>IRG/WP 11-20467 Investigating extraction of bifenthrin from composite wood products J J Morrell, L Bell, J Norton, C Shaw</p> <p>IRG/WP 11-20479 Non-destructive evaluation of wood decay J Van den Bulcke, I De Windt, N Defoirdt, J Van Acker</p> <p>IRG/WP 11-20471 Classification of wood materials using Fourier Transform Near Infrared Spectroscopy and multivariate analysis M A Bouslamti, M A Irle, C Belloncle, V Salvador, S Hulot, B Caron, E M Qannan</p> <p>IRG/WP 11-20462 A rapid colorimetric assay for mold spore germination using XTT tetrazolium salt C A Clausen, V W Yang</p> <p>IRG/WP 11-20478 Slice - Cut and Analyze Laser Microdissection (LMD). A method to produce sample material from modified wood for chemical quality analysis K Zimmer, E Larnøy, A Treu, M Fongen</p> <p>IRG/WP 11-40560 Study of properties and application of <i>Paulownia</i> in wood industries M Akhtari</p>	<p>IRG/WP 11-40544 Thermally modified timber (TMT) for decking applications – determination of relevant surface properties L Meyer, C Brischke, C R Welzbacher</p> <p>IRG/WP 11-40566 Optimization of the bi-oleothermal treatment process for wood preservation and fireproofing F Simon, M Kutnik, M Goyer, M-F Thévenon, C Alfos, M Céron</p> <p>IRG/WP 11-40558 Implementation of a Quality Assurance System for thermally modified timber (TMT) by the Association of Central European TMT-Producers C R Welzbacher, W Scheiding</p> <p>IRG/WP 11-40559 Utilization of thermodesorption coupled to GC-MS to study kinetics of thermodegradation of different wood species K Candelier, M Chaouch, S Dumarçay, A Pétrissans, M Pétrissans, P Gérardin</p> <p>IRG/WP 11-40567 Limited variability in biological durability of thermally modified timber using vacuum based technology J Van Acker, S Michon, J Van den Bulcke, I De Windt, B Van Swaay, M Stevens</p> <p>IRG/WP 11-40572 Effects of nano-silver on brittleness of heat-treated solid woods H Reza Taghiyari, B Moradi Malek, A Karimi</p>

THURSDAY 12 MAY	
Coronet/Remarkables rooms	Queenstown room
11.00-12.30	
WP 3.3 Performance – laboratory tests	Section 5 Sustainability and Environment
Chair: Dr Xiao Jiang	Chair: Dr Miha Humar
<p>IRG/WP 11-30579 Laboratory study of toxicity or tolerance of CCA preservative and heavy metal constituents copper, chromium and arsenic to Malaysian tropical fungi A H H Wong, T Mark Venås, N Morsing, C C L Tan, P K F Chong</p> <p>IRG/WP 11-50281 The Effect of Soil pH on the pH of Treated Southern Pine in Ground Contact after 12 Months L Jin, C Schauwecker, C Vidrine, P Walcheski, A Preston</p> <p>IRG/WP 11-40570 Decrease of stiffness properties of degraded wood predicted by means of micromechanical modeling T K Bader, K Hofstetter, G Alfredsen, S Bollmus</p> <p>IRG/WP 11-40568 Effect of Nano-silver Treatment on Densified Poplar Wood Properties. Part Two: Spring Back, Compression set, Impact Load Resistance and Hardness G Rassam, H Reza Taghiyari, B Jamnani, M Ali Khajeh</p> <p>IRG/WP 11-30569 The potential for using CuO nanoparticles as a wood preservative I S Weitz, K Knani, M Maoz, C Freitag, J J Morrell</p>	<p>IRG/WP 11-20474 Sample Origin Influencing the Leachability of Wood Preservatives K Kängsepp, E Larnøy, P Meier</p> <p>IRG/WP 11-50278 Characterizing long term leaching behaviour of copper from preservative treated wood in a practical exposure scenario T Mark Venås, M Klamer</p> <p>IRG/WP 11-50280 Copper Migration from Micronized Copper Preservatives Treated Wood in soil contact: Effect of soil pH Lei Wang, D P Kamdem</p> <p>IRG/WP 11-50279 Remediation of Pentachlorophenol (PCP) in Biodiesel versus Diesel Carriers S Keshani Langroodi, H Borazjani, D Nicholas, L Prewitt, S V Diehl, S Kitchens</p> <p>IRG/WP 11-50283 Re-use of casting timber I Johansson, S Breyne, H Egnell, J Jermer</p>

THURSDAY 12 MAY

Coronet/Remarkables rooms

13.30 -15.00

Scientific Plenary Session

Chairman: Dr Jeff Lloyd Co-chairs: Dr Laurie Cookson, Dr Michael Kennedy, Dr Radu Craciun, Dr Christian Welzbacher

- Communication issues (Web-site, Facebook, Special sessions etc etc)
- Reporting back from Sections & Special session. Discussion on special sessions for 2012
- Discussion topic: "The impact of climate change on the wood protection industry and the impact of the wood protection industry on climate change "

15.30-16.15

Plenary session, cont'd from Monday 9 May

President: Mr Jack Norton

Vice-President: Dr Jeff Lloyd

8. Approval of membership fees for 2012
9. Approval of the budgets for 2011 (forecast May 2011) and 2012 (IRG/WP 11-60306 and IRG/WP 11-60307)
10. Election of new officers
 - Scientific Programme Committee
 - Information on EC appointments
11. Appointment of auditors
12. Future venues
 - IRG 43: 6-10 May 2012 in Kuala Lumpur, Malaysia
 - IRG 44: 2013 Stockholm, Sweden
13. Any other business
14. Closure of the meeting