

Curriculum Vitae
PETER E. LAKS

Contact Information:

Business:

School of Forest Resources and Environmental Science
Michigan Technological University
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Current Title: Professor

Experience: Research Officer

B.C. Research, Vancouver, B.C., Canada, 1977-1978.

Research Associate

Faculty of Forestry, University of British Columbia,
Vancouver, B.C., Canada, 1979-1980.

Visiting Scientist

Southern Forest Experiment Station, Pineville, Louisiana, 1984-1985.

Research Scientist

Institute of Wood Research
School of Forestry and Wood Products
Michigan Technological University
Houghton, Michigan, 1985-1988.

Senior Research Scientist

School of Forestry and Wood Products, Institute of Wood Research, 1988-1993.

Acting Director

School of Forestry and Wood Products, Institute of Wood Research, 1986-1987.

Associate Professor

School of Forestry and Wood Products, Institute of Wood Research, 1993-1998

Professor

School of Forestry and Wood Products, Institute of Wood Research, 1998-
present.

Interim Director/Program Coordinator for Wood Science

School of Forestry and Wood Products, Institute of Wood Research, 1998-2000.

Education: B.Sc. in Bio/Organic Chemistry (1st Class Honors), Simon Fraser University, Burnaby, Canada, 1976.

M.Sc. in Physical Organic Chemistry, Simon Fraser University, Burnaby, Canada, 1979.

Ph.D. in Wood Science, University of British Columbia, Vancouver, Canada, 1984.

Organization Memberships: American Wood Protection Association (AWPA)
American Society for Testing and Materials (ASTM)
International Research Group on Wood Preservation (IRG)
Forest Products Society

Technical Committee Memberships:

AWPA P-1; Preservatives, Revision of Standards (1991-2005, Chair of committee 2003-2005)

AWPA P-3; Oilborne and Creosote-Based Wood Preservatives (1989-present)

AWPA P-4; Waterborne Wood Preservative Systems (1989-present, Vice-Chair of committee 1991-1999, Chair of committee 2000-2003)

AWPA P-6; Methods for the Evaluation of Wood Preservatives (1989-present)

AWPA T-2; Lumber and Timber (2006-Present)

AWPA P-8 (N-2); Nonpressure Preservatives (1992-present)

AWPA S-2; Wood Preservation Research (1989-present)

ASTM Committee D07 on Wood (2005-present)

Courses Taught: FW1035 Wood Anatomy and Properties
FW3098 Manufacture of Forest Products
FW4024 Wood Preservation and Drying
FW5024 Advanced Wood Preservation
FW2046 Wood Physics
FW235 Elements of Wood Technology
FW236 Wood Identification
FW568 Advanced Wood Composites

Areas of Expertise:

1. General wood science
2. Biological deterioration of wood
3. Wood preservation – solid wood and wood-based composites
4. Manufacture and properties of commercial wood products
5. Wood anatomy and identification of North American wood species

Publications:

1. P.E. Laks and A.C. Oehlschlager. 1980. Amphotericin B-Ergosterol Interactions; A Spin-Label Study, *Canadian Journal of Biochemistry*, 58: 978.
2. J.A. McLean, P.E. Laks and T.L. Shore. 1983. Comparison of Elemental Profiles of the Western Spruce Budworm Reared on Three Host Foliages and Artificial Medium, Proceedings of CANUSA Workshop, Forest Defoliator-Host Interaction: A Comparison Between Spruce Budworm and Gypsy Moth.
3. J.A. McLean and P.E. Laks. 1983. Comparison of Topical and Systemic Application of Rubidium Chloride to Douglas Fir Transplants as a Means of Introducing a Marker into Western Spruce Budworm, The Role of the Host in Population Dynamics of Forest Insects (L.Safranyik, ed), Proceedings of IUFRO Conference, Banff, Alberta, Canada, p. 213.
4. R.W. Hemingway, P.E. Laks, G.W. McGraw and R.E. Kreibich. 1985. Reactions of Condensed Tannins and the Development of Tannin-Based Adhesives. In Proceed. IUFRO-NTRI Symposium, Wood Adhesives, Pretoria, South Africa, Vol. 17, No. 11, pp. 1-20.
5. R.W. Hemingway, G.W. McGraw, P.E. Laks and R.E. Kreibich. 1986. Condensed Tannins: Problems and Prospects for their Expanded use in Wood Adhesives, In Proceed. Symposium, Wood Adhesives in 1985, Forest Products Research Society, Madison, Wisconsin.
6. R.W. Hemingway and P.E. Laks. 1985. Condensed Tannins: A Route to 2R,3R-(2,3-cis)-Proanthocyanidins From 2R,3R-(2,3-trans)-Dihydroflavanols, *Journal of the Chemical Society, Chemical Communications*, p. 746.
7. P.E. Laks. 1986. Chemicals from Northern Hardwoods. In Conference Proceedings, The Northern Hardwood Resource: Management and Potential, Houghton, Michigan, August 18-20, pp. 361-371.
8. P.E. Laks, S.J. Rettig and J. Trotter. 1986. Structure of 3-Amino-5-hydroxyquinoline-7-sulfonic Acid Monohydrate, *Acta Cryst.*, C42, 1799-1800.
9. P.E. Laks and R.W. Hemingway. 1987. Condensed Tannins: Base-catalyzed Reactions of Polymeric Procyanidins with Phenylmethanethiol. Lability of the Interflavanoid Bond and Pyran Ring, *Journal of the Chemical Society, Perkin 1*, 465.
10. P.E. Laks. 1987. Flavonoid Biocides. Phytoalexin Analogues from Condensed Tannins, *Phytochemistry*, 26(6), 1617.
11. P.E. Laks and R.W. Hemingway. 1987. Condensed Tannins: Base-Catalysed Reactions of Polymeric Procyanidins with Phloroglucinol. Intramolecular Rearrangements, *Journal of the Chemical Society, Perkin 1*, 1875.
12. P.E. Laks and R.W. Hemingway. 1987. Condensed Tannins: The Structure of the "Phenolic Acids", *Holzforschung*, 41(5), 287.
13. G. W. McGraw, P. E. Laks and R. W. Hemingway. 1988. Condensed Tannins: Desulfonation of Hydroxybenzyl Sulfonic Acids Related to Proanthocyanidin Derivatives, *Journal of Wood Science and Technology*, 8(1),91.
14. P.E. Laks, R.W. Hemingway and P.A McKaig. 1988. Flavonoid Biocides: Wood Preservatives based on Condensed Tannins, *Holzforschung*, 42(5), 299.
15. P.E. Laks, B.A. Haataja, R.D. Palardy, and R.J. Bianchini. 1988. Evaluation of Adhesives for Bonding Borate-Loaded Waferboards, *Forest Products Journal*, 38(11/12), 23.
16. P.E. Laks. 1988. Wood Preservation as trees do it. Proceedings of the American Wood

- Preservers' Association, 84:147-155.
17. P.E. Laks and M. Pruner. 1989. Flavonoid Biocides: Structure/Activity Relations of Flavonoid Phytoalexin Analogues, *Phytochemistry*, 28(1), 87.
 18. L.J. Putman, P.E. Laks, and M.S. Pruner. 1989. Chemical Constituents of Black Locust Bark and their Biocidal Activity, *Holzforschung*, 43(4), 219.
 19. P.E. Laks, 1989. Wood Preservatives - Looking Ahead, *The Construction Specifier*, 42(10), 60.
 20. P.E. Laks. 1989. Chemistry of the Condensed Tannin B-Ring. The Chemistry and Significance of Condensed Tannins (J.J. Karchesy and R.W. Hemingway, eds.), Plenum Publishing Corporation, 249-264.
 21. P.E. Laks. 1989. Condensed Tannins as a Source of Novel Biocides. The Chemistry and Significance of Condensed Tannins (J.J. Karchesy and R.W. Hemingway, eds.), Plenum Publishing Corporation, 503-516.
 22. P.E. Laks. 1989. An Overview of Condensed Tannin Structure. The Chemistry and Significance of Condensed Tannins (J.J. Karchesy and R.W. Hemingway, eds.), Plenum Publishing Corporation, 131-138.
 23. P.E. Laks, L.J. Putman, and M.S. Pruner. 1988. Natural Products as Wood Preservatives. Proceedings of the Canadian Wood Preservation Association. Toronto, Ontario.
 24. P.E. Laks. 1990. The Chemistry and Utilization of Tree Barks, Handbook on Wood and Cellulosic Materials (D.N.S. Hon and N. Shiraishi, eds), Marcel Dekker, Chapter 8, 257-329.
 25. P.E. Laks and R.D. Palardy. 1990. Bonding and process considerations for preservative-containing waferboard. Proceedings of "Wood Adhesives 1990", Madison, WI, FPRS, pp. 150-154.
 26. P.E. Laks and R.D. Palardy. 1990. The development of borate-containing flakeboard. Proceedings of "Wood Protection with Diffusible Preservatives", Nashville, TN, FPRS, pp. 76-79.
 27. L.J. Putman, M.S. Pruner, and P.E. Laks. 1991. Properties of Protein Constituents of Black Locust Bark, *Journal of Wood Chemistry and Technology* 25(1):1-6.
 28. P.E. Laks, J.B. Pickens, T.L. Woods, J.P. Bell, and J.M. Nolf. 1991. The performance of chlorothalonil and chlorothalonil/biocide combinations in anti-sapstain tests. *Forest Products Journal* 41(5):23-30.
 29. P.E. Laks, M.S. Pruner, and T.L. Woods. 1992. Efficacy of chlorothalonil against fifteen wood decay fungi. *Forest Products Journal* 42(9):33-38.
 30. P.E. Laks, X. Quan, and R.D. Palardy. 1991. The effects of sodium octaborate tetrahydrate and zinc borate on the properties of isocyanate-bonded waferboard."Adhesives and Bonded Wood Symposium" Proceedings. (C.-Y. Hse and B. Tomita, eds.), FPRS, pp. 144-157.
 31. P.E. Laks. 1991. Wood preservation as trees do it. *Scottish Forestry* 45(4):275-284.
 32. P.E. Laks and T.L. Woods. 1992. Current research on chlorothalonil as a pole preservative. "International Conference on Wood Poles and Piles" Proceedings, pp. 75-88.
 33. J.K. Grace, P.E. Laks, and R.T. Yamamoto. 1992. Laboratory Evaluation of chlorothalonil against the Formosan subterranean termite. The International Research Group on Wood Preservation. IRG/WP/1559-92.
 34. P.E. Laks, T.L. Woods, and D.L. Richter. 1992. Evaluation of chlorothalonil for stain and mold control on lumber. The International Research Group on Wood Preservation.

- IRG/WP/3713-92.
35. P.E. Laks and T.L. Woods. 1992. Chlorothalonil: A new ground contact wood preservative. The International Research Group on Wood Preservation. IRG/WP/3712-92.
 36. P.E. Laks and R.D. Palardy. 1992. Factors that affect the performance of preservative-containing wafer-based composites. Proceedings of the Pacific Rim Bio-Based Composites Symposium. New Zealand, pp. 163-171.
 37. **Plant Polyphenolics: Synthesis, Properties, Significance.** 1992. R.W. Hemingway and Peter E. Laks (editors), Plenum Press, New York and London, 1053 pages.
 38. P.E. Laks, C.G. Park, and D.L. Richter. 1993. Anti-Sapstain efficacy of borates against *Aureobasidium pullulans*. *Forest Products Journal*, 43(1):33-34.
 39. J.K. Grace, P.E. Laks, and R.T. Yamamoto. 1993. Efficacy of chlorothalonil as a wood preservative against the Formosan subterranean termite. *Forest Products Journal*, 43(1):21-24.
 40. J.P. Perchellet, H.U. Galli, E.M. Perchellet, P.E. Laks, [and others]. 1992. Antitumor promoting effects of gallotannins, ellagitannins and flavonoids in mouse skin *in vivo*. American Chemical Society Symposium Series No. 546 (Food Phytochemicals for Cancer Prevention I), Chapter 25, pp. 303-327.
 41. J.K. Grace, R.T. Yamamoto, and P.E. Laks. 1993. Laboratory evaluation of copper naphthenate pressure treatments against the Formosan subterranean termite. The International Research Group on Wood Preservation. IRG/WP/ 93-10005.
 42. H.U. Gali, E.M. Perchellet, X.M. Gao, P.E. Laks, and J.P. Perchellet. 1993. Inhibitory effects of synthetic flavonoid phytoalexin analogues from condensed tannin on the biochemical markers of tumor promotion in mouse epidermis *in vivo*. *Cancer Letters*, 72:149-156.
 43. J. Kenneth Grace, Robin T. Yamamoto, and Peter E. Laks. 1993. Laboratory evaluation of the termite resistance of copper naphthenate pressure treatments. *Forest Products Journal*, 43(11/12):72-76.
 44. P.E. Laks and J.E. King. 1993. Resistance of wood blocks treated with Lentrek insecticides to aboveground damage by the Formosan subterranean termite. *Down to Earth*, 48(1):11-14.
 45. P.E. Laks and R.D. Palardy. 1993. Properties and Process Considerations for Preservative-Containing Waferboards. Proceedings of IUFRO Symposium on Protection of Wood-based Composite Products. FPRS, pp. 12-17.
 46. X. Liu, P.E. Laks, and M.S. Pruner. 1994. A preliminary report on the wood preservative properties of phenylboronic acid. *Forest Products Journal*, 44(6):46-48.
 47. T.L. Woods, P.E. Laks and R.D. Fears. 1994. Wood preservative effectiveness of combinations of chlorothalonil and chlorpyrifos. AWWPA Proceedings, 90:22-43.
 48. P.E. Laks, X. Quan, and R.D. Palardy. 1994. Preservative Systems for OSB Panels. Proceedings of the Structural Board Association. Athens, Georgia.
 49. P.E. Laks. 1994. The Wood Preservative Performance of Biocide Mixtures containing Chlorpyrifos. International Research Group on Wood Preservation. IRG/WP/94-30055.
 50. B.A. Haataja and P.E. Laks. 1995. Properties of Flakeboard made from Northern White Cedar (*Thuja occidentalis* L.). *Forest Products Journal*, 45(1):68-70 .
 51. P.E. Laks and M.J. Manning. 1994. Inorganic Borates as Preservative Systems for Wood Composites. Proceedings of the Pacific Rim Bio-Based Composites Symposium. Vancouver, B.C., Canada. pp. 236-244.

52. P.E. Laks and R.D. Palardy. 1994. Physical and Termite Resistive Properties of Waferboard containing Chlorpyrifos. *Forest Products Journal*.
53. P.E. Laks and M.S. Pruner. 1995. Wood Preservative Properties of Chlorpyrifos. *Forest Products Journal*, 45(2):67-71.
54. P.E. Laks. 1994. Chlorpyrifos: An Insecticidal Component of Wood Preservative Systems. Wood Preservation in the 90's and Beyond. Forest Products Society, pp. 213-219.
55. L. Jin and P.E. Laks. 1994. The Use of Natural Plant Products for Wood Protection. Wood Protection in the 90's and Beyond. Forest Products Society, pp. 142-150.
56. T.L. Woods, P.E. Laks, T.C. Blewett, and R. Fears. 1995. A combination of chlorothalonil and chlorpyrifos for more effective wood preservation. International Research Group on Wood Preservation. IRG/WP 95-30067.
57. P.E. Laks and M.J. Manning. 1995. Preservation of wood composites with zinc borate. International Research Group on Wood Preservation. IRG/WP 95-30074.
58. P.E. Laks. 1995. Pioneering composites: Fighting off fungi and insects with borates. *Borax Pioneer*. 5:7-9.
59. T.C. Blewett, T.L. Woods, R.D. Fears, and P.E. Laks. 1997. Chlorpyrifos and Chlorothalonil as a New Pole Preservative. Proceedings of the Southeastern Pole Conference, Forest Products Society, pp. 149-155.
60. P.E. Laks. 1997. New Wood preservatives on the Horizon. Proceedings of the Southeastern Pole Conference. Starkville, Mississippi, January 22-25. Forest Products Society, pp. 15-20.
61. P.E. Laks, K.W. Gutting, J.B. Pickens, and R. DeGroot. 1996. Field Performance of New Wood Preservative Systems in Secondary Timber Species. Proceedings of the 1996 National Conference on Wood Transportation, November, 1996, pp. 389-400.
62. P.E. Laks and M.J. Manning. 1997. Mobility of Zinc Borate Wood Composite Preservative. International Research Group on Wood Preservation. IRG/WP/97-30153.
63. P.E. Laks, K.W. Gutting, and R.C. DeGroot. 1997. Field Performance of Wood Preservative Systems in Secondary Timber Species. International Research Group on Wood Preservation. IRG/WP/97-30152.
64. M.J. Manning and P.E. Laks. 1997. Zinc Borate - A Preservative Treatment for Composites. Proceedings of the Canadian Wood Preservers Association. October, 1996, Vancouver, Canada.
65. M.P. Tolley, P.E. Laks, and R.D. Fears. 1998. Evaluation of Chlorpyrifos and Fungicides Alone and in Combination for Control of Insects and Fungi in Wood and Wood Composites. IRG/WP 98-30187.
66. Y. Liu, L. Yan, P. Heiden, and P. Laks. 1997. Use of Nanoparticles for the Controlled Release of Biocides in Pressure-Treated Solid Wood. *Polymer Preprints* 38(2):624-625.
67. P.E. Laks and M.J. Manning. 1997. Update on the Use of Borates as Preservatives for Wood composites. Proceedings of The Second International Conference on Wood Protection and Diffusible Preservatives and Pesticides. Forest Products Society, pp. 62-68.
68. M.J. Manning and P.E. Laks. 1997. Field performance of borate-containing wood composites. Proceedings from the Third Pacific Rim Bio-Based Composites Symposium. The Japan Wood Research Society, pp.535-543.
69. K.S. Pregitzer, D.D. Reed, T.J. Bornhorst, D.R. Foster, G.D. Mroz, J.S. McLachlan, P.E. Laks, D.D. Stokke, P.E. Martin, S.E. Brown. 1999. A buried spruce forest provides

- evidence at the stand and landscape scale for the effects of environment on vegetation at the Pleistocene/Holocene boundary. *Journal of Ecology* 88, 1-10.
70. P.E. Laks. 1999. The Past, Present, and Future of Preservative-Containing Composites. 33rd International Particleboard/Composite Materials Symposium Proceedings (Wolcott, Tichy, Bender, eds.), Washington State University, pp 151-158.
 71. P.E. Laks and S.A. Verhey. 2000. Decay and Termite Resistance of Thermoplastic/Wood Fiber Composites. Proceedings of the 5th Pacific Rim Bio-Based Composites Symposium. The Australian National University. Pp.727-734.
 72. D.L. Richter and P.E. Laks. 2001. Fungus Wood Decay Laboratory. *Micologia Aplicada International*, 13(1): 41-44.
 73. Y. Liu, L. Yan, P. Heiden, and P.E. Laks. 2001. Use of Nanoparticles for Controlled Release of Biocides in Solid Wood. *Journal of Applied Polymer Science*, 79: 458-465.
 74. P.E. Laks, D.L. Richter, and G.M. Larkin. 2001. Preservative Systems for Wood Composites. Proceedings of the Canadian Wood Preservation Association. Volume 21: 177-187.
 75. P.E. Laks. 2001. Susceptibility of Wood Composites to Formosan Subterranean termite Attack. Residential Construction Materials and Practices to Protect Homes from Formosan Subterranean Termites, Proceedings. In press.
 76. S.A. Verhey, P.E. Laks, and D.L. Richter. 2001. Laboratory Decay Resistance of Wood-Fiber/Thermoplastic Composites. *Forest Products Journal*, 51(9): 44-49.
 77. P.E. Laks, D.L. Richter, and G.M. Larkin. 2002. Fungal Susceptibility of Interior Commercial Building Panels. *Forest Products Journal*, 52(5):41-44 .
 78. P.E. Laks, D.L. Richter, and G.M. Larkin. 2000. Biological Deterioration of Wood-Based Composite Panels. *Wood Design Focus*. 11(4):7-11.
 79. P.E. Laks. 2002. On Deck: Composites. *Smart HomeOwner*. May/June, 36-41.
 80. S.A. Verhey, P.E. Laks, D.L. Richter, E.D. Keranen, and G.M. Larkin. 2003. Evaluation of Wood Fiber/Thermoplastic Composites' Decay Resistance with Field Stakes. *Forest Products Journal*. 53(5):67-74.
 81. S.A. Verhey and P.E. Laks. 2002. Wood Particle Size Affects the Decay Resistance of Wood Fiber/Thermoplastic Composites. *Forest Products Journal* 52(11/12):78-81.
 82. S.A. Verhey and P.E. Laks. Depletion of Zinc Borate from Wood Fiber/Thermoplastic Composite Field Stakes. *Forest Products Journal* (submitted as a Technical Note).
 83. S.A. Verhey and P.E. Laks. Strength Loss Following Fungal Attack on Wood Fiber/Thermoplastic Composites. *Forest Products Journal* (submitted for review).
 84. P.E. Laks. 2002. Biodegradation Susceptibility of Untreated Engineered Wood Products. Enhancing the Durability of Lumber and Engineered Wood Products. Proceedings. Forest Products Society. Pp.125-130.
 85. S.A. Verhey and P.E. Laks. 2002. Fungal Resistance of Woodfiber-Thermoplastic Composites. Enhancing the Durability of Lumber and Engineered Wood Products. Proceedings. Forest Products Society. Pp.179-189.
 86. G.M. Larkin, P.E. Laks and M.P Nelson. 2002. The Microdistribution of Borate Preservative in Flake-Based Wood Composites. Enhancing the Durability of Lumber and Engineered Wood Products. Proceedings. Forest Products Society. Pp.115-118.
 87. Y. Liu, P. Laks, and P. Heiden. 2003. Nanoparticles for the Controlled Release of Fungicides in Wood: Soil Jar Studies using *G. trabeum* and *T. versicolor* Wood Decay Fungi. *Holzforschung* 57, pp. 135-139.
 88. Verhey, S. A. and P. E. Laks. 2002. Strength loss following fungal attack on wood

- fiber/thermoplastic composites. In: Progress in Woodfibre-Plastic Composites Conference 2002. University of Toronto, Toronto, Ontario, Canada.
89. Verhey, S. A. and P. E. Laks. 2002. Fungal resistance of woodfiber/thermoplastic composites. Enhancing the Durability of Lumber and Engineered Wood Products. The Forest Products Society, Madison, WI. Pp. 179-189.
 90. Verhey, S. A., P. E. Laks, and D. L. Richter. 2002. The effect of composition on the decay resistance of model woodfiber-thermoplastic composites. Sixth International Conference on Woodfiber-Thermoplastic Composites. The Forest Products Society, Madison, WI. Pp. 79-86.
 91. Y. Liu, P. Laks, P. Heiden. 2002. Controlled Release of Biocides in Solid Wood. I. Efficacy Against Brown Rot Wood Decay Fungus (*Gloeophyllum trabeum*). Journal of Applied Polymer Science 86, pp. 596-607.
 92. Y. Liu, P. Laks, P. Heiden. Controlled Release of Biocides in Solid Wood. Part 2. Efficacy against *Trametes versicolor* and *Gloeophyllum trabeum* Wood Decay Fungi J. Appl. Polym. Sci. 86, pp. 608-614 (2002)
 93. Y. Liu, P. Laks, P. Heiden. 2002 Controlled Release of Biocides in Solid Wood. III. Preparation and Characterization of Surfactant-Free Nanoparticles. Journal of Applied Polymer Science, 86, 615-621.
 94. D.L. Richter, P.E. Laks, K.M. Larsen, and A.L. Stephens. 2005. Comparison of isolates and strains within the brown rot fungus genus *Gloeophyllum* using the soil block decay method. Forest Products Journal. 55(1):72-75.
 95. M. Jurgensen, P. Laks, D. Reed, A. Collins, D. Page-Dumroese, and D. Crawford. 2003. Chemical, Physical and Biological Factors affecting Wood Decomposition in Forest Soils. IRG/WP 03-03-20281.
 96. P.E. Laks. 2004. Protection of Wood-Based Composites. Proceedings of the American Wood-Preservers' Association. Selma, Alabama. Volume 100, pp.78-82.
 97. P.E. Laks, K. Vehring, S. Verhey, and D.L. Richter. 2005 Effect of Manufacturing Variables on Mold Susceptibility of Wood-Plastic Composites. Eighth International Conference on Woodfiber-Plastic Composites. Forest Products Society, Madison, WI. Pp. 265-270.
 98. P.E. Laks. 2005. Field Testing with the Formosan Subterranean Termite. Proceedings of the American Wood-Preservers' Association. Selma, Alabama. Volume 101, pp. 113-118.
 99. Martin Jurgensen, David Reed, Deborah Page-Dumroese, Peter Laks, Anne Collins, Glenn Mroz and Marek Degórski. 2006. Wood Strength as a Measure of Decomposition in Northern Forest Mineral Soil. European Journal of Soil Biology, Volume 42, Issue 1, January-March 2006, Pages 23-31.
 100. W.C. Pang, L.B. Sandberg, P.E. Laks, and J.W. Forsman. 2007. Corrugated strandboard structural panels. Forest Products Journal, 57(3): 48-53.
 101. P.E. Laks and G.M. Larkin. 2007. Enhancing Composite Durability: Understanding the Implications and Limitations of Test Methods. Proceedings of Wood Protection 2006 (H.M. Barnes, ed.). Forest Products Society, Madison, WI. Pp. 201-206.
 102. S.C. Robinson, P.E. Laks, D.L. Richter, and J.B. Pickens. 2007. Evaluating Loss of Machinability in Spalted Sugar Maple. Forest Products Journal 57(4): 33-37.
 103. S.C. Robinson, D.L. Richter, and P.E. Laks. 2007. Colonization of Sugar Maple by Spalting Fungi. Forest Products Journal 57(4): 24-32.
 104. P.E. Laks, J.K. Vehring, S. Verhey, and D.L. Richter. 2006. Mold Growth on Wood-

- Plastic Composites. Proceedings of the Canadian Wood Preservation Association. Pp. 55-67.
105. P.E. Laks. 2008. Wood Preservative Fungicides. In: Development of Commercial Wood Preservatives (T.P. Schultz, ed.). ACS Symposium Series 982. American Chemical Society, Washington, D.C. Chapter 13, pp. 228-240.
 106. G.M. Larkin, P. Merrick, M. Gnatowski, and P.E. Laks. 2008. In-Process Protection of Wood Composites: An Industry Perspective. In: Development of Commercial Wood Preservatives (T.P. Schultz, ed.). ACS Symposium Series 982. American Chemical Society, Washington, D.C. Chapter 27, pp. 458-469.
 107. G.M. Larkin and P.E. Laks. 2008. Evaluating the Performance of Wood-Based Composites. In: Development of Commercial Wood Preservatives (T.P. Schultz, ed.). ACS Symposium Series 982. American Chemical Society, Washington, D.C. Chapter 8, pp. 152-169.
 108. S.C. Robinson, D.L. Richter, P.E. Laks. 2008. Inducing and Stimulating Spalting in Sugar Maple. International Research Group on Wood Protection. IRG/WP 08-10652

Submitted papers, pending publication:

1. S.C. Robinson, D.L. Richter, P.E. Laks. Effects of Substrate on Laboratory Spalting of Sugar Maple. *Holzforschung*. Accepted.
2. C. Schauwecker, P.E. Laks, and R. Senock. Properties of Waferboard from *Eucalyptus* and *Facalteria* spp. *Forest Products Journal*. Submitted.
3. P.E. Laks, P. I. Morris, G.M. Larkin, and J.K. Ingram. 2009. Field Tests of naturally Durable North American Wood Species. Paper prepared for IRG Americas. Playa Flamingo, Costa Rica. 1-2 December 2008. In press.
4. S.C. Robinson, P.E. Laks, E.J. Turnquist. 2009. A Method for Digital Color Analysis of Spalted Wood using Scion Image Software. *Materials*. Accepted.
5. G.M. Larkin and P.E. Laks. 2009. To Decay or Not to Decay: An Accelerated Field Test of the Validity of the Scheffer Index. Paper prepared for IRG Americas. Playa Flamingo, Costa Rica. 1-2 December 2008. In press.
6. G.M. Larkin, J. Zhang, D.L. Richter, R.J. Ziobro, and P.E. Laks. 2009. Biological Performance of Micronized Copper Wood Preservative Formulations in Field and Laboratory Tests. Paper prepared for IRG Americas. Playa Flamingo, Costa Rica. 1-2 December 2008. In press.

Patents:

1. P.E. Laks. 1988. Biocidal Derivatives of Catechins, U.S. 4,760,088.
2. P.E. Laks, 1990. Biocidal Treatment of Materials with Catechins. U.S. 4,906,656.
3. P.E. Laks, 1991. Method of Treating wood against Fungal Attack. U.S. 4,988,545.
4. P.E. Laks and P.A. Heiden. 2001. Compositions and Methods for Wood Preservation. WO 01/91925.
5. P.E. Laks and P.A. Heiden. 2003. Compositions and Methods for Wood Preservation. US 6,521,288.
6. P.E. Laks and P.A. Heiden. 2004. Compositions and Methods for Wood Preservation. US 6,753,035.

Selected Recent Presentations:

1. P.E. Laks. Field Tests of naturally Durable North American Wood Species. IRG-Americas. December 2, 2008. Playa Flamingo, Costa Rica.
2. P.E. Laks. Wood Protection. Short course presented at The 16th Annual Building Professional Institute. May 19-23, 2008. Arlington, Texas.
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