

PUBLICATIONS

Journal Publications

1. Nocetti M., Della Rocca G., Berti S., Brunetti M., Di Lonardo V., Pizzo B., Danti R. (2017) Clonal consistency of wood technological properties in canker-resistant *Cupressus sempervirens* clones at two contrasting sites. *Tree Genetics & Genomes*, 13(2): 32
2. Macchioni N., Pizzo B., Capretti C., Pecoraro E., Sozzi L., Lazzeri S. (2016) New wooden archaeological finds from Herculaneum: The state of preservation and hypothesis of consolidation of the material from the House of the Relief of Telephus. *Archaeometry*, 58(6), 1024–1037
3. Betti M., Brunetti M., Lauriola M.P., Nocetti M., Ravalli F., Pizzo B. (2016) Comparison of newly proposed test methods to evaluate the bonding quality of Cross-Laminated Timber (CLT) panels by means of experimental data and Finite Element (FE) analysis. *Construction and Building Materials*, 125, 952–963
4. Chiozza F., Pizzo B. (2016) Innovation in poly(vinyl acetate) water resistant D3 glues used in wood industry. *International Journal of Adhesion & Adhesives*, 70, 102–109
5. Pizzo B., Macchioni N., Capretti C., Pecoraro E., Sozzi L., Fiorentino L. (2016) Assessing the wood compressive strength in pile foundations in relation to diagnostic analysis: The example of the Church of Santa Maria Maggiore, Venice. *Construction and Building Materials*, 114, 470–480
6. Macchioni N., Pizzo B., Capretti C. (2016) An investigation into preservation of wood from Venice foundations. *Construction and Building Materials*, 111, 652–661
7. Pizzo B., Smedley D. (2015). Adhesives for on-site bonding: characteristics, testing and prospects. *Construction and Building Materials*, 97, 67–77
8. Diodato M., Macchioni N., Brunetti M., Pizzo B., Nocetti M., Burato P., Sozzi L., Pecoraro E., Vegas López-Manzanares F., Mileto C. (2015) Understanding Spanish Timber Jack Arch Floors: Examples of Assessment and Conservation Issues. *International Journal of Architectural Heritage: Conservation, Analysis, and Restoration*, 9(6), 641–654
9. Pecoraro E., Pizzo B., Alves A., Macchioni N., Rodrigues J.C. (2015) Measuring the chemical composition of waterlogged decayed wood by near infrared spectroscopy. *Microchemical Journal*, 122, 176–188
10. Capano M., Pignatelli O., Capretti C., Lazzeri S., Pizzo B., Marzaioli F., Martinelli N., Gennarelli I., Gigli S., Terrasi F., Macchioni N. (2015) Anatomical and chemical analyses on wooden artifacts from a Samnite sanctuary in Hirpinia (Southern Italy). *Journal of Archaeological Science*, 57, 370–379
11. Pizzo B., Pecoraro E., Alves A., Macchioni N., Rodrigues J.C. (2015) Quantitative evaluation by attenuated total reflectance infrared (ATR-FTIR) spectroscopy of the chemical composition of decayed wood preserved in waterlogged conditions. *Talanta*, 131, 14–20
12. Picollo M., Bartolozzi G., Cucci C., Galeotti M., Marchiafava V., Pizzo B. (2014) Comparative study of Fourier Transform Infrared Spectroscopy in Transmission, Attenuated Total Reflection, and Total Reflection modes for the analysis of plastics in the Cultural Heritage field. *Applied Spectroscopy*, 68(4), 389–396
13. Staccioli G., Santoni I., Pizzo B. (2014) Decay of fossil wood from kimberlite pipes of Lac de Gras in the Canadian sub-Arctic area. *Annales de Paléontologie*, 100, 87–94
14. Macchioni N., Capretti C., Sozzi L., Pizzo B. (2013) Grading the decay of waterlogged archaeological wood according to anatomical characterisation. The case of the Fiavé site (N-E Italy). *International Biodeterioration and Biodegradation*, 84, 54–64
15. Pizzo B., Pecoraro E., Macchioni N. (2013) A new method to quantitatively evaluate the chemical composition of waterlogged wood by means of Attenuated Total Reflectance Fourier Transform Infrared (ATR-FT-IR) measurements carried out on wet material. *Applied Spectroscopy*, 67(5), 553–562
16. Chiozza F., Toniolo F., Pizzo B. (2013) Effects of radio frequency and heat on wood bonding with a poly(vinyl acetate) dispersion adhesive. *Journal of Applied Polymer Science*, 129(3), 1157–1169
17. Pizzo B., Lauriola M.P., Gavioli M. (2013) Evaluation of a design approach to the on-site structural repair of decayed old timber end beams. *Engineering Structures*, 48, 611–622
18. Santoni I., Pizzo B. (2013) Evaluation of alternative vegetable proteins as wood adhesives. *Industrial Crops and Products*, 45, 148–154

19. Pizzo B., Giachi G., Fiorentino L. (2013) Reasoned use of chemical parameters for the diagnostic evaluation of the state of preservation of waterlogged archaeological wood. *Journal of Archaeological Science*, 40(4), 1673–1680
20. Alessandri C., Mallardo V., Pizzo B., Ruocco E. (2012) The roof of the Church of the Nativity in Bethlehem: Structural problems and intervention techniques. *Journal of Cultural Heritage*, 13(4 suppl.), e70–e81
21. Macchioni N., Brunetti M., Pizzo B., Burato P., Nocetti M., Palanti S. (2012) The timber structures in the Church of the Nativity in Bethlehem: Typologies and diagnosis. *Journal of Cultural Heritage*, 13(4 suppl.), e42–e53
22. Macchioni N., Pizzo B., Capretti C., Giachi G. (2012) How an integrated diagnostic approach can help in a correct evaluation of the state of preservation of waterlogged archaeological wooden artefacts. *Journal of Archaeological Science*, 39(10), 3255–3263
23. Giachi G., Capretti C., Donato I.D., Macchioni N., Pizzo B. (2011) New trials in the consolidation of waterlogged archaeological wood with different acetone-carried products. *Journal of Archaeological Science*, 38(11), 2957–2967
24. Santoni I., Pizzo B., (2011) Effect of surface conditions related to machining and air exposure on wettability of different Mediterranean wood species. *International Journal of Adhesion and Adhesives*, 31(7), 743–753
25. Pizzo B., Pometti C.L., Charpentier J.P., Boizot N. and Saidman B.O. (2011) Relationships involving several types of extractives of five native argentine wood species of genera *Prosopis* and *Acacia*. *Industrial Crops and Products*, 34(1), 851–859
26. Mader A., Schirò A., Brischetto M., Pizzo B. (2011) Interactions and penetration of polymers and nanolatexes into wood. An overview. *Progress in Organic Coatings*, 71(2), 123–135
27. Pizzo B., Garabelli G., Varetto M., Brancati L.E., Locandieri M., Pecoraro E., Macchioni N. (2011) On site consolidation of burnt and partially charred wood in dry conditions. *Journal of Cultural Heritage*, 12(1), 19–27
28. Pometti C.L., Palanti S., Pizzo B., Charpentier J.P., Boizot N., Resio C., Saidman B.O. (2010) Durability of five native argentine wood species of genera *Prosopis* and *Acacia* decayed by rot fungi and its relationship with extractive content. *Biodegradation*, 21(5), 753–760
29. Pizzo B., Giachi G., Fiorentino L. (2010) Evaluation of the applicability of conventional methods for the chemical characterization of waterlogged archaeological wood. *Archaeometry*, 52(4), 656–667
30. Palanti S., Pizzo B., Feci E., Fiorentino L., Torniai A.M. (2010) Nutritional requirements for larval development of the dry wood borer *Trichoferus holosericeus* (Rossi) in laboratory cultures. *Journal of Pest Science*, 83(2), 157–164
31. Giachi G., Capretti C., Macchioni N., Pizzo B., Donato I.D. (2010) A methodological approach in the evaluation of the efficacy of treatments for the dimensional stabilisation of waterlogged archaeological wood. *Journal of Cultural Heritage*, 11(1), 91–101
32. Pometti C.L., Pizzo B., Brunetti M., Macchioni N., Ewens M., Saidman B.O. (2009) Argentinean native wood species: Physical and mechanical characterization of some *Prosopis* species and *Acacia* aroma (Leguminosae; Mimosoideae). *Bioresource Technology*, 100(6), 1999–2004
33. Capretti C., Macchioni N., Pizzo B., Galotta G., Giachi G., Giampaola D. (2008) The characterization of the waterlogged archaeological wood: the three roman ships found in Naples (Italy). *Archaeometry*, 50(5), 855–876
34. Torchia D., Capretti C., Pizzo B., Francalanci S. (2008) Patch test triggering recurrence of distant dermatitis: the flare-up phenomenon. *Canadian Medical Association Journal*, 179(4), August 12, 341
35. Lavischi P., Pizzo B., Gagliano J.M., Triboulot P., De Ciechi M. (2003) Fracture energy testing of thick joints with structural wood adhesives. *Holz als Roh- und Werkstoff*, 61(5), 355–357
36. Pizzo B., Lavischi P., Misani C., Triboulot P., Macchioni N. (2003) Measuring the shear strength ratio of glued joints within the same specimen. *Holz als Roh- und Werkstoff*, 61(4), 273–280
37. Pizzo B., Lavischi P., Misani C., Triboulot P. (2003) The compatibility of structural adhesives with wood. *Holz als Roh- und Werkstoff*, 61(4), 288–290
38. Pizzo B., Rizzo G., Lavischi P., Megna B., Berti S. (2002) Comparison of thermal expansion of wood and epoxy adhesives. *Holz als Roh- und Werkstoff*, 60(4), 285–290
39. Lavischi P., Berti S., Pizzo B., Triboulot P., Zanuttini R. (2001) A shear test for structural adhesives used in the consolidation of old timber. *Holz als Roh- und Werkstoff*, 59(1/2), 145–152

40. Lavisci P., Berti S., Pizzo B., Triboulot P., Zanuttini R. (2001) A delamination test for structural wood adhesives used in thick joints. *Holz als Roh- und Werkstoff*, 59(1/2), 153–154

Books

41. Chiozza F., Pizzo B. (2015) *Use of radiofrequency heating to glue wood products with polyvinyl acetate adhesives. Adhesive layers perpendicular to the electric field*. Vinavil SpA, Milan, 76 pp. ISBN: 978-88-940878-0-2)

Chapter in Books with International publisher (selected)

42. Pizzo B., Macchioni N., Capretti C. (2013) “Chapter 7. Evaluating the state of preservation of waterlogged archaeological wood prior to conservation”. In: P. Frediani, M. Frediani, L. Rosi (Eds.) *Cultural Heritage. Protection, Developments and International Perspectives. Focus on Civilizations and Cultures*, 139-171. Nova Science Publisher, New York. ISBN: 978-1-62808-812-0 (printed copy)
43. Pizzo B., Schober K.U. (2008) “On site interventions on decayed beam ends”. In: *Core Document of the COST Action E34. Bonding of Timber*. M. Dunky, B. Källander, M. Properzi, K. Richter, M. Van Leemput (Eds.), Issue 18, 40-49. Lignovisionen Series, Univerität für Bodenkultur, Vienna. ISSN 1681-2808
44. Pizzo B. (2008) “Durability of historic structures repaired with adhesives”. In: *Core Document of the COST Action E34. Bonding of Timber*. M. Dunky, B. Källander, M. Properzi, K. Richter, M. Van Leemput (Eds.), Issue 18, 74-79. Lignovisionen Series, Univerität für Bodenkultur, Vienna. ISSN 1681-2808
45. Pizzo B., Macchioni N., Lavisci P., De Ciechi M. (2004) “On-site consolidation systems of old timber structures”. In: *Interaction between Science, Technology and Architecture in Timber Construction*. C. Bertolini Cestari, T. Marzi, E. Seip, P. Touliatos (Eds.), 323-352. Elsevier SAS, Heritage series, Paris. ISBN 2-84299-605-4. ISSN: 1625-1199
46. Pizzo B., Lavisci P., Macchioni N., Misani C. (2002) “A new approach to the design of epoxy adhesives for the restoration of timber structures”. In: C. Bertolini Cestari, J. Amorim Faria, A. Soikkeli (Eds.), *European Timber Buildings as an Expression of the Technological and Technical Cultures*, 245-254. Elsevier SAS, Heritage series, Paris. ISBN 2-84299-419-1. ISSN: 1625-1199

Journal Publications (non-JCR) (selected)

47. Picollo M., Cavallo E., Macchioni N., Pignatelli O., Pizzo B., Santoni I. (2011) Spectral characterisation of ancient wooden artefacts with the use of traditional IR techniques and ATR device: a methodological approach. *e-Preservation Science*, 8, 23-28
48. Ascione L., Bonamini G., Borri A., Corradi M., Faggiano B., Lavisci P., Piazza M., Pizzo B. (2006) Considerazioni a margine del CNR-DT 201/2005: Studi Preliminari finalizzati alla redazione di Istruzioni per Interventi di Consolidamento Statico di Strutture Lignee mediante l'utilizzo di Compositi Fibrorinforzati. *L'Edilizia*, n.146, 16-21. ISSN: 1593-3970
49. Giampaola D., Carsena V., Boetto G., Crema F., Florio C., Panza D., Bartolini M., Capretti C., Galotta G., Giachi G., Macchioni N., Nugari M.P., Pizzo B. (2005) La scoperta del porto di Neapolis: dalla ricostruzione topografica allo scavo e al recupero dei relitti. *Archaeologia Maritima Mediterranea, An International Journal on Underwater Archaeology*, 2, 82-91, Istituti Editoriali e Poligrafici Internazionali, Pisa, Roma, doi: 10.1400/52974
50. Lavisci P., Lauriola M., Pizzo B., Berti S., Rizzo G. (2003) Compatibilità strutturale tra adesivi e legno. *Area Legno*, Vol. 3, n. 10, agosto-ottobre, 6-11
51. Berti S., Lavisci P., Lauriola M., Pizzo B., Rizzo G. (2003) Consolidamento di strutture lignee con adesivi epossidici. Parte 1: Indagine sulla durabilità degli interventi. *Area Legno*, Vol. 3, n. 9, maggio-luglio, 40-43

Conference Papers (International, extended abstracts)

52. Chiozza F., Santoni I., Pizzo B. (2015) “Bondline discoloration of PVAc-glued wood assemblies”. At: 69th Forest Products Society (FPS) International Convention, Unlocking the Potential of Forest Products, June 10-12, 2015, Atlanta, Georgia, paper 1.6.2

53. Chiozza F., Pizzo B. (2014) "Limits and innovation in poly(vinyl acetate) water resistant D3 glues". In: J.M. Martín-Martínez, J.C. Suárez-Bermejo (Eds.) EURADH 2014, 10th European Conference on Adhesion, April 22-25, Alicante, Spain, 333–336. ISBN: 978-84-616-9067-1
54. Chiozza F., Santoni I., Toniolo F., Pizzo B. (2013). Investigations on the bondline discoloration of PVAc in wood assemblies. In: Proceedings of the 4th International Scientific Conference on Hardwood Processing (ISCHP 2013), 7th-9th October, 2013, Florence, Italy, 241-249. Edizioni CNR-IVALSA, Firenze. ISBN: 978-8-89016-609-9
55. Santoni I., Pizzo B. (2013). Adhesion and penetration of Polyvinyl acetate (PVAc) glues on some commercially valuable hardwood species. In: Proceedings of the 4th International Scientific Conference on Hardwood Processing (ISCHP 2013), 7th-9th October, 2013, Florence, Italy, 258-265. Edizioni CNR-IVALSA, Firenze. ISBN: 978-8-89016-609-9
56. Pizzo B., Alves A., Macchioni N., Alves A., Giachi G., Schwanninger M., Rodrigues J. (2010) "Characterization of waterlogged wood by infrared spectroscopy". In: J. Gril (Ed.) Wood Science for Conservation of Cultural Heritage - Braga 2008: Proceedings of the International Conference held by COST Action IE0601, Braga (Portugal), 5-7 November 2008. Firenze University Press. ISBN 978-88-6453-157-1 (print) ISBN 978-88-6453-165-6 (online), 236-241
57. Chiozza F., Toniolo F., Pizzo B. (2009) "Influence of radiofrequency bonding procedures on the performances of adhesives: the example of PVAc dispersions". In: J.M. Martin Martinez (Ed.), Tendencias en adhesión y adhesivos. Bioadhesión, bioadhesivos y adhesivos naturales, 25-47. Compobell, Alicante. ISBN 978-84-608-0930-2
58. Pizzo B., Santoni I., Ravera M., Mello E. (2009) "Use of garlic for bonding wood in restoration works. Evaluation of its efficacy in the case of animal glues". In: J.M. Martin Martinez (Ed.), Tendencias en adhesión y adhesivos. Bioadhesión, bioadhesivos y adhesivos naturales, 61-71. Compobell, Alicante. ISBN 978-84-608-0930-2
59. Pizzo B., Lauriola M. (2009) "Repair of timber end-beams: Some operational aspects". In: Proceedings of 1st International Conference "Protection of Historical Buildings, PROHITECH 09", Vol. 1. F.M. Mazzolani (Ed.), Rome, 21-24 June 2009, 397-402, CRC Press/Balkema, Taylor & Francis Group, The Netherlands. ISBN 978-0-415-55803-7
60. Giachi G., Pizzo B., Macchioni N., Santoni I. (2009) "A Chemical characterisation of the decay of waterlogged archaeological wood". In: Proceedings of the 10th ICOM Group on Wet Organic Archaeological Materials Conference: Amsterdam 2007. K. Strætkvern, D.J. Huisman (Eds.), Amsterdam, September 10-14, 2007, Nederlandse Archeologische Rapporten 37, 21-33, Rijksdienst voor Archeologie, Cultuurlandschap en Monumenten, Amersfoort. ISBN 978-90-5799-139-4, 772 pp.

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