

ANNOUNCEMENT

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The 4th announcement of the 68th annual meeting of the Japan wood Research Society in Kyoto

Date: March 14 (Wed.)–16 (Fri.), 2018

Venue: Kyoto Prefectural University, Shimogamo Campus (1-5 Shimogamo hangi-cho, Sakyo-ku, Kyoto, Japan)

Kyoto International Conference Center (422 Iwakura osagi-cho, Sakyo-ku, Kyoto, Japan)

Kyoto Concert Hall (1–26 Shimogamo hangi-cho, Sakyo-ku, Kyoto, Japan)

Time Table:

Date	March 14 (Wed.)	March 15 (Thur.)		March 16 (Fri.)
Venue	Kyoto Prefectural University, Shimogamo Campus	Kyoto International Conference Center		Kyoto Prefectural University, Shimogamo Campus
Morning	Oral presentation 9:00–12:00	Poster presentation 9:00–12:00	Exhibition of related companies	Oral presentation 9:00–12:00 Closing ceremony 12:15–12:45
Afternoon	Oral presentation 13:00–18:00	Poster presentation 12:00–17:00 JWRS awards ceremony 13:00–14:00 Symposium 14:30–17:00	Exhibition of related companies	Seminars for research groups 12:45–17:00
Evening	Wood Science Mixer (Kyoto Concert Hall) 18:30–21:45	Banquet 18:00–20:00		

Due dates: Early bird registration: **17:00 (JST), February 6 (Tue.), 2018**

The Japan Wood Research Society (JWRS) takes great pleasure in inviting all members of our society with an interest in the science and technology of wood to attend the 68th Annual Meeting of the JWRS that will be held from March 14 to 16, 2018, Kyoto, Japan.

The society members may take oral and poster presentations during the meeting. The symposium and the exhibition of the related companies will also be held.

For more detail information, please visit <http://www.jwrs.org/wood2018/index-e.html>

Organizing committee:

Prof. Dr. Keiji Takabe (Chief)

Prof. Dr. Yuzo Furuta (Executive Chief)

Prof. Dr. Hisashi Miyafuji (Secretary)

Associate Prof. Dr. Atsushi Tabuchi (Secretary)

Assistant Prof. Dr. Keisuke Kojiro (Secretary)

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Mokuzai Gakkaishi (Journal of the Japan Wood Research Society)

Mokuzai Gakkaishi is another official journal of the Japan Wood Research Society. This journal publishes original articles, notes, review articles, and announcements from the Society in Japanese but with English abstracts, tables, and figure captions for original reports. Contents of the latest issue of *Mokuzai Gakkaishi* are as follows:

Volume 64 Number 1 2017

Category II

Mikio Ueta, Chiaki Hori, Yutaka Tamai, Yusuke Yamagishi, Toshizumi Miyamoto, Yuzou Sano

Changes in the secondary xylem of the living stem of four tree species in response to inoculation with *Perenniporia fraxinea*

This study aimed to clarify the factors that influence tree susceptibility to infection by the white-rot fungus *Perenniporia fraxinea*, by inoculating it into stems of four tree species at butt and breast height, and comparing the alterations in the xylem three to five months after inoculation. The four tree species include *Robinia pseudoacacia*, *Cerasus sargentii*, *Ulmus davidiana* var. *japonica* and *Picea glehnii*; the former two species are easily infected by this fungus, whereas the latter two species are not. PCR analysis detected the inoculated fungus only in the butt xylem of *R. pseudoacacia* and *C. sargentii* and the cell walls in the butt xylem tissues of these species were eroded by hyphae. Other xylem alterations (e.g., water accumulation and cell occlusion) differed among tree species, whereas no apparent difference was observed between butt and breast height. For example, water accumulation occurred in the discolored wood tissues around the inoculated holes in both *R. pseudoacacia* and *U. davidiana* var. *japonica*, while dehydration occurred in the light-colored wood tissues around the inoculated hole in *P. glehnii*. In the vicinity of the inoculation holes, resin deposits formed in *P. glehnii*, whereas cell occlusions by tyloses/gums occurred in the other three species. These results suggest that susceptibility to *P. fraxinea* infection differs not only among tree species but also between heights above ground. It is likely that no particular response to fungal inoculation in the xylem tissues of these four tree species is closely associated with their susceptibility to the infection by *P. fraxinea*.

Category II

Yasuo Yanagawa, Mitsuyoshi Harata

Outdoor exposure test of sugi glued-laminated-timber manufactured with 7 adhesive resinsII: Deterioration according to position

Sugi five-ply glued-laminated-timbers (GLT) were manufactured using 3 resorcinol resin adhesives, 3

water-based-polymer-isocyanate resin adhesives, and vinyl-acetate emulsion adhesive (VAE). GLTs were treated with wood preservative, ACQ (Alkaline Copper Quaternary), and exposed under outdoor conditions with their glue-layers positioned horizontally for 10 years. After 1, 3, 5, and 10 years of exposure, block-shear test were conducted and deterioration of GLT according to position was investigated. Residual ratio of shear-strength increased in order of south-side, north-side, and middle of south-side and north-side positions. Deterioration rates of shear-strength at south-side were larger than those at north-side. Decrease and deterioration rate of shear-strength were large at upper glue-layers, and this was conspicuous in VAE with low adhesion durability. Wood-failure ratio decreased at the first glue-layer of VAE after 5 year of exposure. However, in other adhesive resins, differences of wood-failure ratio among position or glue-layers were small regardless of exposure duration.

Category II

Sakae Shibutani, Shigeru Yamauchi, Kazuko Kirikoshi, Mitsuyoshi Yatagai

Effects of neutralization on deodorizing activities of pyroligneous liquids

The deodorant effects of neutralized pyroligneous liquids were chemically studied to investigate their deodorant mechanisms. Three pyroligneous liquids, which were obtained from nara (*Quercus serrata* Thunb. and/or *Quercus crispula* Blume), ubamegashi (*Quercus phillyraeoides* A. Gray), and mosochiku (*Phyllostachys pubescens* Mazel), respectively, were neutralized with sodium hydroxide, and then their deodorant activities were examined. Five typical offensive odor compounds, ammonia, trimethylamine, hydrogen sulfide, methyl mercaptan, and acetaldehyde, were used in the deodorant tests. All of the neutralized pyroligneous liquids had clear deodorant effects on ammonia. Although all three of the neutralized pyroligneous liquids exhibited deodorant effects against trimethylamine, the effects of the pyroligneous liquid from ubamegashi were markedly decreased by neutralization. The deodorant effects of the three pyroligneous liquids on hydrogen sulfide were considerably increased by neutralization. The pyroligneous liquids from nara and mosochiku exhibited greater deodorant effects against methyl mercaptan after being neutralized. Finally, acetaldehyde emission was markedly inhibited

by the addition of sodium hydroxide to the pyroligneous liquids.

Category III

Satoshi Fukuta, Masaki Nomura, Takeshi Ikeda, Masaki Yoshizawa, Mariko Yamasaki, Yasutoshi Sasaki

UV-laser Incisions to Apply Wood-plastic Compositions to Wood Surfaces

Ultraviolet wavelength short pulse laser (UV laser) was used to apply microscopic incisions to wood surfaces. Using the incisions, we tried to improve the physical properties by plasticizing the surface layer by impregnating it with resin. The UV laser can make a large number of perforations without impairing the aesthetic appearance of wood. Focusing

on this point, at an incision treatment of 667 holes/cm², resin penetration was obtained up to the hole depth from the laser, even with a coating operation under atmospheric or a slightly reduced pressure, and a remarkable improvement in physical properties could be confirmed. When using acrylic resin, the rate of impregnation of solid content was 66 and 53% for sapwood of Japanese cedar and heart wood of Japanese larch, respectively, and the Brinell hardness was improved more than 6 and 4 times, respectively, and the indentation depth in the impact test was decreased less than 1/4 for both specimens. Although a high rate of impregnated solid content could not be obtained, a certain improvement in performance was observed even when a common resin coating was applied for treatment.