# Curriculum Vitae

## Professor Dr. Yafang YIN


**Research Topics:** Wood Anatomy, Wood Cell Wall
Wood Identification
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**EDUCATION**

**1997.09 ~ 2002.06** PhD in Wood Science and Technology; awarded by Chinese Academy of Forestry in Beijing, in 2002.

**1992.09 ~ 1996.06** B.Sc. Majoring in Forest Products and Engineering; awarded by Northeast Forestry University, China, in 1996.

**EMPLOYMENT EXPERIENCE**

**2011.11 ~ present:** Professor, Chinese Academy of Forestry, Beijing.

**2009.03 ~ present:** Chief, Wood Anatomy and Utilization Division, Research Institute of Wood Industry, Chinese Academy of Forestry.

**2002.06 ~ 2009.02:** Assistant Professor and Associate Professor of Chinese Academy of Forestry

**MAJOR AWARDS AND HONORS**

Received the Eleventh Forestry Science and Technology Award for Young Scholars of the State Forestry Administration of China (**2011**), and the Third Distinguished Young Scholars of the Chinese Academy of Forestry (**2012**).

Assigned to the Editorial Board of the IAWA Journal (**2010-2017**), Chinese Wood Industry (since **2014**) and Wood Science and Technology (since **2021**), and the International Editorial Board of Korean Wood Science and Technology Journal (since **2015**), the Associate Editor of the IAWA Journal (since **2020**), and appointed to consultancies by the China CITES Management Authority and the China National Association of Forest Products Industry (since **2014**), and assigned to the China CITES Scientific Committee (since **2020**).

**RELATED RESEARCH EXPERIENCE**

**2022.05** Invited Speaker, Side Event on Xylarium Networking and Wood Identification of the XV World Forestry Congress, Seoul (online)

**2021.11** Co-organizer of the 8th IAWA China Group Annual Meeting and 2021 International Youth Forum for Wood Anatomy, Chengdu, China

**2021.08** Session Organizer of “Advancing Wood Identification to Promote a Sustainable Supply Chain of Forest Products”, the IUFRO World Day, 2021.

**2020.09** Coordinator of 5.16.00, Division 5 of IUFRO (International Union of Forestry Research Organizations, https://www.iufro.org/science/divisions/division-5/50000/51600/)

**2019.10** Co-organizer of LPF/SFB-IAWA Session “New Methods and Applications of Tropical Timber Identification to Promote Legal Logging”, XXV IUFRO World Congress 2019, Curitiba, Brazil.

**2019.08** Member of China Delegation, CITES CoP 18, Geneva, Switzerland.

**2019.05** Organizer of IAWA-IUFRO International Symposium: Challenges and Opportunities for Updating Wood Identification, China.

**2019.02** Invited Speaker, APEC Workshop to Share Experience, Knowledge and Challenges on Implementation of Tools for Combating and Preventing Illegal Logging Activities and Associated Trade (EGILAT)

**2018.08~ present:** Elected Fellow**,** IAWS (International Academy of Wood Science)

**2017.01~ present:** Executive Secretary, IAWA (International Association of Wood Anatomists, http://www.iawa-website.org/)

**2016.10 ~ 2017.10:** Visiting Scholar in Forest Products Laboratory (FPL), USDA, USA.

**2016. 02** Co-organizer of a proposed session (IAWA symposium proposal), XIX International Botanical Congress (IBC 2017, China).

**2015. 11** Organizer of a proposed session (IAWA symposium proposal), XIX International Botanical Congress (IBC 2017, China).

**2015. 09** Invited speaker for two side events, XIV World Forestry Congress (WFC), Durban of South Africa: 1) Wood identification for CITES; 2) Wood anatomy network.

**2014. 12~ present:** Expert member of Expert Group Meeting on forensic analysis related to forest crime, the United Nations Office on Drugs and Crime (UNODC).

**2014. 04~ present:** Deputy Chair of IAWA-China Group.

**2013.05~2013.08:** Division of Flora Affairs, China CITES Management Authority, State Forestry Administration of China (SFA).

**2012.07** Organizer of two sessions for all Division 5 Conference, Estoril, Portugal, IUFRO.

**2012.04~2015.06:** Member of Steering Committee of the International cooperation project -- "Identification of Timber Species and Origin" by Bioversity International.

**2010.10 ~ 2016.12:** Council Member, IAWA

**2010.08 ~ 2019.12:** Deputy Coordinator of 5.06.00, Division 5 of IUFRO

**2009.08 ~ 2010.08:** Visiting Scholar in Royal Institute of Technology (KTH), Sweden.

**2004.02 ~ 2004.05:** Visiting Scholar in Forestry and Forest Products Research Institute (FFPRI), Japan.

**2003.02 ~ 2003.08:** Post-doctor in Canadian Wood Products Research Institute (Forintek), Canada.

## LECTURES FOR GRADUAATED STUDENTS

**2012.09 ~ 2021.12:** Wood Anatomy Lecture for Master and PhD students, Chinese Academy of Forestry

## GUIDER FOR TRAINING COURSES of WOOD IDENTIFICATION

**2016.05~2022.06** "Advancing Wood Identification Techniques to Promote Legal Timber Trade" for Seminar on Forest Law Enforcement and Governance for Officials from Developing Countries, Ministry of Commerce, China.

**2016.04** CITES Implementation and Wood Identification for CITES office of Cameroon and DRC Congo.

**2014.09:** CITES Joint Training Courses for wood ID by China and Germany CITES office.

**2011.03~2015.04:** Hongkong, Macau, Huangpu, Kuming, Guilin, Xiamen Customs, China

## RECENT RELATED PUBLICATIONS (2015~2022)

1） Jiao, L, Lu, Y, Zhang, M, Chen, Y, Wang, Z, Guo, Y, Xu, C, Guo, J, He, T, Ma, L, Gao, W, Wang, J, Zhou, S, Zhang, Y, Jiang, X, Baas, P, & **Yafang Yin***. Ancient plastid genomes solve the tree species mystery of the imperial wood "Nanmu" in the Forbidden City, the largest existing wooden palace complex in the world. Plants, People, Planet, 2022, 1-14. https://doi.org/10.1002/ppp3.10311

2） Li R, Guo J, Macchioni N, Pizzo B, Xi G, Tian X, Chen J, Sun J, Jiang X, Cao J, Zhang Z*, **Yafang Yin***. Characterisation of waterlogged archaeological wood from Nanhai No.1 shipwreck by multidisciplinary diagnostic methods. Journal of Cultural Heritage, 2022, 56, 25-35

3） Juan Guo, Jiabao Chen, Ren Li, Jian'an Liu, Rupeng Luo, Lichao Jiao, **Yafang Yin***. Thermoporometry of waterlogged archaeological wood: Insights into the change of pore traits after the water-removal by supercritical drying. Thermochimica Acta, 2022, (715) 179297. https://doi.org/10.1016/j.tca.2022.179297

4） Li S, Li X, Wang J, Chen Z, Lu S, Wan X, Sun H, Wang L, Sylvain D, Herve C, Jiang X, Shu J, Zheng J*, **Yin Y***. Hydraulic traits are coupled with plant anatomical traits under drought-rewatering cycles in Ginkgo biloba L. Tree Physiology, 2022, 42(6), 1216-1227

5） Shoujia Liu, Tuo He*****, Jiajun Wang, Jiabao Chen, Juan Guo, Xiaomei Jiang, Alex C. Wiedenhoeft, **Yafang Yin**. Can quantitative wood anatomy data coupled with machine learning analysis discriminate CITES species from their look‐alikes? Wood Science and Technology, 2022, https://doi.org/10.1007/s00226-022-01404-y

6） Han L, Guo J*****, Tian X, Jiang X, **Yin Y**. Evaluation of PEG and sugars consolidated fragile waterlogged archaeological wood using nanoindentation and ATR-FTIR imaging. International Biodeterioration & Biodegradation, 2022, 170, 105390

7） Maomao Zhang, Juan Guo, Yang Lu, Lichao Jiao, Tuo He, **Yafang Yin***. Similarity network fusion for aggregating headspace GC‐MS and direct analysis in real time‐mass spectrometry data from solid samples to enhance species identification efficiency of high‐temperature heated wood. Journal of Wood Science, 2022, 68:38, https://doi.org/10.1186/s10086-022-02044-3

8） Tuo He, Lichao Jiao, Juan Guo, **Yafang Yin***. Wood Informatics: History of Development, Application, and Prospective Trend. Chinese Journal of Wood Science and Technology, 2021, 35(4):15-24

9） Juan Guo, Maomao Zhang, Jian'an Liu, Rupeng Luo, Tingting Yan, Tao Yang, Xiaomei Jiang, Mengyu Dong, **Yafang Yin***. Evaluation of the Deterioration State of Archaeological Wooden Artifacts: A Non-destructive Protocol based on Direct Analysis in Real Time – Mass Spectrometry (DART-MS) coupled to Chemometrics. *Analytical Chemistry*, 2020, DOI 10.1021/acs.analchem.0c01429

10）Lichao Jiao, Yang Lu, Tuo He, Juan Guo, **Yafang Yin***. DNA barcoding for wood identification: global review of the last decade and future perspective. *IAWA Journal*, 2020, DOI 10.1163/22941932-bja10041

11）Tuo He, Yang Lu, Lichao Jiao, Yonggang Zhang, Xiaomei Jiang, **Yafang Yin***. Developing Deep Learning Models to Automate Rosewood Tree Species Identification for CITES Designation and Implementation. *Holzforschung*, 2020, DOI 10.1515/hf-2020-0006

12）Han L, Guo J, Wang K, Grönquist P, Li R, Tian X, **Yafang Yin***. Hygroscopicity of waterlogged archaeological wood from Xiaobaijiao No.1 shipwreck related to its deterioration state. Polymers, 2020, 12, 834. https://doi.org/10.3390/polym12040834

13）Juan Guo#, Lin Xiao#, Liuyang Han, Hao Wu, Tao Yang, Shunqing Wu, **Yafang Yin***. Deterioration of cell wall in waterlogged wooden archaeological artifacts, 2400 years old. *IAWA Journal*, 2019, 40(4): 820-844.

14）Tuo He, Lichao Jiao, Alex Wiedenhoeft, **Yafang Yin***. Machine learning approaches outperform distance- and tree- based methods for DNA barcoding of *Pterocarpus* wood. *Planta*, 2019, 249(5):1617-1625.

15）Lichao Jiao, Yang Lu, Tuo He, Jianing Li, **Yafang Yin***. A strategy for developing high-resolution DNA barcodes for species discrimination of wood specimens using the complete chloroplast genome of three P*terocarpus* species, *Planta*, 2019, 250:95-104.

16）Maomao Zhang, Guangjie Zhao, Juan Guo, Alex C. Wiedenhoeft, Charles C. Liu，**Yafang Yin***.

Timber species identification from chemical fingerprints using direct analysis in real time (DART) coupled to Fourier transform ion cyclotron resonance mass spectrometry (FTICR-MS): comparison of wood samples subjected to different treatments. *Holzforschung*, 2019, 73(11): 975-985.

17）Lichao Jiao, Tuo He, Eleanor Dormontt, Yonggang Zhang, Andy Lowe, **Yafang Yin***. Applicability of chloroplast DNA barcodes for wood identification between *Santalum album* and its adulterants. *Holzforschung*, 2019, 73(2): 209-218.

18）Maomao Zhang, Guangjie Zhao, Bo Liu, Tuo He, Juan Guo, Xiaomei Jiang, **Yafang Yin***. Wood discrimination analyses of *Pterocarpus tinctorius* and endangered *Pterocarpus santalinus* using DART-FTICR-MS coupled with multivariate statistics. *IAWA Journal*, 2019, 40(1): 58-74.

19）Tuo He, Lichao Jiao, Min Yu, Juan Guo, Xiaomei Jiang, **Yafang Yin*.** DNA barcoding authentication for the wood of eight endangered *Dalbergia* timber species using machine learning approaches. *Holzforschung*, 2018. DOI: 10.1515/hf-2018-0076.

20）Lichao Jiao#, Min Yu#, Alex Wiedenhoeft, Tuo He, Jianing Li, Bo Liu, Xiaomei Jiang, **Yafang Yin***. DNA barcode authentication and library development for the wood of six commercial *Pterocarpus* species: the critical role of xylarium specimens. *Scientific Reports*. 2018, 8:1945, DOI: 10.1038/s41598-018-20381-6.

21）Guo J, Zhou H, Stevanic JS, Dong M, Yu M, Salmén L*, **Yin Y**. Effects of aging on the cell wall and its hygroscopicity of wood in ancient timber construction. Wood Science and Technology, 2018, 52(1), 131-147. https://doi.org/10.1007/s00226-017-0956-z

22）Mengyu Dong, Yun Lu, Xiaomei Jiang , Wenbin Wang, Yucheng Zhou, Guangjie Zhao, Haibin Zhou*, Yafang Yin*. AMS 14C dating and wood identification in ancient timber structures in Shanxi Province, China. *Journal of Archaeological Science: Reports*, 2017, 13: 361-371.

23）Min Yu#, Lichao Jiao#, Juan Guo, Alex Wiedenhoeft, Tuo He, Xiaomei Jiang, **Yafang Yin*.** DNA barcoding of vouchered xylarium wood specimens of nine endangered *Dalbergia* species. *Planta*, 2017, 246:1165-1176.

24）Jiangping Yin#, Tongqi Yuan#, Yun Lu, Kunlin Song, Haiying Li, Guangjie Zhao, **Yafang Yin***. Effect of compression combined with steam treatment on the porosity, chemical composition and cellulose crystalline structure of wood cell walls. *Carbohydrate Polymers*. 2017, 155: 163-172.

25）Mengyu Dong#, Haibin Zhou#, Xiaomei Jiang, Yun Lu, Weibin Wang, **Yafang Yin***. Wood used in ancient timber architecture in the Shanxi Province, China. *IAWA Journal*, 2017, 38(2):182-200.

26）Juan Guo, H Rennhofer, **Yafang Yin***, HC Lichtenegger*. The influence of thermo-hygro-mechanical treatment on the micro- and nanoscale architecture of wood cell walls using small- and wide-angle X-ray scattering. *Cellulose*, 2016, 23:2325-2340

27）**Yafang Yin**, X Jiang, L Yuan (Editors). Identification manual of endangered and precious timber species common in trades. Beijing: Science Press. 2016 (in English)/2015(in Chinese)

28）Lichao Jiao, Xiaoli Liu, Xiaomei Jiang, **Yafang Yin***. Extraction and Amplification of DNA from aged and archaeological *Populus euphratica* wood for species identification. *Holzforschung* 2015: 69(8):925–931

29）Juan Guo, Kun Song, Lennart Salmen*, **Yafang Yin***. Changes of wood cell walls in response to hygro-mechanical steam treatment. *Carbohydrate Polymers*, 2015, 115:207-214.

30）E Dormontt, M Boner, B Braun, G Breulmann, B Degen, E Espinoza, S Gardner, l Guillery, J Hermanson, G Koch, S Lee, M Kanashiro, A Rimbawanto, D Thomas, A Wiedenhoeft, **Yafang Yin**, J Zahnen, A Lowe*. Forensic timber identification: It's time to integrate disciplines to combat illegal logging, *Biological Conservation*, 2015, 191:790-798.