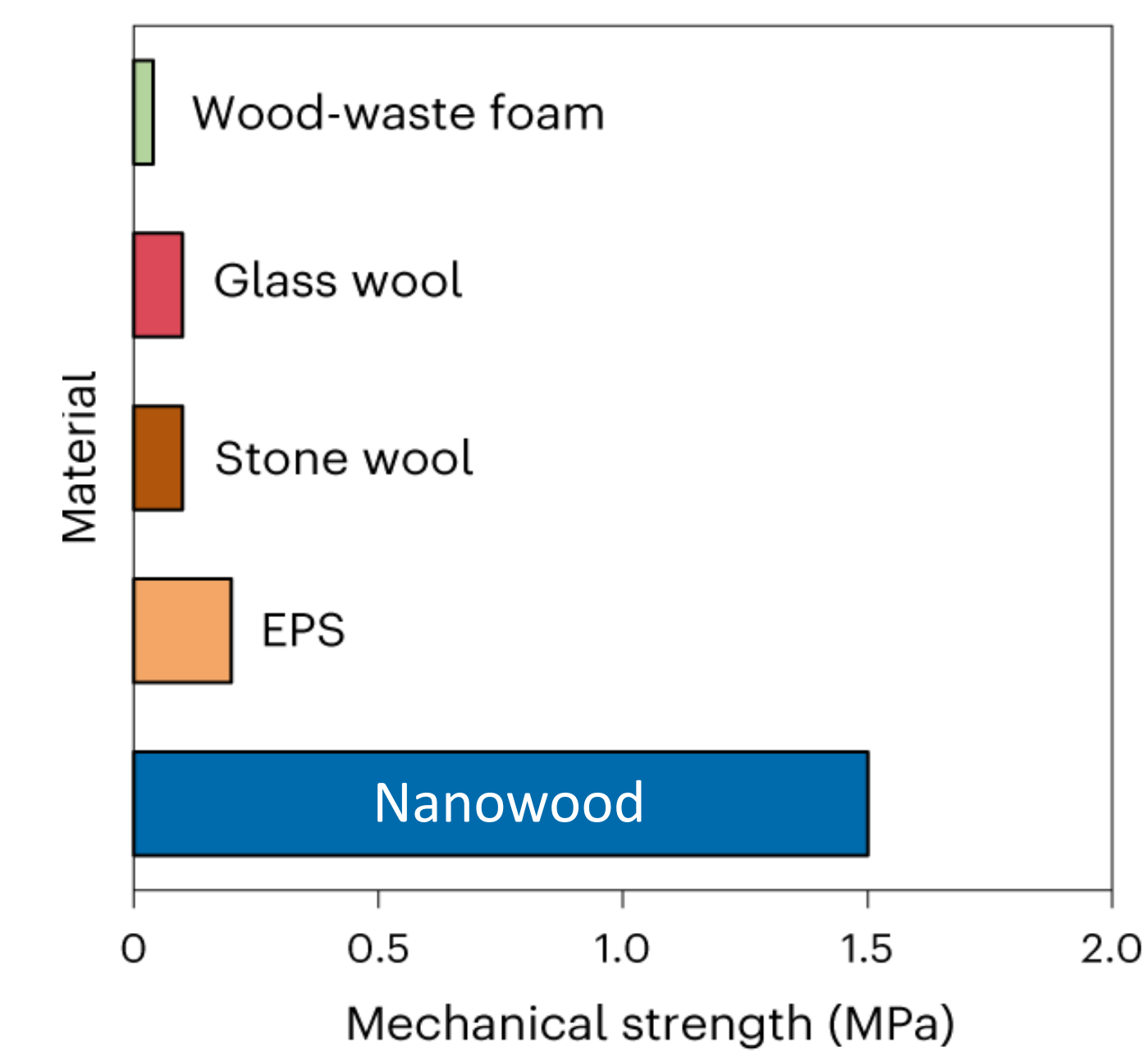
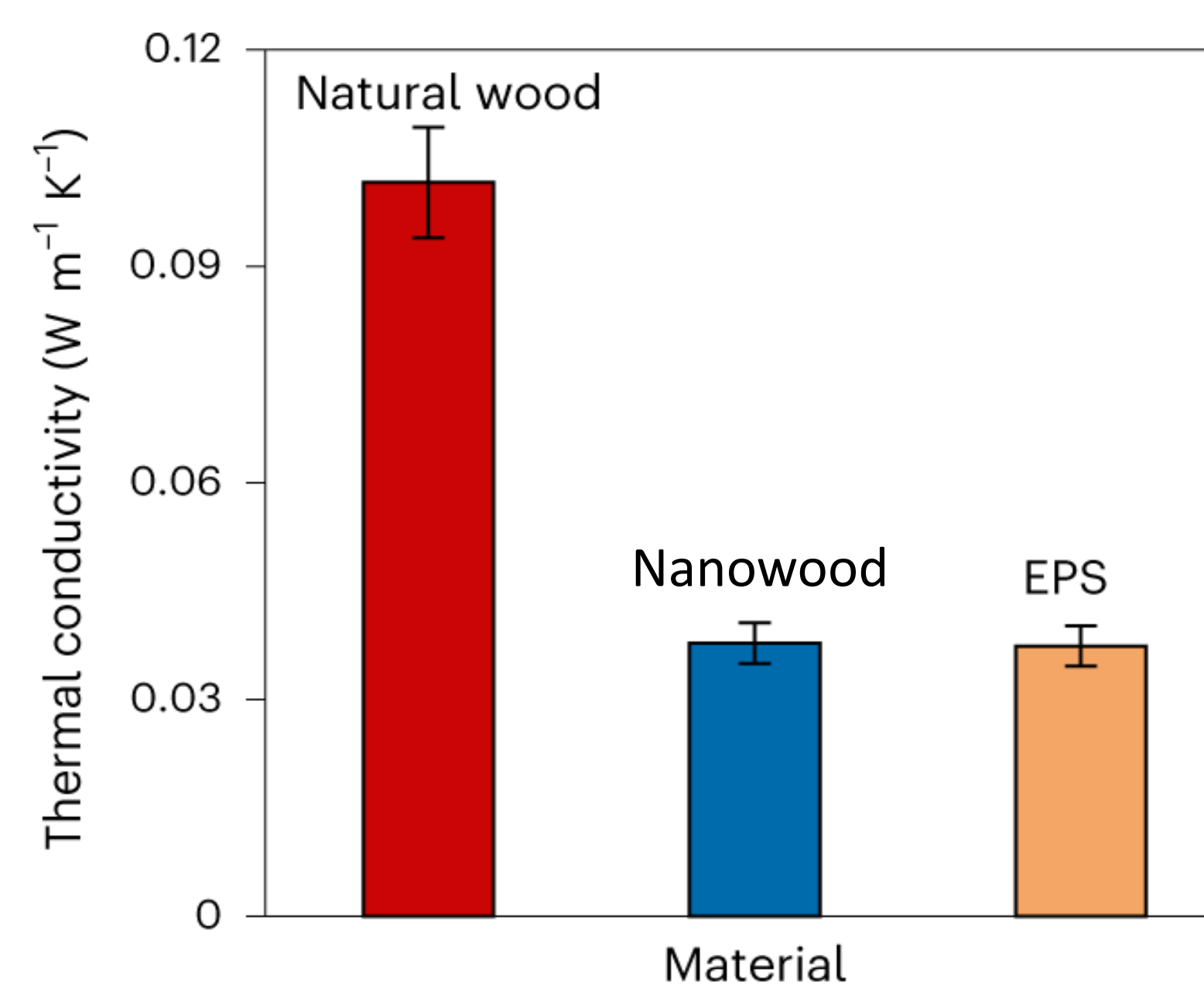
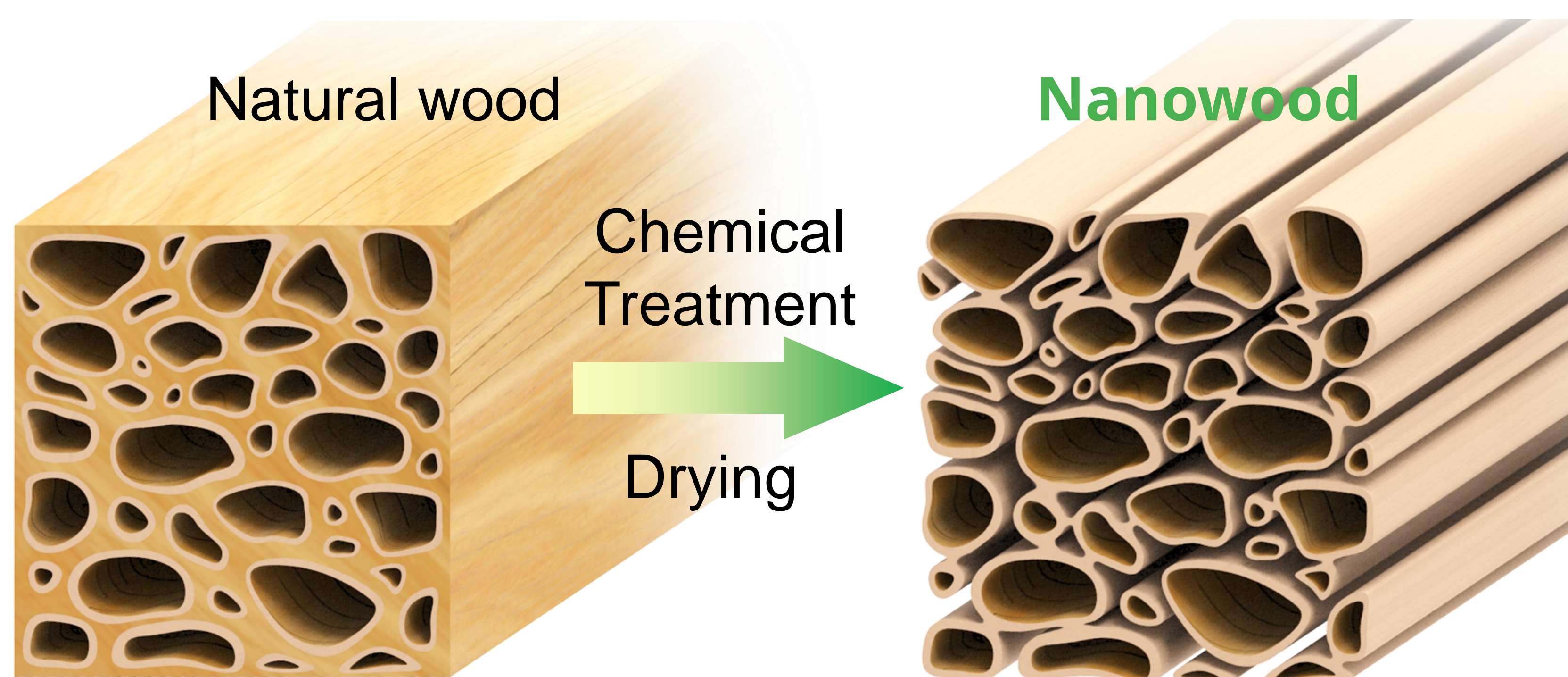




Amy Gong, Jiaqi Dai, Soo-Hwan Jang, Liza Pikus, Josh Cable, InventWood
Xinpeng Zhao, Liangbing Hu, University of Maryland
Program Director: Dr. Sven Mumme



Superior Properties of Nanowood



Zhao, X., Liu, Y., Zhao, L. *et al.* A scalable high-porosity wood for sound absorption and thermal insulation. *Nat Sustain* 6, 306–315 (2023).

Performance Highlights

- Porosity ~ 0.93 (~ 60% reduction in mass)
- Density ~ 0.11 g/cm³
- Thermal conductivity = 0.038 W/(m-K)
- Compressive strength = 1.5MPa

Nanowood Panel Fabrication



Chemical Treatment

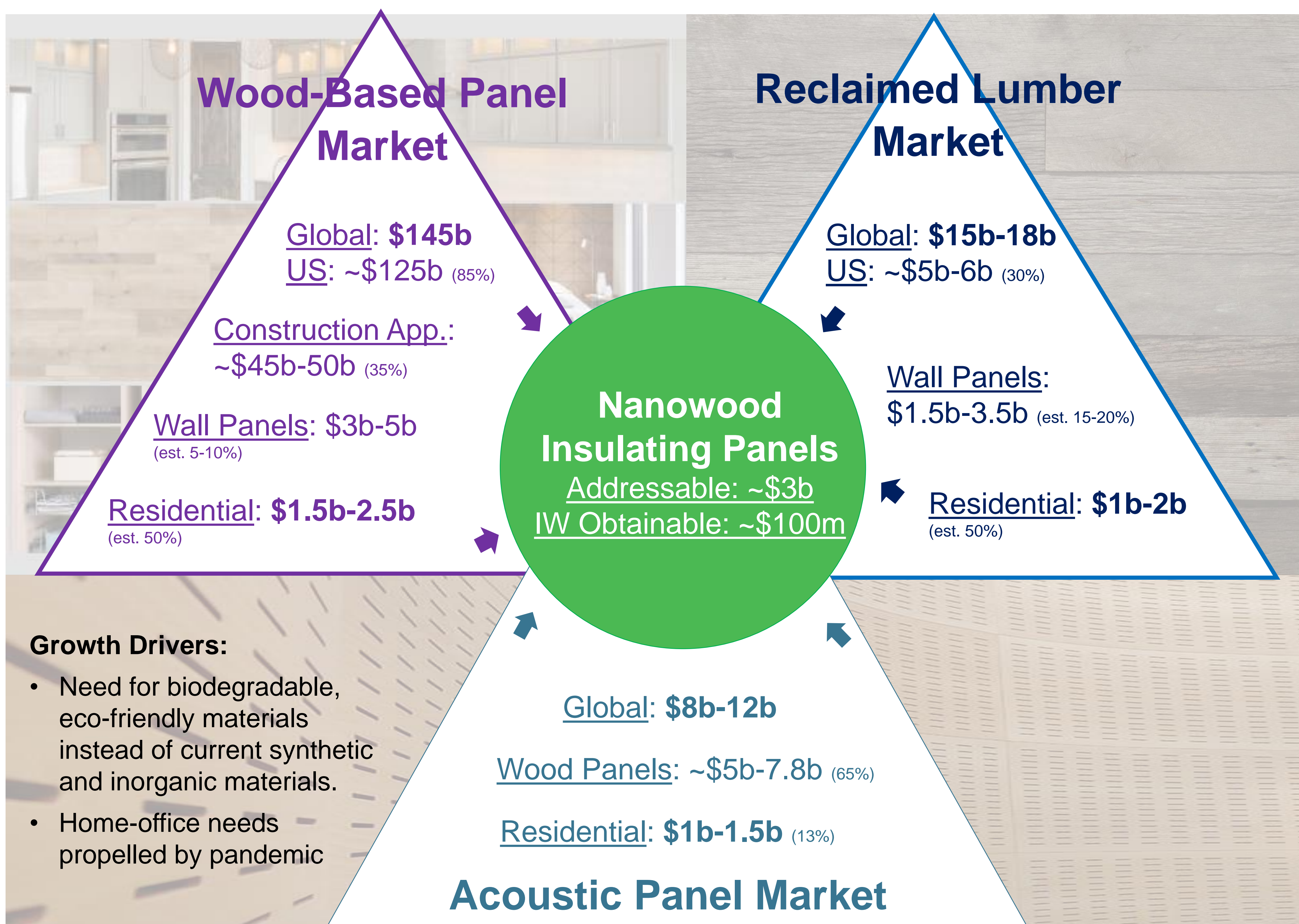


Freeze Drying

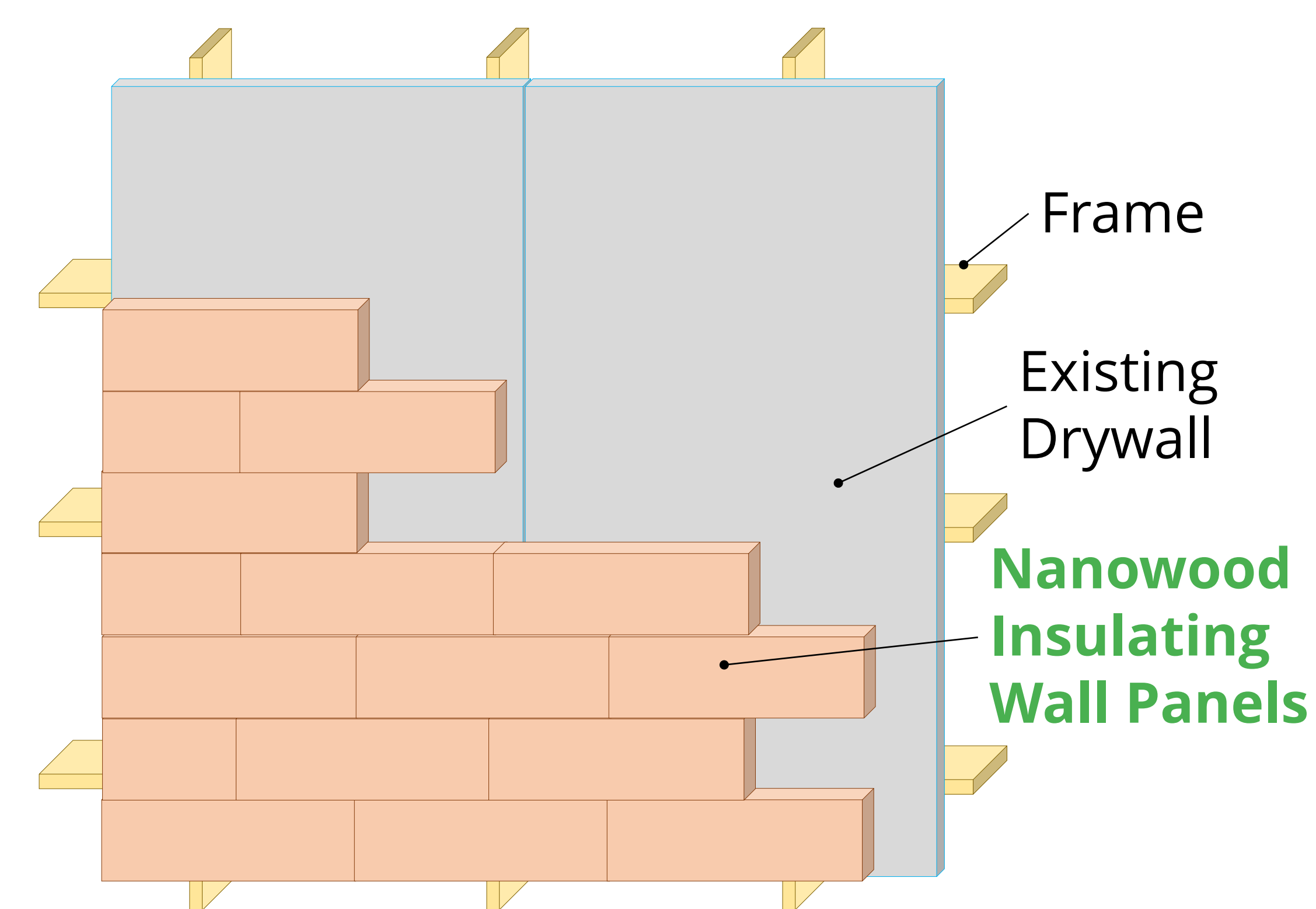


Panel Assembly

Nanowood Wall Panel Market Study



Application



Nanowood Insulating Wall Panel Prototype



Commercial Wall Panel



Nanowood Wall Panel