

SUPERWOOD

For electric guitars

A tunable densified wood platform for electric guitar necks

The musical instrument industry employs specific woods and cuts for stringed instruments to optimize their acoustic and vibrational characteristics. In the case of electric guitars, these woods often originate from slow-growing timber species (hardwoods), which are relatively less sustainable. Additionally, certain species are subject to restrictions or regulations regarding trade. This project seeks to chemically treat and densify wood to modify or control its mechanical and vibrational properties, thereby creating a processed timber that closely resembles natural timber while possessing superior mechanical and acoustic attributes.

Actual samples - Unprocessed Hard Maple, Yellow Poplar, Norway Spruce, Spruce sompressed to 75% thickness, Spruce compressed to 50% thickness, Yellow poplar compressed to 50% thickness (left to right)

Process - Partial delignification, then thermal densification

