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Sommario/riassunto	Wood-based materials are CO2-neutral, renewable, and considered to be environmentally friendly. The huge variety of wood species and wood-based composites allows a wide scope of creative and esthetic alternatives to materials with higher environmental impacts during production, use and disposal. Quality of wood is influenced by the genetic and environmental factors. One of the emerging uses of wood are building and construction applications. Modern building and construction practices would not be possible without use of wood or wood-based composites. The use of composites enables using wood of lower quality for the production of materials with engineered properties for specific target applications. Even more, the utilization of such reinforcing particles as carbon nanotubes and nanocellulose enables development of a new generation of composites with even better properties. The positive aspect of decomposability of waste wood can turn into the opposite when wood or wood-based materials are exposed to weathering, moisture oscillations, different discolorations, and degrading organisms. Protective measures are therefore unavoidable for many outdoor applications. Resistance of wood against different aging factors is always a combined effect of toxic or inhibiting ingredients on the one hand, and of structural, anatomical, or chemical ways of excluding moisture on the other.