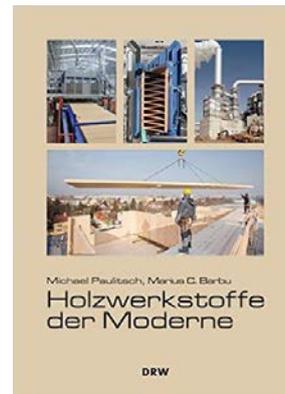


**TITLE:**  
**MODERN WOOD-BASED COMPOSITES (HOLZWERKSTOFFE DER MODERNE) (in German language)**

**AUTHORS:**  
**Michael PAULITSCH, Marius C. BARBU**

**PUBLISHED IN:**  
**DRW-Verlag, Leinfelden-Echterdingen, 2015**  
**ISBN 978-3-87181-891-2, 532 pagini**

*For orders, please contact the author at the following address: [cmbarbu@unitbv.ro](mailto:cmbarbu@unitbv.ro)*



**SHORT PRESENTATION:**

Nowadays wood-based composites are an integrated part of modern constructions, furniture and interior design. The authors are presenting the raw materials and technologies in the current issues of markets, energy, environment and consumer protection. This book deals not only with the technical-economic conditions, but also with aspects of climate protection and the advantages of wood material used for constructions and furniture manufacturing. A special chapter is dedicated to the carbon footprint in the wood industry compared with other materials. The considerations of this work lead to the conclusion that the use of wood has a positive future.

Based on the characteristics and the availability of wood and ligno-cellulosic materials, the book describes the four modern principles of wood size reduction and the consequent manufacturing methods and finishing technologies, including paper-based products, films or coatings for these wood composites. The discussions are based on data from Germany, Austria and Switzerland; but aspects from other European countries and large wood producers such as USA, Russia or China are also considered. The technical conditions of the wood-based materials production are described in detail.

This work presents the main impacts on processing technologies of the chemical and physical properties of raw materials, from fresh to reclaimed wood and other ligno-cellulosic plants. Other chapters include the organic and mineral binders and additives. The non-destructive, continuous quality control and inline quality forecast are an issue in the age of Industry 4.0. Other topics include laminates, WPC and pellets, but also VOC emissions from wood-based materials. The international markets and markets correlations for wood and wood-based materials are pointed.

The book is aimed for all interested parties in the production, properties and applications of modern wood-based materials. It allows students a deepening of knowledge. For engineers and architects represents an understanding of the production and properties of wood-based panels for the intensive consideration/integration of materials in everyday professional life. It brings more arguments for an increased use of these products in emerging markets, taking into account the positive environmental and economic properties of this valuable raw material: wood.