Record Nr. UNINA9910337590603321 Autore Huang Zujian Titolo Application of Bamboo in Building Envelope // by Zujian Huang Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2019 3-030-12032-5 **ISBN** Edizione [1st ed. 2019.] Descrizione fisica 1 online resource (304 pages) Collana Green Energy and Technology, , 1865-3529 Disciplina 624.1897 721.044997 Soggetti Sustainable architecture **Building materials** Sustainable development **Building construction** Sustainable Architecture/Green Buildings **Building Materials** Sustainable Development Building Physics, HVAC Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Introduction -- Material Hygrothermal Properties Test -- Hygrothermal Performance Assessment on Building Component and Enclosed Space -- Building Envelope Hygrothermal Performance Optimization in Hot and Humid Climate Region -- Conclusion. This book offers a comprehensive overview of the use of bamboo in Sommario/riassunto building industry. It systematically demonstrates bamboo's utility in terms of its properties, describing the material properties of typical industrial bamboo products, and discussing their performance evaluation and optimization as building components and in the creation of building envelopes. The book also includes examples of the high-value utilization of bamboo forest resources. Further, it examines how building performance may be affected by conditions such as

climate. Including insights from material science, construction design, building physics and building climatology, the book also provides data

obtained from technology and market status investigation, laboratory test and the computer simulation. This book appeals to scientists and professionals, as it introduces and tests various bamboo products, demonstrating the advantages and disadvantages for each one. The book is also a valuable resource for civil engineers and students interested in this unique plant material and its application in the building industry.