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Nota di contenuto	1. Biosynthesis of bacterial cellulose / Inder M. Saxena and R. Malcolm Brown, Jr. -- 2. Effect of cultivation conditions on the structure and morphological properties of BNC biomaterials with a focus on vascular grafts / Paul Gatenholm. [et al.] -- 3. Large-scale production of BNC : state and challenges / Dana Kralisch and Nadine Hessler -- 4. Tough bacterial nanocellulose hydrogels based on the double-network technique / Anamul Haque, Takayuki Kurokawa, and Jian Ping Gong -- 5. Bacterial cellulose surface modifications / Joao P. Silva, Fabia K. Andrade, and Francisco Miguel Gama -- 6. Nematic ordered cellulose templates / Tetsuo Kondo -- 7. Applications and products : Nata de Coco / Muenduen Phisalaphong and Nadda Chiaoprakobkij -- 8. Wound dressings and cosmetic materials from bacterial nanocellulose / Stanislaw Bielecki. [et al.] -- 9. Bacterial nanocellulose hydrogels designed as bioartificial medical implants / Dieter Klemm. [et al.] -- 10. Bacterial nanocellulose biomaterials with controlled architecture for tissue engineering scaffolds and customizable implants / Paul Gatenholm. [et al.] -- 11. Biomimetic mineralization of apatite on

bacterial cellulose / Thi Thi Nge and Junji Sugiyam -- 12. Bacterial nanocellulose as a structured platform for conductive biopolymers / Fernando Dourado. [et al.].

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Sommario/riassunto

The first book dedicated to the potential applications and unique properties of bacterial cellulose (BC), this seminal work covers the basic science, technology, and economic impact of this bulk chemical as well as the companies and patents that are driving the field. It reviews the biosynthesis and properties of BC, including genetics and characterization; discusses the advancing technology as it relates to product development, bioreactors, and production; and analyzes the economic impact of BC on a diverse range of industry applications, including materials and biomaterials, biological and polymer sciences, and electromechanical engineering--Provided by publisher.

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