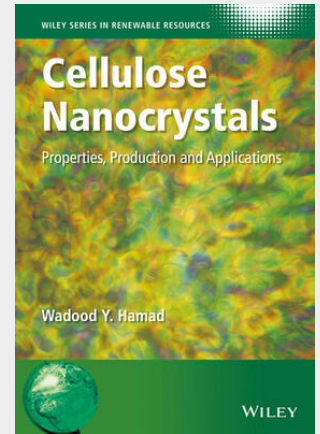


Hamad

Cellulose Nanocrystals

Properties, Production and Applications

Research into cellulose nanocrystals is currently in an exponential growth phase, with research into potential applications now strengthened by recent advances in nanomanufacturing. The possibility of routine commercial production of these advanced materials is now becoming a reality. Cellulose Nanocrystals: Properties, Production and Applications provides an in-depth overview of the materials science, chemistry and physics of cellulose nanocrystals, and the technical development of advanced materials based on cellulose nanocrystals for industrial and medical applications. Topics covered include: * A comprehensive treatment of the structure, morphology and synthesis of cellulose nanocrystals. * The science and engineering of producing cellulose nanocrystals and the challenges involved in nanomanufacturing on a large industrial scale. * Surface/interface modifications of cellulose nanocrystals for the development of novel biomaterials with attractive structural and functional properties. * The scientific bases for developing cellulose-based nanomaterials with advanced functionalities for industrial/medical applications and consumer products. * Discussions on the (i) reinforcing potential of cellulose nanocrystals in polymer nanocomposites, (ii) utilization of these nanocrystals as efficient templates for developing tunable photonic materials, as well as (iii) applications in sustainable electronics and biomedicine. Cellulose Nanocrystals: Properties, Production and Applications will appeal to audiences in the physical, chemical and biological sciences as well as engineering disciplines. It will be of critical interest to industrialists seeking to develop sustainable new materials for the advanced industrial economies of the 21st century, ranging from adaptive "smart" packaging materials, to new chiral, mesoporous materials for optoelectronics and photonics, to high-performance nanocomposites for structural applications.



154,50 €

144,39 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9781119968160

Medium: Buch

ISBN: 978-1-119-96816-0

Verlag: Wiley

Erscheinungstermin: 18.04.2016

Sprache(n): Englisch

Auflage: 1. Auflage 2016

Serie: Wiley Series in Renewable Resources

Produktform: Gebunden

Gewicht: 577 g

Seiten: 312

Format (B x H): 156 x 236 mm

