

1. Record Nr.	UNINA9910557359603321
Autore	Surace Cecilia
Titolo	Novel Approaches for Structural Health Monitoring
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 electronic resource (344 p.)
Soggetti	Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>The thirty-plus years of progress in the field of structural health monitoring (SHM) have left a paramount impact on our everyday lives. Be it for the monitoring of fixed- and rotary-wing aircrafts, for the preservation of the cultural and architectural heritage, or for the predictive maintenance of long-span bridges or wind farms, SHM has shaped the framework of many engineering fields. Given the current state of quantitative and principled methodologies, it is nowadays possible to rapidly and consistently evaluate the structural safety of industrial machines, modern concrete buildings, historical masonry complexes, etc., to test their capability and to serve their intended purpose. However, old unsolved problematics as well as new challenges exist. Furthermore, unprecedented conditions, such as stricter safety requirements and ageing civil infrastructure, pose new challenges for confrontation. Therefore, this Special Issue gathers the main contributions of academics and practitioners in civil, aerospace, and mechanical engineering to provide a common ground for structural health monitoring in dealing with old and new aspects of this ever-growing research field.</p>

2. Record Nr.	UNINA9910404083503321
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Titolo	Nanocelluloses: Synthesis, Modification and Applications
Pubbl/distr/stampa	MDPI - Multidisciplinary Digital Publishing Institute, 2020
ISBN	3-03928-785-0
Descrizione fisica	1 electronic resource (142 p.)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Nanocelluloses: Synthesis, Modification and Applications is a book that provides some recent enhancements of various types of nanocellulose, mainly bacterial nanocellulose, cellulose nanocrystals and nanofibrils, and their nanocomposites. Bioactive bacterial nanocellulose finds applications in biomedical applications, https://doi.org/10.3390/nano9101352. Grafting and cross-linking bacterial nanocellulose modification emerges as a good choice for improving the potential of bacterial nanocellulose in such biomedical applications as topical wound dressings and tissue-engineering scaffolds, https://doi.org/10.3390/nano9121668. On the other hand, bacterial nanocellulose can be used as paper additive for fluorescent paper, https://doi.org/10.3390/nano9091322, and for the reinforcement of paper made from recycled fibers, https://doi.org/10.3390/nano9010058. Nanocellulose membranes are used for up-to-date carbon capture applications, https://doi.org/10.3390/nano9060877. Nanocellulose has been applied as a novel component of membranes designed to address a large spectrum of filtration problems, https://doi.org/10.3390/nano9060867. Poly (vinyl alcohol) (PVA) and cellulose nanocrystals (CNC) in random composite mats prepared using the electrospinning method are widely characterized in a large range of physical chemical aspects, https://doi.org/10.3390/nano9050805. Similarly, physical chemical aspects are emphasized for carboxylated cellulose nanofibrils produced by ammonium persulfate oxidation combined with ultrasonic and</p>

mechanical treatment, <https://doi.org/10.3390/nano8090640>. It is extraordinary how nanocellulose can find application in such different fields. Along the same lines, the contributions in this book come from numerous different countries, confirming the great interest of the scientific community for nanocellulose.
