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Coating/Substrate System Using a Local Approach; Growth of (Zr,Ti)N Thin Films by Ion-Assisted Dual D.C. Reactive Magnetron Sputtering; Structural and Magnetic Properties of Off-Stoichiometric Ni-Mn-Al Heusler Alloy Thin Film; Sprayed-On Polymer as Concrete Spall Shield; Surface Roughness and Morphology Analysis Using an Atomic Force Microscopy of Polycrystalline Diamond Coated Si₃N₄ Deposited by Microwave Plasma Assisted Chemical Vapor Deposition Studies on Effect of Nano-Talc Filler on Nucleation, Crystal Morphology and Crystallization Behaviour of Semi-Crystalline Plastics Sonochemical Synthesis of Poly (Methyl Acrylate); Application of Power Ultrasound in Cavitation Erosion Testing of Nano-Ceramic Particle/Polymer Composites; Keywords Index; Authors Index

Sommario/riassunto

This very special volume on 'Advanced Structural and Functional Materials for Protection' focuses on the choice of materials intended for the specific task of protecting civilians and soldiers against the effects of blast, fragmentation weapons and unconventional attacks, and also covers multi-functional materials intended for the enhancement of soldier performance. Protective materials represent one of the greatest challenges to synthesis and processing; due to the extreme requirements of the application. An understanding of the various mechanisms & sciences behind the behavior of materials w
