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| Nota di contenuto | Characterization and Development of Biosystems and Biomaterials; Preface; Contents; 1 Influence of Al2O3/Pr Nanoparticles on Soil, Air and Water Microorganisms; Abstract; 1...Introduction; 2...Experimental Methods; 3...Results and Discussion; 4...Conclusions; References; 2 Hardness Improvement of Dental Amalgam Using Zinc Oxide and Aluminum Oxide Nanoparticles; Abstract; 1...Introduction; 2... Methodology; 2.1 Synthesis of Zinc Oxide; 2.2 Morphological Characterization and Elemental Analysis; 2.3 Mechanical Strength Test; 2.4 Chemical Composition of Silverfil Dental Amalgam; 3...Results and Discussions<br>3.1 X-Ray Diffraction3.2 Surface Morphologies from FESEM Analysis; 3.3 Elemental Analysis; 3.4 Mechanical Strength Test; 3.4.1 Compression Test; 3.5 Micro Vickers Hardness Test; 3.6 Investigate the Change in Compressibility and Hardness of the Silverfil and its Components with the Addition of 250 degC ZnO; 3.7 Determining the Compressibility, Green Density and Hardness of the Silverfil Powder Material at Higher Filler Loading; 3.8 Investigating the Change in Compressibility and Hardness of the Powder Material with the Addition of 800 degC Aluminum Oxide; 4...Conclusion; References |

3 Review of Rapid Prototyping Techniques for Tissue Engineering Scaffolds FabricationAbstract; 1...Introduction; 2...Rapid Prototyping Techniques for Tissue Engineering Scaffolds Fabrication; 2.1 Extrusion-Based RP Techniques; 2.2 Three Dimensional Printing; 2.3 Selective Laser Sintering; 2.4 Stereolithography; 2.5 Microstereolithograph; 2.6 Electron Beam Melting; 2.7 Selective Laser Melting; 3...Current Limitations; 4...Future Trends; Acknowledgments; References; 4 Molecular Dynamics Study of Oligomer-Membrane Complexes with Biomedical Relevance; Abstract; 1...Introduction; 2...Simulation Details 2.1 Simulated Systems2.2 Simulation Parameters and Conditions; 2.3 Data Analysis; 3...Results and Discussion; 4...Conclusion; References; 5 Methods to Prevent or Mitigate Accidents with Large Animals; Abstract; 1...Introduction; 2...Method of Investigation; 3...Theory; 4...Results; 5... Measures; 5.1 Vehicle; 5.1.1 Passive Measures; 5.1.2 Active Systems; ABS (Anti-Lock Braking System from German: Antiblockiersystem); ESP (Electronic Stability Program); BAS (Brake Assist System); Light Source Technology; Night-Vision Systems; Identification of Objects; Radar (Radio Detection and Ranging); 5.1.3 Long Range
5.1.4 Short Range5.1.5 Ultrasonic Sensor; Laser (LIDAR: Light Detection and Ranging); Multibeam; Laserscanner; 5.1.6 Video; Standard; FIR (Far Infra-Red); Photonic Mixer Device: PMD; C2X (Car-to-X Communication); 5.1.7 Requirements for Active Systems; 5.2 Infrastructure; 5.2.1 Deer Fencing; 5.2.2 Undercrossings and Overcrossings; 5.2.3 Illumination; 5.2.4 Artificial Deterrents; 5.2.5 Reflectors; 5.2.6 Acoustic Means; 5.2.7 Olfactory Means; 5.2.8 Warning Signs; 5.2.9 Shaping of Lateral Road Space; 5.2.10 Animal Recognition Systems and Warning Systems; 5.2.11 Directed Reduction of Population 5.3 The Driver

Sommario/riassunto

This collection of recent activities provides researchers and scientists with the latest trends in characterization and developments of biosystems and biomaterials. Well known experts present their research in materials for drug delivery, dental implants and filling materials, biocompatible membranes, bioactive surface coatings and bio-compatible and eco-sustainable building materials. In The book covers also topics like microorganisms, the human eye, the musculoskeletal system and human body parts.