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4: Engineered Electromagnetic Surfaces and Their Applications; 4.1 Introduction; 4.2 Impedance Boundary Condition
4.3 Metasurfaces Based on Metallic Strips
4.4 Metasurfaces Based on Circular Inclusions; 4.5 Metasurfaces Based on Crossed Dipoles; References; Chapter 5: Structural and Hydroxyapatite-like Surface Functionalization of Advanced Biomimetic Prototype Interface for RA Endoprostheses to Enhance Osteoconduction and Osteointegration; 5.1 Introduction; 5.2 Biomimetic Multi-spiked Connecting Scaffold Prototype - The Promising Breakthrough in Bone-implant Advanced Interfacing in Joint Resurfacing Endoprostheses Fixation Technique
5.3 Bioengineering Design of the MSC-scaffold Prototype, Its Additive Manufacturing and Post-SLM_processing of Bone Contacting Surfaces
5.4 Structural Pro-osteoconduction Functionalization of the MSC-scaffold Interfacing System for Biomimetic Entirely Cementless RA Endoprostheses; 5.5 Hydroxyapatite-like Functionalization of Bone Contacting Surfaces of the MSC-scaffold to Enhance Osteointegration; 5.6 Conclusions; Acknowledgments; References; Part 2: Engineering of Nanosurfaces; Chapter 6: Biosynthesis of Metal Nanoparticles and Graphene; 6.1 Introduction
6.2 Synthesis of Gold and Silver Nanoparticles Using Microorganisms
6.3 Synthesis of Gold and Silver Nanoparticles Using Fruit Extract; 6.4 Synthesis of Gold and Silver Nanoparticles Using Plant Extract; 6.5 Synthesis of Gold and Silver Nanoparticles Using Honey; 6.6 Synthesis of Gold and Silver Nanoparticles Using Animal Tissue; 6.7 Synthesis of Semiconductor Nanoparticles from Plant, Fruit Extract and Honey; 6.8 Biosynthesis of Other Nanoparticles; 6.9 Biosynthesis of Graphene; 6.10 Applications of Metal Nanoparticles and Graphene; 6.11 Future Trends and Prospects; 6.12 Conclusions
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