Surface Coating and Modification of Metallic Biomaterials

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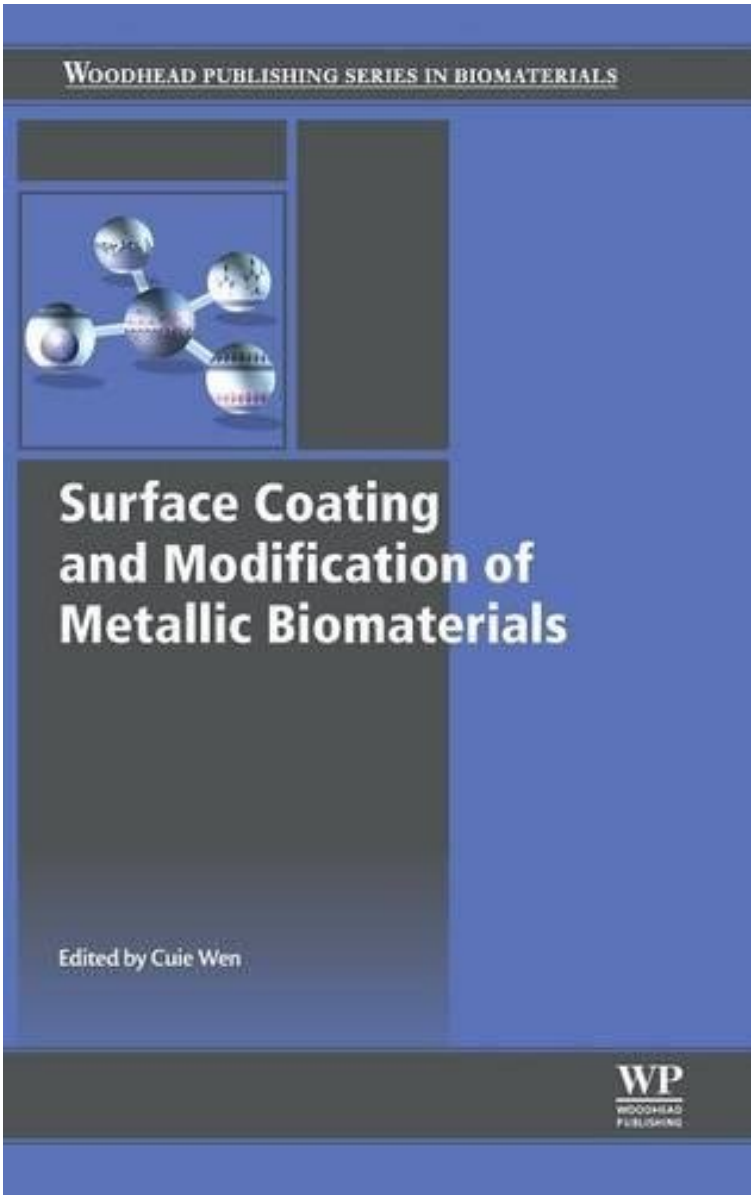

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From Woodhead Publishing : Surface Coating and Modification of Metallic Biomaterials before purchasing it in order to gage whether or not it would be worth my time, and all praised Surface Coating and Modification of Metallic Biomaterials:

Despite advances in alternative materials, metals are still the biomaterial of choice for a number of clinical applications such as dental, orthopedic and cardiac implants. However, there are a number of intrinsic problems associated with implanting metal in the biological environment, such as wear, corrosion, biocompatibility and toxicity, which must be addressed. Modern technology has enabled scientists to modify metal surfaces or apply special coatings to metals to improve their performance safety. Surface Coating and Modification of Metallic Biomaterials will discuss the most important modification techniques and coatings for metals, first covering the fundamentals of metals as a biomaterial and then exploring surface modification techniques and coatings.An expansive overview of surface modification techniques for biomedical useIn-depth exploration of issues arising from metal biomaterial useIncludes examples of applications in a clinical setting

From the Back CoverDespite advances in alternative materials, metals are still the biomaterial of choice for a number of clinical applications such as dental, orthopaedic and cardiac implants. However, there are a number of intrinsic problems associated with implanting metal in the biological environment such as wear, corrosion, biocompatibility and toxicity which must be addressed. Modern technology has enabled scientists to modify metal surfaces or apply special coatings to metals to improve the performance safety of these biomaterials. This book discusses the most important modification techniques and coatings for metals. Part one covers Fundamentals of surface coating and modification of metallic biomaterials. Part two Surface modification techniques for metallic biomaterials and Part three Applications of surface modification and coatings Cuie Wen is Professor of Surface Engineering at Swinburne University of Technolog. Cuies research has led to over 240 peerreviewed original publications in total and these publications have been cited for over 1800 times with an hindex 19. Cuies research interests include metallic biomaterials, surface coating/modification of metals and alloys, development of porous metallic biomaterials (Ti, Mg, and their alloys and composites), porous metals for light weight structures (Ti, Al, Mg and their alloys), batteries, nanolaminates and nanostructured metals, alloys and composites with physical and mechanical properties. About the AuthorCuie has published over 280 peer reviewed original publications in total and these publications have been cited for over 2000 times with an h index 20. She has also delivered over 170 keynote, invited and oral presentations at national and international conferences. Her research interests include metallic biomaterials, surface coating/modification of metals and alloys, development of porous metallic biomaterials (Ti, Mg, and their alloys and composites), porous metals for light weight structures (Ti, Al, Mg and their alloys), batteries, nanolaminates and nanostructured metals, alloys and composites with physical and mechanical properties.