1. Record Nr. UNINA9910298576303321

Titolo	Metallurgical Design and Industry : Prehistory to the Space Age / / edited by Brett Kaufman, Clyde L. Briant
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-93755-3
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (390 pages)
Disciplina	669.09
Soggetti	Metals Engineering design Surfaces (Physics) Interfaces (Physical sciences) Thin films Nuclear energy Biomedical engineering Technology—History Metallic Materials Engineering Design Surface and Interface Science, Thin Films Nuclear Energy Biomedical Engineering and Bioengineering History of Technology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1 -- Anthropology of Metallurgical Design: A Survey of Metallurgical Traditions from Hominin Evolution to the Industrial Revolution -- Chapter 2.The Beginnings of the Use of Iron and Steel in Heavy Armor -- Chapter 3.Transformative Innovation in Mining and Metallurgy -- Chapter 4.Structural Metallurgy: Metallurgy of Bridges -- Chapter 5.Materials in the Aircraft Industry -- Chapter 6.The Development of Clean Steels for Steam Turbine Applications-Their Demand and Use.

Sommario/riassunto

This edited volume examines metallurgical technologies and their place in society throughout the centuries. The authors discuss metal alloys and the use of raw mineral resources as well as fabrication of engineered alloys for a variety of applications. The applications covered in depth include financial, mining and smelting, bridges, armor, aircraft, and power generation. The authors detail the multiple levels and scales of impact that metallurgical advances have had and continue to have on society. They include case studies with guidance for future research design and innovation of metallic materials relevant to societal needs. Includes case studies written by industry professionals with guidance for future research design and innovation; Demonstrates metal materials design that reflects relevant societal needs; Covers a broad range of applied materials used in aircraft, armor, bridges, and power generation, among others.