1. **Record Nr.**   UNINA9910688310603321

   Titolo   Recent Advancements in the Metallurgical Engineering and
                         Electrodeposition / / Uday Basheer Al-Naib, Dhanasekaran Vikraman, K.
                         Karuppasamy, editors

   Pubbl/distr/stampa London : , : IntechOpen, , 2020

   Descrizione fisica 1 online resource (202 pages)

   Disciplina   669.92

   Soggetti   Metallurgical analysis
                         Electrometallurgy

   Lingua di pubblicazione Inglese

   Formato   Materiale a stampa

   Livello bibliografico Monografia

   Sommario/riassunto Metallurgy is a field of material science and engineering that studies
                         the chemical and physical behavior of metallic elements, intermetallic
                         compounds, and their mixtures, which are called alloys. These metals
                         are widely used in this kind of engineering because they have unique
                         combinations of mechanical properties (strength, toughness, and
                         ductility) as well as special physical characteristics (thermal and
                         electrical conductivity), which cannot be achieved with other materials.
                         In addition to thousands of traditional alloys, many exciting new
                         materials are under development for modern engineering applications.
                         Metallurgical engineering is an area concerned extracting minerals
                         from raw materials and developing, producing, and using mineral
                         materials. It is based on the principles of science and engineering, and
                         can be divided into mining processes, which are concerned with the
                         extraction of metals from their ores to make refined alloys, and
                         physical metallurgy, which includes the fabrication, alloying, heat
                         treatment, joining and welding, corrosion protection, and different
                         testing methods of metals. Conventional metal forming/shaping
                         techniques include casting and forging, which remains an important
                         processing route. Electrodeposition is one of the most used methods
                         for metal and metallic alloy film preparation in many technological

processes. Alloy metal coatings offer a wider range of properties than those obtained by a single metal film and can be applied to improve the properties of the substrate/coating system. This book covers a wide range of topics related to recent advancements in metallurgical engineering and electrodeposition such as metallurgy forming, structure, microstructure properties, testing and characterizations, and electrodeposition techniques. It also highlights the progress of metallurgical engineering, the ferrous and non-ferrous materials industries, and the electrodeposition of nanomaterials and composites.

2. Record Nr.	UNINA9910410055503321
Titolo	Artificial Intelligence and Machine Learning for Digital Pathology : State-of-the-Art and Future Challenges / / edited by Andreas Holzinger, Randy Goebel, Michael Mengel, Heimo Müller
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-50402-6
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (xii, 339 pages)
Collana	Lecture Notes in Artificial Intelligence, , 2945-9141 ; ; 12090
Disciplina	616.07540285 616.07
Soggetti	Artificial intelligence Computers Database management Social sciences - Data processing Data protection Computer vision Artificial Intelligence Computing Milieux Database Management Computer Application in Social and Behavioral Sciences Data and Information Security Computer Vision
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Note generali	Includes index.
Nota di contenuto	Expectations of Artificial Intelligence for Pathology -- Interpretable Deep Neural Network to Predict Estrogen Receptor Status from Haematoxylin-Eosin Images -- Supporting the Donation of Health Records to Biobanks for Medical Research -- Survey of XAI in Digital Pathology -- Sample Quality as Basic Prerequisite for Data Quality: A Quality Management System for Biobanks -- Black Box Nature of Deep Learning for Digital Pathology: Beyond Quantitative to Qualitative Algorithmic Performances -- Towards a Better Understanding of the Workflows: Modeling Pathology Processes in View of Future AI Integration -- OBDEX – Open Block Data Exchange System -- Image Processing and Machine Learning Techniques for Diabetic Retinopathy Detection: A Review -- Higher Education Teaching Material on Machine Learning in the Domain of Digital Pathology -- Classification vs Deep Learning in Cancer Degree on Limited Histopathology Datasets -- Biobanks and Biobank-Based Artificial Intelligence (AI) Implementation Throughan International Lens -- HistoMapr: An Explainable AI (xAI) Platform for Computational Pathology Solutions -- Extension of the Identity Management System Mainzelliste to Reduce Runtimes for Patient Registration in Large Datasets -- Digital Image Analysis in Pathology Using DNA Stain: Contributions in Cancer Diagnostics and Development of Prognostic and Theranostic Biomarkers -- Assessment and Comparison of Colour Fidelity of Whole slide imaging scanners -- Deep Learning Methods for Mitosis Detection in Breast Cancer Histopathological Images: a Comprehensive Review -- Developments in AI and Machine Learning for Neuroimaging.
Sommario/riassunto	Data driven Artificial Intelligence (AI) and Machine Learning (ML) in digital pathology, radiology, and dermatology is very promising. In specific cases, for example, Deep Learning (DL), even exceeding human performance. However, in the context of medicine it is important for a human expert to verify the outcome. Consequently, there is a need for transparency and re-traceability of state-of-the-art solutions to make them usable for ethical responsible medical decision support. Moreover, big data is required for training, covering a wide spectrum of a variety of human diseases in different organ systems. These data sets must meet top-quality and regulatory criteria and must be well annotated for ML at patient-, sample-, and image-level. Here biobanks play a central and future role in providing large collections of high-quality, well-annotated samples and data. The main challenges are finding biobanks containing ''fit-for-purpose'' samples, providing quality related meta-data, gaining access to standardized medical data and annotations, and mass scanning of whole slides including efficient data management solutions.