

1. Record Nr.	UNINA9910659493203321
Titolo	Advances in Pyrometallurgy : Developing Low Carbon Pathways // edited by Camille Fleuriault, Joalet D. Steenkamp, Dean Gregurek, Jesse F. White, Quinn G. Reynolds, Phillip J. Mackey, Susanna A.C. Hockaday
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2023
ISBN	3-031-22634-8
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (302 pages)
Collana	The Minerals, Metals & Materials Series, , 2367-1696
Disciplina	669.0282
Soggetti	Metals Materials Mining engineering Carbon Chemistry Ferroelectric crystals Metals and Alloys Metal-organic Frameworks Mining and Exploration Carbon Materials Ferroelectrics and Multiferroics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Sommario/riassunto	Carbon intensive industries are at a crossroads. Long-term manufacturing plans using pyrometallurgical processes all include decarbonization levers: we must solve the problem of fossil-based reduction and fossil-based power generation processes for metals production. This collection explores innovative and diverse strategies for the enablement of low carbon industries in the high-temperature metals and materials processing fields. In particular, the following processes are investigated: · Electrolysis and electrification of metallurgical processes · High-temperature electrolytic routes for metal and alloy production · Use of hydrogen and other alternative non-

carbonaceous reducing agents · Biofuels and other non-fossil reagents for metallurgical applications · Direct and indirect use of solar energy in high-temperature processing · Energy efficiency and waste heat recovery concepts applied to pyrometallurgical operations.

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