

1. Record Nr.	UNINA9910253968103321
Autore	Ding Yi <1975 April->
Titolo	Nanoporous Metals for Advanced Energy Technologies / / by Yi Ding, Zhonghua Zhang
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-29749-X
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (229 p.)
Disciplina	620
Soggetti	Electronics Microelectronics Nanotechnology Optical materials Electronics - Materials Electronics and Microelectronics, Instrumentation Optical and Electronic Materials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction to Nanoporous Metals -- Formation and Microstructural Regulation of Nanoporous Metals -- Nanoporous Metals for Fuel Cell Applications -- Nanoporous Metals for Supercapacitor Applications -- Nanoporous Metals for Li Battery Applications -- Conclusions and Prospects.
Sommario/riassunto	This book covers the state-of-the-art research in nanoporous metals for potential applications in advanced energy fields, including proton exchange membrane fuel cells, Li batteries (Li ion, Li-S, and Li-O <sub>2</sub> ), and supercapacitors. The related structural design and performance of nanoporous metals as well as possible mechanisms and challenges are fully addressed. The formation mechanisms of nanoporous metals during dealloying, the microstructures of nanoporous metals and characterization methods, as well as microstructural regulation of nanoporous metals through alloy design of precursors and surface diffusion control are also covered in detail. This is an ideal book for researchers, engineers, graduate students, and government/industry

officers who are in charge of R&D investments and strategy related to energy technologies.

---