1. Record Nr. UNINA9910585939403321

Autore	Pasquini Luca
Titolo	Nanostructured Materials for Energy Storage and Conversion
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (164 p.)
Soggetti	Physics Research & information: general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	The conversion and storage of renewable energy sources is key to the transition from a fossil-fuel-based economy to a low-carbon society. Many new game-changing materials have already impacted our lives and contributed to a reduction in carbon dioxide emissions, such as high-efficiency photovoltaic cells, blue light-emitting diodes, and cathodes for Li-ion batteries. However, new breakthroughs in materials science and technology are required to boost the clean energy transition. All success stories in materials science are built upon a tailored control of the interconnected processes that take place at the nanoscale, such as charge excitation, charge transport and recombination, ionic diffusion, intercalation, and the interfacial transfer of matter and charge. Nanostructured materials, thanks to their ultra-small building blocks and the high interface-to-volume ratio, offer a rich toolbox to scientists that aspire to improve the energy conversion efficiency or the power and energy density of a material. Furthermore, new phenomena arise in nanoparticles, such as surface plasmon resonance, superparamegntism, and exciton confinement. The ten articles published in this Special Issue showcase the different applications of nanomaterials in the field of energy storage and conversion, including electrodes for Li-ion batteries and beyond, photovoltaic materials, pyroelectric energy harvesting, and (photo) catalytic processes.

2. Record Nr. UNINA9910831874003321

Autore	Ockwell David G.
Titolo	Sustainable energy for all : innovation, technology and pro-poor green transformations / / David Ockwell and Rob Byrne
Pubbl/distr/stampa	Taylor & Francis, 2017 Lodnon ; ; New York : , : Routledge, , 2017
ISBN	9781317220510 131722051X 9781315621623 1315621622 9781317220503 1317220501
Edizione	[1st ed.]
Descrizione fisica	1 online resource (213 pages)
Collana	Pathways to Sustainability
Altri autori (Persone)	ByrneRob
Disciplina	621.0420967
Soggetti	Renewable energy sources - Africa, Sub-Saharan Clean energy industries - Africa, Sub-Saharan Energy security - Africa, Sub-Saharan Solar energy - Kenya
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. Introduction : beyond hardware financing and private sector entrepreneurship -- 2. Innovation systems for technological change and economic development -- 3. Innovation in the context of social practices and socio-technical regimes -- 4. Emergence and articulation of the Kenyan solar PV market -- 5. Policy regime interactions and emerging markets -- 6. Learning from the Kenyan solar PV innovation history -- 7. Conclusion : towards Socio-Technical Innovation System Building.
Sommario/riassunto	Despite decades of effort and billions of dollars spent, two thirds of people in sub-Saharan Africa still lack access to electricity, a vital pre-cursor to economic development and poverty reduction. Ambitious international policy commitments seek to address this, but scholarship has failed to keep pace with policy ambitions, lacking both the

empirical basis and the theoretical perspective to inform such transformative policy aims. Sustainable Energy for All aims to fill this gap. Through detailed historical analysis of the Kenyan solar PV market the book demonstrates the value of a new theoretical perspective based on Socio-Technical Innovation System Building. Importantly, the book goes beyond a purely academic critique to detail exactly how a Socio-Technical Innovation System Building approach might be operationalized in practice, facilitating both a detailed plan for future comparative research as well as a clear agenda for policy and practice.