

1. Record Nr.	UNINA9910465321603321
Autore	Cheruvally Gouri
Titolo	Lithium iron phosphate : a promising cathode-active material for lithium secondary batteries // Gouri Cheruvally
Pubbl/distr/stampa	Stafa-Zuerich ; ; Enfield, New Hampshire : , : Trans Tech Publications Limited, , [2008] ©2008
ISBN	3-03813-240-3
Descrizione fisica	1 online resource (142 p.)
Collana	Materials science foundations, , 1422-3597 ; ; volume 38
Soggetti	Lithium cells - Research Lithium compounds Electronic books.
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 (pages 114-126).
Nota di contenuto	Lithium Iron Phosphate: A Promising Cathode-Active Material for Lithium Secondary Batteries; Dedication; Author; Preface; Table of Contents; Abbreviations; Table of Contents; 1. Introduction; 2. Characteristics of LiFePO ₄ as a Cathode-Active Material; 3. Synthesis of LiFePO ₄ : Different Methods; 4. Synthesis of LiFePO ₄ /C; 5. Influence of Synthesis Parameters on the Properties of LiFePO ₄ and LiFePO ₄ /C; 6. Metal Ion-Doped LiFePO ₄ : Synthesis and Properties; 7. LiFePO ₄ -Based Cathode: Influence of Different Parameters on Properties 8. Lithium Cells with LiFePO ₄ Cathode: Influence of Cell Components and Operating Temperature 9. Safety and Storage of Lithium Batteries with LiFePO ₄ Cathodes; 10. Theoretical and Modeling Studies on LiFePO ₄ ; 11. Phosphate Olivines as Cathode-Active Materials; 12. An Overview; References; Authors Index
Sommario/riassunto	Since the first development of lithium-ion batteries in the early 1990's, there have been tremendous advances in the science and technology of these electrochemical energy sources. At present, lithium batteries dominate the field of advanced power sources and have almost entirely replaced their bulkier and less energetic counterparts such as nickel-cadmium and nickel-metalhydride batteries; especially in portable electronic devices. But lithium batteries are still the object of

continuing intense research aimed at making further improvements in performance and safety, at lower cost, so as to m
