1. Record Nr. UNINA9910254633903321

Autore	He Junfeng
Titolo	Angle-Resolved Photoemission Spectroscopy on High-Temperature Superconductors : Studies of Bi2212 and Single-Layer FeSe Film Grown on SrTiO3 Substrate / / by Junfeng He
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2016
ISBN	3-662-52732-4
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XVI, 126 p. 77 illus., 71 illus. in color.)
Collana	Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053
Disciplina	537.623
Soggetti	Superconductivity Superconductors Surfaces (Physics) Interfaces (Physical sciences) Thin films Spectrum analysis Microscopy Strongly Correlated Systems, Superconductivity Surface and Interface Science, Thin Films Spectroscopy and Microscopy
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Doctoral Thesis accepted by The University of Chinese Academy of Sciences, China."
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	From the Contents: Brief introduction to cuprates and Fe-based high Tc superconductors -- The discovery of high Tc superconductors -- Cuprates -- Fe-based superconductors -- Introduction to angle-resolved photoemission spectroscopy (ARPES) -- Energy resolution -- Momentum resolution (three-step model) -- The physical processes in photoemission.
Sommario/riassunto	This book mainly focuses on the study of the high-temperature superconductor Bi2Sr2CaCu2O8+ (Bi2212) and single-layer FeSe film grown on SrTiO3 (STO) substrate by means of angle-resolved photoemission spectroscopy (ARPES). It provides the first electronic

evidence for the origin of the anomalous high-temperature superconductivity in single-layer FeSe grown on SrTiO3 substrate. Two coexisted sharp-mode couplings have been identified in superconducting Bi2212. The first ARPES study on single-layer FeSe/STO films has provided key insights into the electronic origin of superconductivity in this system. A phase diagram and electronic indication of high Tc and insulator to superconductor crossover have been established in the single-layer FeSe/STO films. Readers will find essential information on the techniques used and interesting physical phenomena observed by ARPES.