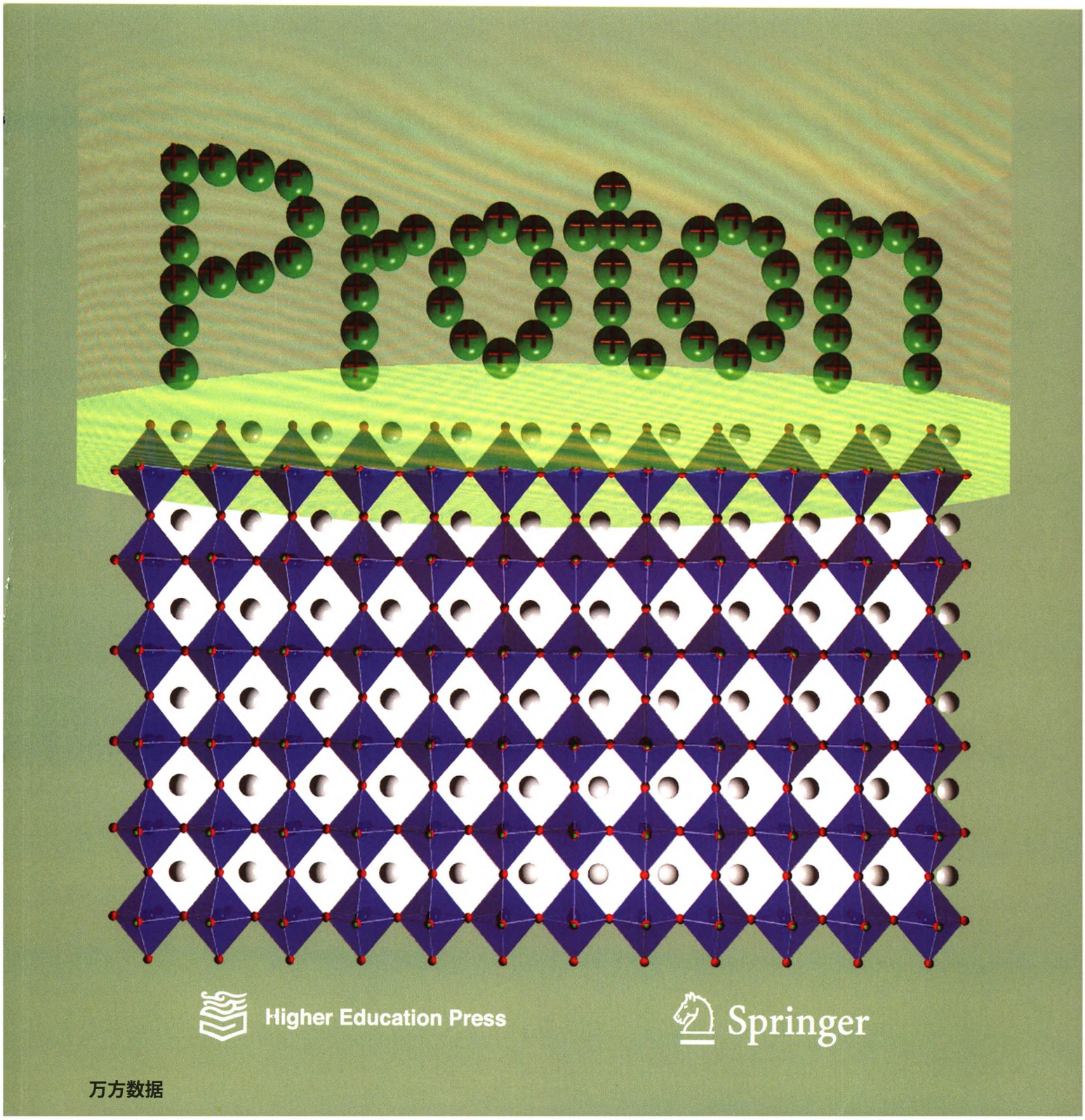
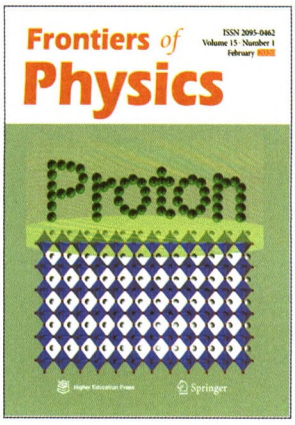
Frontiers of Physics

ISSN 2095-0462
Volume 15 · Number 1
February 2020



Higher Education Press
Springer



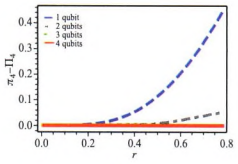
Online submission via
mc.manuscriptcentral.com/fop

Available online at
www.springer.com/11467,
journal.hep.com.cn/fop

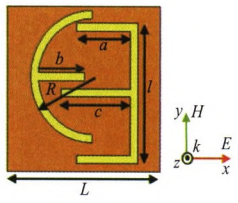
Abstracted/Indexed in
Science Citation Index Expanded (SciSearch), Journal Citation Reports/Science Edition, SCOPUS, INSPEC, Astrophysics Data System (ADS), Google Scholar, Academic OneFile, Chinese Science Citation Database, Current Contents/Physical, Chemical and Earth Sciences, Expanded Academic, Gale, INIS Atomindex, INSPIRE, OCLC, SCImago, Summon by ProQuest

CONTENTS

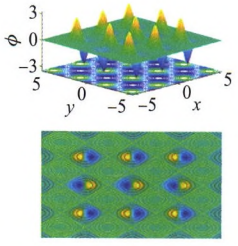
Vol. 15 No. 1 February 2020



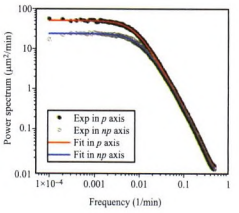
11602



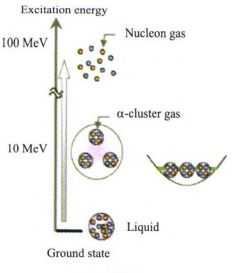
12601


12602

13401



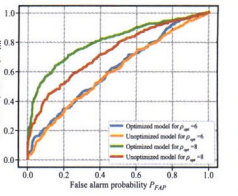
13602



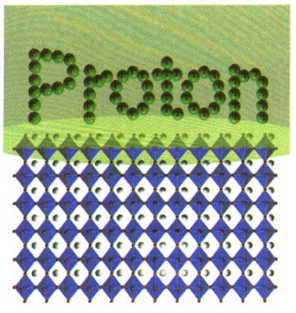
14401

Contents Continued ▶

CONTENTS



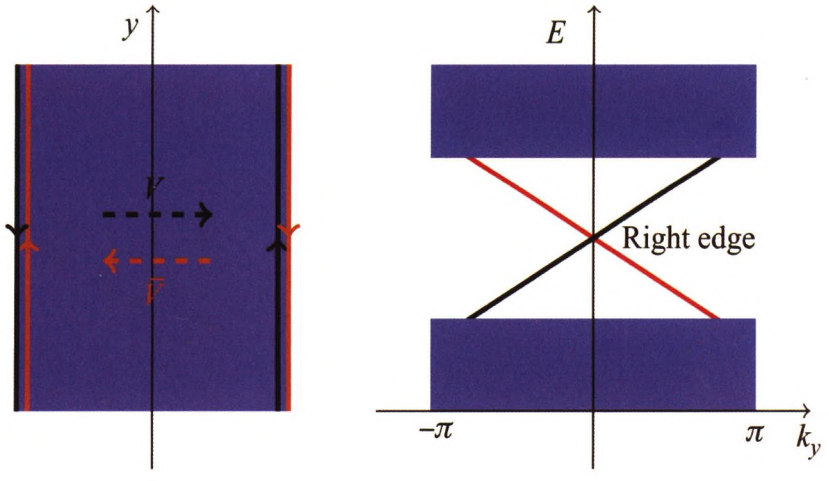
14601



Cover

Perovskite oxides thin films exhibit diverse properties and are of prime importance to multi-functional integrated electronic devices, where a burst of strategies are proposed to manipulate their intimate couplings and uncover new functionalities. A non-destructive low-energy hydrogen plasma implantation experiment has been performed in strongly correlated $SrCrO_3$ thin films for proton incorporation here. Protons accumulate largely at the interfacial region near the substrate and induce the band-filling controlled Mott transition from metallic $SrCrO_3$ to insulating $HSrCrO_2$ phases. Our experimental results open a new strategy to manipulate the interplay between different collective phenomena in strongly correlated systems and may provide the opportunities to design novel proton-based multifunctional materials. For more details, please refer to the article entitled "Modulation of the electronic states of perovskite $SrCrO_3$ thin films through protonation via low-energy hydrogen plasma implantation approaches" by Meng Wu, *et al.*, *Front. Phys.* 15(1), 13601 (2020). [Photo credits: Meng Wu & Hui-Qiong Wang at Xiamen University.]

Frontiers of
Physics
Vol. 15 No. 1 February 2020



The author revealed a new class of *PT*-symmetric Chern insulators, which has internal degrees of freedom forming real representations of a symmetry group with a complex endomorphism field. See: Y. X. Zhao, Equivariant *PT*-symmetric real Chern insulators, *Front. Phys.* 15(1), 13603 (2020).

Available online
http://www.springerlink.com

物理学前沿
CN 11-5994/O4
邮发代号：**80-965**

ISSN 2095-0462