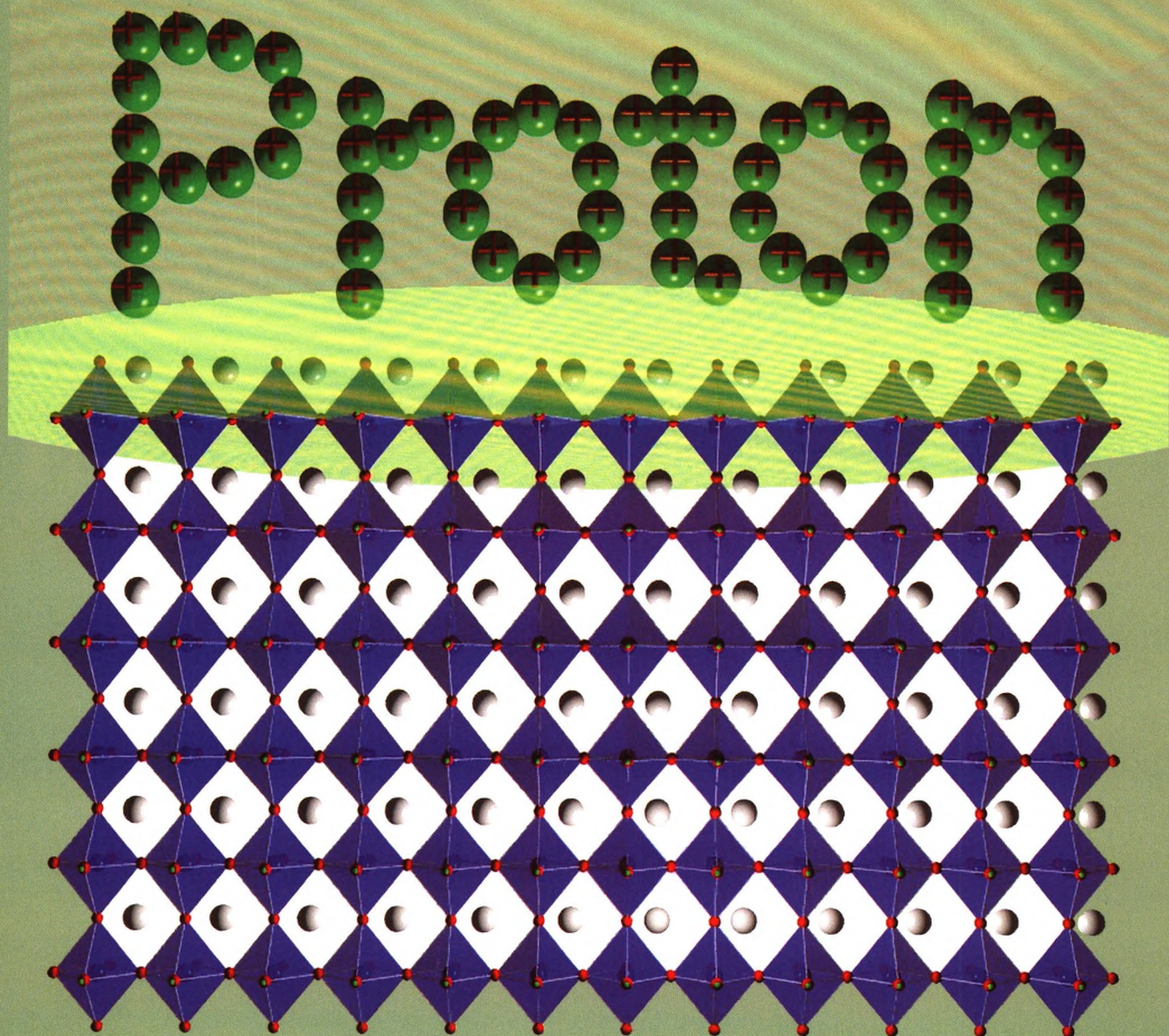


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ISSN 2095-0462  
Volume 15 · Number 1  
February 2020

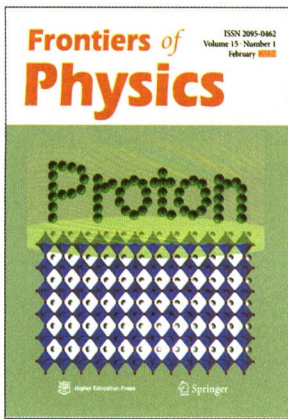


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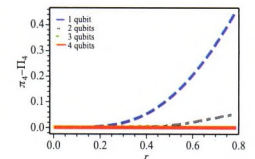
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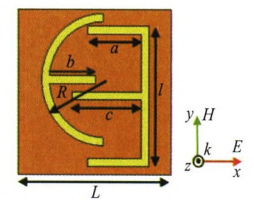
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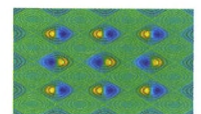
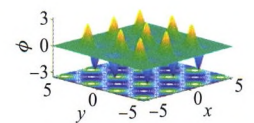
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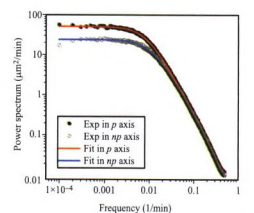
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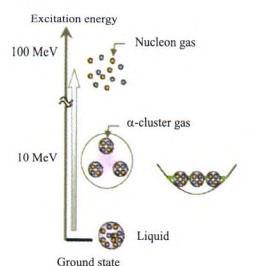
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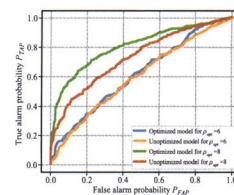
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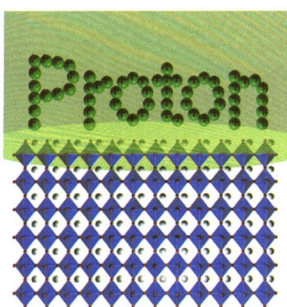
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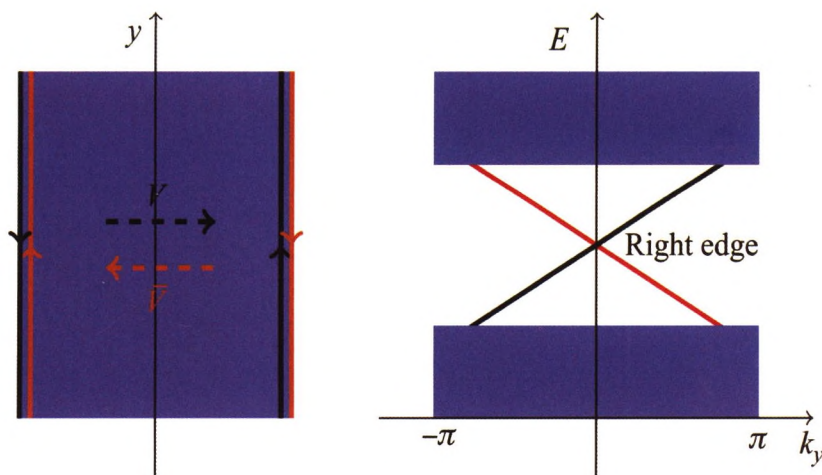
### Cover

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  $\text{SrCrO}_3$  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  $\text{SrCrO}_3$  to insulating  $\text{HSrCrO}_2$  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  $\text{SrCrO}_3$  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.]



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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).

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CN 11-5994/O4  
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