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2019 Strongly Correlated Electronic Systems from SCPMA

We recommend the following articles on Strongly Correlated Electronic Systems published in SCIENCE CHINA Physics, Mechanics & Astronomy (SCPMA) in 2019. These articles focus on the latest research results in superconductors, topological insulators, and Wely semimetals, contributed from the famous research groups in this field, including Profs. Fuchun Zhang, Haiqing Lin, Haihu Wen, Jinfeng Jia, Changqing Jin, etc. We hope it will offer you valuable information, and make you aware of publications in SCPMA according to your research area.

Article Condensed Matter Physics

Hexagonal warping effect on Majorana zero modes at the ends of superconducting vortex lines in doped strong 3D topological insulators

Lun-Hui Hu, Fu-Chun Zhang, Chuang Li

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(11): 117411-

(2019) 10.1007/s11433-019-9391-7

[Abstract] [PDF] [Full Text]

Letter Condensed Matter Physics

Orbital selection of the double [CuO_2] layer compound $Ca_3Cu_2O_4Cl_2$

WenMin Li, Shuang Yu, QingQing Liu, JianFa Zhao, GuangYang Dai, XianCheng Wang, Lei Duan, GuoQiang Zhao, RunZe Yu, LiPeng Cao, YouWen Long, YaTing Jia, Chien-Te Chen, ChangQing Jin, ZhiWei Hu, Hong-Ji Lin, Jun Zhang, Liu-Hao Tjeng

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(10): 107421-

(2019) 10.1007/s11433-019-9436-6

[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics

Point-contact tunneling spectroscopy between a Nb tip and an ideal topological insulator Sn-doped $Bi_{1.1}Sb_{0.9}Te_2S$

Ying Xiang, Wei Xie, Huan Yang, ZhiXin Liu, Guan-Yu Chen, XiYu Zhu, Hai-Hu Wen

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(9): 997411

(2019) 10.1007/s11433-019-9395-0

[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics

Quantum-classical correspondence in integrable systems

Biao Wu, Yiqiang Zhao

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(9): 997011-
(2019) 10.1007/s11433-018-9348-2
[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics
Molecular beam epitaxy of superconducting $PdTe_2$ films on topological insulator Bi_2Te_3
YaoYi Li, YanFu Wu, CanHua Liu, Gang Yao, ShiYong Wang, HuanYi Xue, Hao Yang, DanDan Guan, Hao Zheng, JinFeng Jia
SCIENCE CHINA Physics, Mechanics & Astronomy, 62(7): 076801
(2019) 10.1007/s11433-018-9342-3
[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics
Turning $ZrTe_5$ into a semiconductor through atom intercalation
JinSheng Wen, LiBo Gao, YangYang Lv, WeiMin Zhao, Li Zhu, Song Bao, QiYuan Li, ChengLong Xue, YanBin Chen, YanFeng Chen, Wei Shi, ZhenYu Jia, JingHui Wang, ShaoChun Li
SCIENCE CHINA Physics, Mechanics & Astronomy, 62(6): 967812
(2019) 10.1007/s11433-018-9329-4
[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics
Numerical study of Klein quantum dots in graphene systems
JiaoJiao Zhou, ShuGuang Cheng, WenLong You, Hua Jiang
SCIENCE CHINA Physics, Mechanics & Astronomy, 62(6): 067811-
(2019) 10.1007/s11433-018-9314-2
[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics
Structure, charge transfer, and superconductivity of $\boldsymbol~M$-doped phenanthrene ($\boldsymbol~M$ = Al, Ga, and In): A comparative study of K-doped cases
Hai-Qing Lin, Guo-Hua Zhong, Hai-Yan Lv, Xiao-Jia Chen, Ming Chen, Chun-Lei Yang
SCIENCE CHINA Physics, Mechanics & Astronomy, 62(5): 957412-
(2019) 10.1007/s11433-018-9362-x
[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics
Superconductivity, electronic phase diagram, and pressure effect in $Sr_{1-x}Pr_xFBiS_2$
HongYing Mao, ChuanYing Xi, HaiYang Yang, Jie Cheng, JianHui Dai, YuKe Li, JiaLu Wang, Li Zhang, Wei You, Lin Li, YongKang Luo
SCIENCE CHINA Physics, Mechanics & Astronomy, 62(5): 957411
(2019) 10.1007/s11433-018-9326-4
[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics

Pressure-induced Lifshitz transition in the type II Diracsemimetal $PtTe_2$

XuJie Lü, HuaQing Huang, MingZhe Yan, JiaHeng Li, NaNa Li, Shang Peng, Peng Cai, FengLiang Liu, Qian Zhang, SongHao Guo, ShuYun Zhou, WenHui Duan, LiFeng Yin, Jian Shen, WenGe Yang, KeNan Zhang

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(4): 048211

(2019) 10.1007/s11433-018-9319-3

[Abstract] [PDF] [Full Text]

Article Condensed Matter Physics

Superconductivity in potassium and ammonia co-intercalated FeSe$_{1-x}$Te$_x$

Xiao Bin, Wang Nai, Shang Chao, Meng Fan, Ding Jian, Lei Bin, Luo Xi

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(4): 047411

(2019) 10.1007/s11433-018-9302-6

[Abstract] [PDF] [Full Text]

News & Views Condensed Matter Physics

Discrete scale invariance and ln(B) periodic quantum oscillations in topological semimetals

Robert Joynt

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(3): 037431

(2019) 10.1007/s11433-018-9343-1

[Abstract] [PDF] [Full Text]

Letter Condensed Matter Physics

Superconductivity of a cuprate with compressed local octahedron

YouWen Long, WenMin Li, QingQing Liu, XianCheng Wang, ChangQing Jin, JianFa Zhao, LiPeng Cao, RunZe Yu

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(3): 037421

(2019) 10.1007/s11433-018-9346-8

[Abstract] [PDF] [Full Text]

Letter Condensed Matter Physics

Superconductivity of Pb films studied with superconducting Pb tips

Qin ShengYong

SCIENCE CHINA Physics, Mechanics & Astronomy, 62(1): 017421

(2019) 10.1007/s11433-018-9269-3

[Abstract] [PDF] [Full Text]

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