

# Frontiers of Physics

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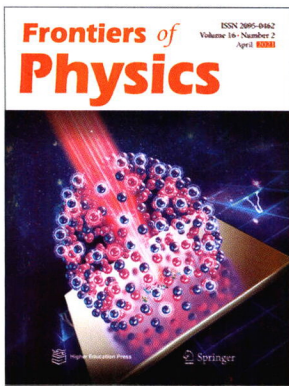


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# CONTENTS

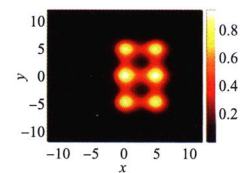
Vol. 16 No. 2 April 2021

## Quantum Computation & Quantum Information; Atomic, Molecular & Optical Physics

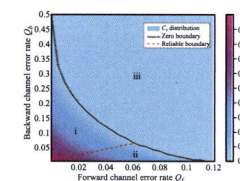
- 21501 **Squeezed light goes flexible**  
 Linran Fan
- 21502 **Resource reduction for simultaneous generation of two types of continuous variable nonclassical states**  
 Long Tian, Shao-Ping Shi, Yu-Hang Tian, Ya-Jun Wang, Yao-Hui Zheng, Kun-Chi Peng
- 22504 **The family of quantum droplets keeps expanding**  
 Boris A. Malomed
- 22501 **Quantum droplets in two-dimensional optical lattices**  
 Yi-Yin Zheng, Shan-Tong Chen, Zhi-Peng Huang, Shi-Xuan Dai, Bin Liu, Yong-Yao Li, Shu-Rong Wang
- 21503 **Generic security analysis framework for quantum secure direct communication**  
 Zhang-Dong Ye, Dong Pan, Zhen Sun, Chun-Guang Du, Liu-Guo Yin, Gui-Lu Long
- 22503 **Understanding the source of signal fluctuations in laser-induced breakdown spectroscopy analytical applications**  
 Miao Zhu, Muhammad Umair Ali, Changwei Zou, Wei Xie, Vincenzo Palleschi
- 22502 **Mechanism of signal uncertainty generation for laser-induced breakdown spectroscopy**  
 Yang-Ting Fu, Wei-Lun Gu, Zong-Yu Hou, Sher Afgan Muhammed, Tian-Qi Li, Yun Wang, Zhe Wang
- 22500 **Development in the application of laser-induced breakdown spectroscopy in recent years: A review**  
 Lian-Bo Guo, Deng Zhang, Lan-Xiang Sun, Shun-Chun Yao, Lei Zhang, Zhen-Zhen Wang, Qian-Qian Wang, Hong-Bin Ding, Yuan Lu, Zong-Yu Hou, Zhe Wang

## Condensed Matter & Materials Physics

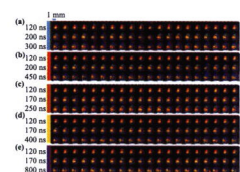
- 23201 **Theory, preparation, properties and catalysis application in 2D graphynes-based materials**  
 Ning Zhang, Jiayu Wu, Taoyuan Yu, Jiaqi Lv, He Liu, Xiping Xu
- 23501 **Dense skyrmion crystal stabilized through interfacial exchange coupling: Role of in-plane anisotropy**  
 Ming-Xiu Sui, Zi-Bo Zhang, Xiao-Dan Chi, Jia-Yu Zhang, Yong Hu



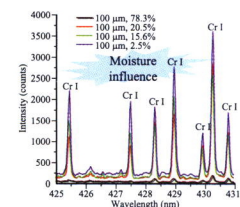
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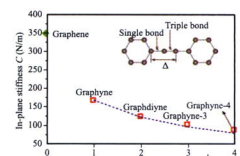
21503



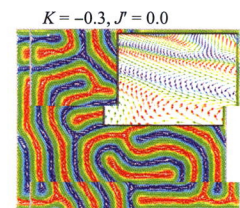
22502



22500



23201



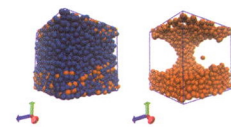
23501

Contents Continued ▶

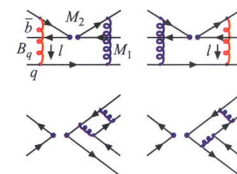
# CONTENTS

## Particle, Nuclear Physics, Astrophysics & Cosmology

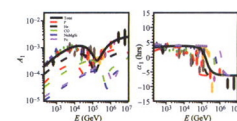
- 24302 **Tasting nuclear pasta made with classical molecular dynamics simulations**  
 Bao-An Li
- 24301 **Properties of nuclear pastas**  
 Jorge A. López, Claudio O. Dorso, Guillermo Frank
- 24201 **The PQCD approach towards to next-to-leading order: A short review**  
 Shan Cheng, Zhen-Jun Xiao
- 24501 **Nearby source interpretation of differences among light and medium composition spectra in cosmic rays**  
 Qiang Yuan, Bing-Qiang Qiao, Yi-Qing Guo, Yi-Zhong Fan, Xiao-Jun Bi
- 24503 **A comparison between repeating bursts of FRB 121102 and giant pulses from Crab pulsar and its applications**  
 Fen Lyu, Yan-Zhi Meng, Zhen-Fan Tang, Ye Li, Jun-Jie Wei, Jin-Jun Geng, Lin Lin, Can-Min Deng, Xue-Feng Wu
- 24502 **Analytic phase structures and thermodynamic curvature for the charged AdS black hole in alternative phase space**  
 Zhen-Ming Xu
- i **Special Focus:** Department of Energy and Power Engineering, Tsinghua University



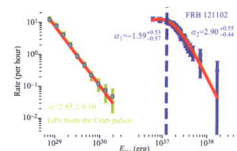
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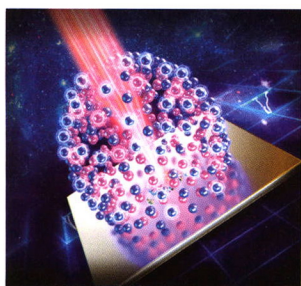
24201



24501



24503



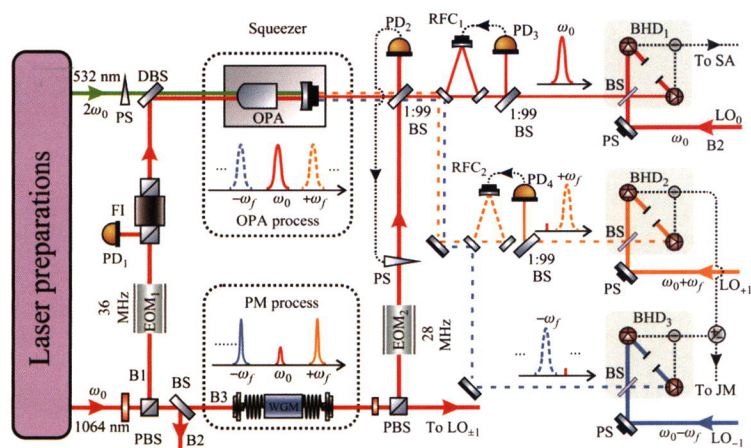
### Cover

Relative high signal uncertainty severely hindered the improvement the quantification performance for laser-induced breakdown spectroscopy (LIBS). However, due to lack of enough diagnostic technology and violent evolution nature of the laser-induced inhomogeneous plasma, the mechanism of uncertainty generation of LIBS always remains unclear. Based on previous understanding that morphological fluctuation of plasma is the main source of LIBS signal uncertainty, here the authors propose the mechanism leading to plasma morphology fluctuation: the frontier part of plasma was pushed back by the counter-balance force in shockwave generation and the bounced back part crash with the lower part, exaggerating tiny disturb into large fluctuation. For more details, please refer to the article entitled “Mechanism of signal uncertainty generation for laser-induced breakdown spectroscopy” by Yang-Ting Fu, *et al.*, *Front. Phys.* 16(2), 22502 (2021). [Photo credits: Zhe Wang at Tsinghua University.]



# Frontiers of Physics

Vol. 16 No. 2 April 2021



Schematic diagram of the experimental setup. See: Long Tian, Shao-Ping Shi, Yu-Hang Tian, Ya-Jun Wang, Yao-Hui Zheng, and Kun-Chi Peng, Resource reduction for simultaneous generation of two types of continuous variable nonclassical states, *Front. Phys.* 16(2), 21502 (2021).

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