

# Communications in Theoretical Physics

Vol. 60, No. 6, 2013

## Contents

### General

No Spin-Localization Phase Transition in the Spin-Boson Model without Local Field <i>LIU Tao, FENG Mang, LI Lei, YANG Wan-Li, and WANG Ke-Lin</i> .....	637–641
Analytic Results in the Position-Dependent Mass Schrödinger Problem <i>M.S. Cunha and H.R. Christiansen</i> .....	642–650
A New Scheme for Probabilistic Teleportation and Its Potential Applications <i>WEI Jia-Hua, DAI Hong-Yi, and ZHANG Ming</i> .....	651–657
Effect of Varying Dzyaloshinskii–Moriya Interaction on the Bistable Nano-Scale Soliton Switching <i>L. Kavitha, M. Saravanan, V. Senthilkumar, and D. Gopi</i> .....	658–662
Lower Bound of Concurrence Based on Generalized Positive Maps <i>QIN Hui-Hui and FEI Shao-Ming</i> .....	663–666
Quantum Discord in any Mixture of Two Bi-Qubit Arbitrary Product States <i>WANG Sheng-Fang, LIU Yi-Min, LI Guo-Feng, LIU Xian-Song, and ZHANG Zhan-Jun</i> .....	667–672
Collective Excitations of Low Dimensional Trapped Bose-Condensed Gas <i>LUO Yun-Wen and CHEN Ji-Sheng</i> .....	673–676
Why Matter Occupies so Large a Volume? <i>E.B. Manoukian</i> .....	677–686
Interpretation of Rotation Curves of Spiral Galaxies in Modified Teleparallel Gravity <i>K. Nozari, R. Shojaee, and S. Karimzadeh</i> .....	687–690
De Broglie–Bohm Interpretation of Canonical Quantum Cosmology Implies Early Stages of the Universe Dominated by Radiation <i>Ch'ng Han Siong and Shahidan Radiman</i> .....	691–694
Statistical Entropy of an Acoustic Black Hole in Bose–Einstein Condensates <i>MA Meng-Sen, ZHAO Hui-Hua, and ZHAO Ren</i> .....	695–698
Double Reduction and Exact Solutions of Zakharov–Kuznetsov Modified Equal width Equation with Power Law Nonlinearity via Conservation Laws <i>HAN Zhong, ZHANG Yu-Feng, and ZHAO Zhong-Long</i> .....	699–706
A Lattice Hydrodynamic Model for Traffic Flow Accounting for Driver Anticipation Effect of the Next-Nearest-Neighbor Site <i>PENG Guang-Han, NIE Fang-Yan, and WANG Sheng-Hui</i> .....	707–713

(Continued)

ISSN 0253-6102  
CN 11-2592/O3  
Price: 80.00 Yuan

ISSN 0253-6102



## **Physics of Elementary Particles and Fields**

Scalars and Neutral Fermions on the Background with Hyperscaling Violation <i>BAI Nan, FANG Chao, GAO Yi-Hong, QI Guan-Bu, and XU Xiao-Bao.....</i>	714–720
$B^0$ - $\bar{B}^0$ Mixing in Local Gauged Baryon and Lepton Numbers <i>SUN Fei, FENG Tai-Fu, LUO Guo-Hui, ZHAO Shu-Min, SUN Ke-Sheng, and KOU Li-Na.....</i>	721–726
Production of Tetraquark State $T_{cc}$ at $B$ -Factories <i>Reyima Rashidin.....</i>	727–730

## **Atomic and Molecular Physics**

Control Protocol of Finite Dimensional Quantum Systems <i>TANG Jian-Ju and FU Hong-Chen.....</i>	731–737
Localized States of an Excess Electron in an Ionic Cluster <i>K.V. Grigorishin and B.I. Lev.....</i>	738–746
Positronium Decay in a Circular Polarized Laser Field <i>CHEN Yu-Qi and WU Pei.....</i>	747–752

## **Interdisciplinary Physics and Related Areas of Science and Technology**

A New Cooperation Mechanism of Kinesin Motors when Extracting Membrane Tube <i>WANG Zi-Qing, SHU Yao-Gen, and LI Ming.....</i>	753–760
---	---------

Subject Index to Volume 59 .....	761–765
Subject Index to Volume 60 .....	766–770
Authors' Index to Volume 59 .....	771–775
Authors' Index to Volume 60 .....	776–780