

**1. Antimagnetic Rotation Band in Nuclei: A Microscopic Description**

P. W. Zhao (赵鹏巍), J. Peng (彭婧), H. Z. Liang (梁豪兆), P. Ring, and J. Meng (孟杰)

Physical Review Letters 107 (2011) 122501

**2. Novel structure for magnetic rotation bands in  $^{60}\text{Ni}$**

P. W. Zhao, S. Q. Zhang, J. Peng, H. Z. Liang, P. Ring, and J. Meng

Physics Letters B 699 (2011) 181-186

**3. The first candidate for chiral nuclei in the  $A \sim 80$  mass region:  $^{80}\text{Br}$**

S. Y. Wang, B. Qi, L. Liu, S. Q. Zhang, H. Hua, X. Q. Li, Y. Y. Chen, L. H. Zhu, J. Meng, S. M. Wyngaardt, P. Papka, T. T. Ibrahim, R. A. Bark, P. Datta, E. A. Lawrie, J. J. Lawrie, S. N. T. Majola, P. L. Masiteng, S. M. Mullins, J. Gál, G. Kalinka, J. Molnár, B.M. Nyakó, J. Timár, K. Juhász, and R. Schwengner

Physics Letters B 703 (2011) 40-45

**4. Spin-orbit and orbit-orbit strengths for the radioactive neutron-rich doubly magic nucleus  $^{132}\text{Sn}$  in relativistic mean-field theory**

Haozhao Liang (梁豪兆), Pengwei Zhao (赵鹏巍), Lulu Li (李璐璐), and Jie Meng (孟杰)

Physical Review C 83 (2011) 011302(R)

**5. Configuration mixing of angular-momentum-projected triaxial relativistic mean-field wave functions. II. Microscopic analysis of low-lying states in magnesium isotopes**

J. M. Yao, H. Mei, H. Chen, J. Meng, P. Ring, and D. Vretenar

Physical Review C 83 (2011) 014308

**6. New insight into the shape coexistence and shape evolution of  $^{157}\text{Yb}$**

C. Xu, H. Hua, X. Q. Li, J. Meng, Z. H. Li, F. R. Xu, Y. Shi, H. L. Liu, S. Q. Zhang, Z. Y. Li, L. H. Zhu, X. G. Xu, G. S. Li, C. Y. He, S. G. Zhou, S. Y. Wang, Y. L. Ye, D. X. Jiang, T. Zheng, J. L. Lou, L. Y. Ma, E. H. Wang, Y. Y. Cheng, and C. He

Physical Review C 83 (2011) 014318

**7. Chirality in odd- $A$  Rh isotopes within the triaxial particle rotor model**

B. Qi (齐斌), S. Q. Zhang (张双全), S. Y. Zhang (王守宇), J. Meng (孟杰), and T. Koike

Physical Review C 83 (2011) 034303

## 8. Properties of the rotational bands in $^{161}\text{Er}$

L. Chen, X. H. Zhou, Y. H. Zhang, Y. Zheng, M. L. Liu, S. T. Wang, F. Ma, N. T. Zhang, Y. D. Fang, W. Hua, S. Guo, Y. H. Qiang, H. B. Zhou, G. S. Li, H. X. Wang, B. Ding, X. G. Lei, Y. X. Guo, L. H. Zhu, X. G. Wu, S. Q. Zhang, and J. Meng

Physical Review C 83 (2011) 034318

## 9. Multiple chiral doublet candidate nucleus $^{105}\text{Rh}$ in a relativistic mean-field approach

Jian Li (李剑), S. Q. Zhang (张双全), and J. Meng (孟杰)

Physical Review C 83 (2011) 037301

## 10. Perturbative interpretation of relativistic symmetries in nuclei

Haozhao Liang (梁豪兆), Pengwei Zhao (赵鹏巍), Ying Zhang (张颖), Jie Meng (孟杰), and Nguyen Van Giai

Physical Review C 83 (2011) 041301(R)

## 11. Stellar electron-capture rates calculated with the finite-temperature relativistic random-phase approximation

Y. F. Niu (牛一斐), N. Paar, D. Vretenar, and J. Meng (孟杰)

Physical Review C 83 (2011) 045807

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Y. Zhang (张颖), M. Matsuo (松尾正之), and J. Meng (孟杰)

Physical Review C 83 (2011) 054301

## 13. Observation of high-spin oblate band structures in $^{141}\text{Pm}$

L. Gu (顾龙), S. J. Zhu (朱胜江), J. G. Wang (王建国), E. Y. Yeoh (杨韵颐), Z. G. Xiao (肖志刚), S. Q. Zhang (张双全), J. Meng (孟杰), M. Zhang (张明), Y. Liu (刘宇), H. B. Ding (丁怀博), Q. Xu (徐强), L. H. Zhu (竺礼华), X. G. Wu (吴晓光), C. Y. He (贺创业), G. S. Li (李广生), L. L. Wang (王烈林), Y. Zheng (郑云), and B. Zhang (张彪)

Physical Review C 83 (2011) 064303

## 14. Determination of local energy density functionals from Brueckner-Hartree-Fock calculations

D. Gambacurta, L. Li, G. Colò, U. Lombardo, N. Van Giai, and W. Zuo

Physical Review C 84 (2011) 024301

## 15. Microscopic description of quantum shape fluctuation in C isotopes

- J. M. Yao, J. Meng, P. Ring, Z. X. Li, Z. P. Li, and K. Hagino  
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Z. P. Li, J. M. Yao, D. Vretenar, T. Nikšić, H. Chen, and J. Meng  
Physical Review C 84 (2011) 054304
- 17. One-Pion Exchange Current Corrections for Nuclear Magnetic Moments in Relativistic Mean Field Theory**  
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Progress of Theoretical Physics 125 (2011) 1185-1192
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Nuclear Physics A 868-869 (2011) 12-24
- 19. Comparison of the confined  $\beta$ -soft rotor model and a microscopic collective Hamiltonian based on the relativistic mean field model in  ${}^{150,152}\text{Nd}$**   
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Journal of Physics G: Nuclear and Particle Physics 38 (2011) 095105
- 21. Editorial**  
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- 22. g factors of nuclear low-lying states: A covariant description**  
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## 27. Selected issues at the interface between nuclear physics and astrophysics as well as the standard model

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SCIENCE CHINA Physics, Mechanics & Astronomy 54 Suppl. 1 (2011) s119-s123

## 28. Tensor Coupling Effects on Spin Symmetry in Anti-Lambda Spectrum of Hypernuclei

SONG Chun-Yan (宋春艳), YAO Jiang-Ming (尧江明), and MENG Jie (孟杰)

Chinese Physics Letters 28 (2011) 092101

## 29. Chiral Doublet Bands with $\nu h_{11/2} \otimes \nu d_{5/2}^{-1}$ Configuration in the Particle Rotor Model

QI Bin (齐斌), WANG Shou-Yu (王守宇), and ZHANG Shuang-Quan (张双全)

Chinese Physics Letters 28 (2011) 122101

## 30. Chirality in atomic nucleus

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International Journal of Modern Physics E: Nuclear Physics 20 (2011) 341-348

## 31. Low-lying states in $^{30}\text{Mg}$ : A beyond relativistic mean-field investigation

J. M. YAO, Z. X. LI, J. XIANG, H. MEI, and J. MENG

International Journal of Modern Physics E: Nuclear Physics 20 (2011) 482-487

## 32. Sensitivity of the nuclear collectivity to the pairing strength in $^{150}\text{Nd}$

Z. P. LI, J. XIANG, J. M. YAO, H. CHEN, and J. MENG

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## 33. Perturbative pseudospin symmetry limit with linear spin-orbit potential

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Journal of Physics: Conference Series 267 (2011) 012039
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Ring P, Lalazissis G A, Li Z P, Meng J, Nikšić T, Próchniak L, Vretenar D, and Yao J M  
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- 39. A new covariant density functional with point-coupling and its application**  
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物理学进展 PROGRESS IN PHYSICS 31 (2011) 199-336