

山西大同大学教学名师 —— 赵仁

姓名	赵仁	性别	男	民族	汉族
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出生年月	1956.11	政治面貌	群众		
毕业学校	西安交大				
学位	博士	学历	博士研究生		
参加工作时间	1981.09				



教学及科研成果简介

赵仁，1956年11月生于山西朔州，联系地址：山西大同大学研究生处，大同，037009
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一、教育科研经历

学历教育

2004.09 — 2007.12：西安交通大学攻读博士学位，理学博士
 1995.09 — 1997.07：山西教育学院物理系
 1978.09 — 1981.07：雁北师范专科学校物理系

进修与培训

1984.03 — 1985.01：华东师范大学物理系理论物理进修班学习
 1986.09 — 1988.07：辽宁大学理论物理助教班，学习理论物理硕士研究生课程
 1993.09 — 1994.07：北京师范大学物理系做国内访问学者

工作经历

1981.07：山西大同大学物电学院（雁北师范专科学校、雁北师范学院）任教、教授
 2001.07：雁北师范学院学位办主任
 2001.08：被聘为南昌大学兼职硕士生导师
 2007.01：山西大同大学研究生处处长
 2008.12：被聘为中北大学兼职博士生导师

二、主要学术成果

1. Ren Zhao, Hui-Hua Zhao, Meng-Sen Ma, Li-Chun Zhang, On the critical phenomena and thermodynamics of charged topological dilaton AdS black holes, Eur. Phys. J. C (2013) 73:2645
2. Lichun Zhang, Huaifan Li, Ren Zhao, Ronggen Cai, The Entropy of A Dielectric Black Hole, Modern Physics Letters A, 2013, 28 (07): 1350009
3. Ren Zhao, Mengsen Ma, Huaifan Li, Lichun Zhang, On Thermodynamics of Charged and Rotating Asymptotically AdS Black Strings, Advances in High Energy Physics, Volume 2013 (2013), Article ID 371084, 7 pages

4. Huihua Zhao, Guangliang Li, Lichun Zhang, Hawking and Unruh Effects of a 5-Dimensional Minimal Gauged Supergravity Black Hole by a Global Embedding Approach, *Entropy* 2013, 15, 1057-1068
5. Ren Zhao, Lichun Zhang, A new explanation for statistical entropy of charged black hole, *SCIENCE CHINA Physics, Mechanics & Astronomy*, 2013, 56(9): 1632-1635
6. Lichun Zhang, Huaifan Li, Huihua Zhao, Ren Zhao. Analytic study of properties of holographic superconductors with Weyl corrections, *International Journal of Theoretical Physics*, *Int J Theor Phys* (2013) 52: 2455–2463
7. Lichun Zhang, Huaifan Li, Ren Zhao, Ronggen Cai. Entanglement entropy of acoustic black hole in Bose-Einstein Condensate. *Astrophysics and Space Science: Astrophys Space Sci* (2013) 344:451–454
8. Huaifan Li, Huihua Zhao, Lichun Zhang, Quantum statistical entropy of dielectric black hole, *International Journal of Theoretical Physics*: 2013, 52(2) : 362-367
9. Jianhua Shi, Shuangqi Hu, Ren Zhao, Entanglement entropy of a black hole and isolated horizon, *Astrophysics and Space Science: Astrophys Space Sci* (2013) 343:555–558
10. Huihua Zhao, Guangliang Li, Lichun Zhang, Generalized uncertainty principle and entropy of three-dimensional rotating acoustic black hole, *Physics Lett. A* 2012, 376: 2348-2351
11. Ren Zhao, Lichun Zhang, Huihua Zhao, Quantum statistical entropy of Schwarzschild-de Sitter spacetime *Astrophysics and Space Science*: 2012, 341: 675-679
12. Ren Zhao, Lichun Zhang Hawking radiation from a dielectric black hole, *Astrophys Space Sci* (2012) 338, 295–300
13. Cao Shuo, Zhu zonghong, Zhao Ren, Testing and selecting dark energy models with lens redshift data, *PHYSICAL REVIEW D* 84, 023005 (2011)
14. Lichun Zhang, Huaifan Li and Ren Zhao Thermodynamics of the Reissner-Nordstrom-de Sitter black hole, *SCIENCE CHINA Physics, Mechanics & Astronomy* 2011, 54(8):1384-1387
15. Lichun Zhang, Huaifan Li and Ren Zhao Hawking and Unruh effects of the cosmological horizon in a higher-dimensional Kerr-de Sitter spacetime by the global embedding approach, *Europhysics Letter*. 2011(94) :40003
16. 张丽春, 李怀繁, 赵仁. 利用新的整体嵌入方法研究高维旋转黑洞的 Hawking 效应和 Unruh 效应, *物理学报* 2011, 60(8): 080403
17. Lichun Zhang, Huaifan Li, Ren Zhao, Yueqin Wu, Thermodynamics of the five-dimensional Schwarzschild-de Sitter black hole, *Astrophys Space Sci*, 2011, 335(2):523-527
18. Lichun Zhang, Huaifan Li, Ren Zhao. Tunneling mechanism in higher-dimensional rotating black hole with a cosmological constant in the approach of dimensional reduction, *Astrophys Space Sci* (2011) 333: 457-462
19. Lichun Zhang, Huaifan Li, Ren Zhao. Hawking radiation from a rotating acoustic black hole, *Phys. Lett. B*, 2011, 698: 438-442
20. Lichun Zhang, Hai Lin, Huaifan Li, Ren Zhao. Radiation spectrum of rotating Gödel black hole and correction entropy, *Chines Physics C*, 2011, 35(4): 339-343
21. 张丽春, 林海, 李怀繁, 赵仁, Kerr-Newman 时空中带电旋转粒子的 Hawking 辐射, *中国科学 G 辑: 物理、力学、天文学*, 2011, 41(3): 221-226
22. Ren Zhao, Li-Chun Zhang, Yue-Qin Wu, Huai-Fan Li, Temperature and Energy of 4-

- Dimensional Axisymmetric Black Holes from Entropic Force , *Int J Theor Phys*, 2011 50(4): 244-250
23. Li Chun Zhang, Yue Qin Wu, Huai Fan Li, and Ren Zhao , Radiation Spectrum and Correction to the Entropy of the Kerr-(anti)de Sitter Black Hole in all Dimensions ,*Chinese Journal of Physics*, 2010, 48(4): 439-450
 24. 张丽春, 李怀繁, 赵仁, Schwarzschild-de Sitter 黑洞的热力学性质, *物理学报* 2010 , 59(12): 8994-8998
 25. Zhang Lichun , Li Huaifan, Zhao Ren, Radiation spectrum and entropy correction of black holes in Horava-Lifshitz gravity , *Europhysics Letter*. 2010(89) :20008
 26. Zhao Ren, Li Huaifan, Zhang Lichun, Wu Yueqin, Hawking radiation and entropy in de Sitter spacetime, *Astrophys Space Sci* (2010) 330: 361–365
 27. 赵仁, 张丽春, 李怀繁 Kerr-Newman 黑洞的辐射谱 *物理学报* 2010 , 29(5): 2982-2986
 28. Zhang Lichun, Li Huaifan, Wu Yueqin, Zhao Ren Hawking Radiation Spectrum and Entropy Correction of Apparent Horizon in a FRW Universe *Int J Theor Phys*, 2010, 49(4): 1587-1594
 29. 张丽春, 赵仁 Kerr-Newman-de Sitter 黑洞辐射谱和熵修正 *物理学报* 2010 , 59(4): 2217-2222
 30. Zhao Ren, Li Huaifan, Zhang Lichun, Wu Yueqin Radiation spectrum of a high-dimensional rotating black hole *SCIENCE CHINA Physics, Mechanics & Astronomy* 2010 , 53(3):504-507
 31. Ren Zhao, Li-Chun Zhang, and Huai-Fan Li, Hawking radiation of a Reissner–Nordström–de Sitter black hole, *General Relativity and Gravitation*. 2010, 42(4): 975-983
 32. Zhao Ren, Zhang Lichun, Li Huaifan, hawking radiation of charged particles in reissner-nordstrom black hole, *Commun. Theor. Phys. (Beijing, China)*, 2010,53 (3): 499–502
 33. Zhang Lichun, Li Huaifan, Zhao Ren, radiation spectrum and correction entropy of (n+4)-dimensional kerr-(A)dS black hole, *Int J Theor Phys*, 2010, 49(4): 791-797
 34. Zhao Ren, Zhang Lichun, Wu Yueqin, Li Huaifan, Generalized uncertainty principle and tunneling radiation of the SAdS₅ black hole, *Chin. Phys. B*, 2010, 19(1): 010402
 35. Zhao Ren, Zhang Lichun, Li Huaifan, Wu Yueqin. Hawking radiation of a high-dimensional rotating black hole, *The European Physical Journal C*. 2010, 65(1): 289-293
 36. Li Huaifan, Zhang Shengli, Zhao Ren. General Radiation Spectrum of a Kerr-Newman Black Hole, *Chinese Journal of Physics*, 2009, 47(5): 618-624
 37. 胡双启, 张丽春, 赵仁, Schwarzschild-de Sitter 黑洞的 Hawking 辐射 *物理学报*. 2009, 58(10): 6798-6802.
 38. Ren Zhao, Li-Chun Zhang, Yue-Qin Wu, and Huai-Fan Li, Generalized Uncertainty Relation and Hawking Radiation of the Black Hole , *International Journal of Theoretical Physics*. 2009,48(11): 3220-3227
 39. Ren Zhao, Yue-Qin Wu, Li-Chun Zhang and Huai-Fan Li, Bekenstein-Hawking cosmological entropy and correction term corresponding cosmological horizon of rotating and charged black string, *Commun. Theor. Phys*. 2009,52(6):264-268
 40. Huai-Fan Li, Sheng-Li Zhang, Yue-Qin Wu, Li-Chun Zhang and Ren Zhao, Hawking radiation of Kerr–Newman–de Sitter black hole, *The European Physical Journal C*. 2009, 63(1): 133-138
 41. Li-Chun Zhang, Yue-Qin Wu, Huai-Fan Li, Ren Zhao, Hawking radiation and entropy correction of a black hole, *Europhysics Letter*. 2009 (86) :59002

42. Ren Zhao, Yue-Qin Wu, Li-Chun Zhang, Hawking Radiation of Charged Particles from a Rotating Black String, *International Journal of Theoretical Physics*. 2009, 48(5):1231-1238
43. Ren Zhao, Yue-Qin Wu, Li-Chun Zhang, Entropy of a rotating and charged black string to all orders in the planck length, *Chinese Physics B*. 2009, 18(5):1749-1784
44. Ren Zhao, Yue-Qin Wu, Li-Chun Zhang and Huai-Fan Li, Hawking radiation of five-dimensional rotating black hole, *The European Physical Journal C*. 2009, 60(4): 685-690
45. 赵仁,张丽春,李怀繁. 广义测不准关系和三维 BTZ 黑洞熵. *物理学报*. 2009, 58(4): 2193-2197.
46. *L.-C. Zhang, H.-F. Li, R. Zhao, Canonical Entropy of Higher-Dimensional Reissner-Nordstroem Black Hole. *Bulgarian Journal of Physics*. 2007, 34(2) (34): 092-102
47. 赵仁, 张丽春, 李怀繁. 黑洞的 Hawking 辐射. *物理学报*. 2008, 57(12), 7463-7466.
48. Zhao Ren, Zhang Lichun, Wu Yueqin, Li Huaifan. Entropy of Four-Dimensional Spherically Symmetric Black Holes with Planck Length. *Commun. Theor. Phys*. 2008,50(6):1327-1330
49. Zhao Ren, Zhang Lichun, Li Huaifan, Wu Yueqin. Entropy of Kerr-Newman Black Hole to All Orders in the Planck Length. *International Journal of Theoretical Physics*. 2008, 47(12): 3083-3090
50. Li-Chun Zhang, Huai-Fan Li, Ren Zhao and Yue-Qin Wu, Canonical entropy of black hole in the generalized uncertainty principle. *International Journal of Theoretical Physics*. 2008, 47 (7): 2021-2028 (SCI: 310IF)
51. Zhang Lichun, Wu Yueqin, Li Huaifan, Zhao Ren. Computing the Entropy of Kerr-Newman Black Hole Without Brick Walls Method, *International Journal of Modern Physics A*, 2008,23(20): 3155-3163
52. Zhang Shaoming, Hu Shuangqi, Zhao Ren, Entropy of toroidal black hole to all orders in the Planck length, *IL NUOVO CIMENTO*, 2008,123(2): 247-255 (SCI:363OF)
53. 张丽春, 武月琴, 赵仁, 带电黑洞 Bekenstein-Hawking 熵的修正值, *中国科学 G 辑: 物理、力学、天文学*, 2008, 38 (9): 1113 - 1119
54. Zhang Lichun, Wu Yueqin, Zhao Ren, Correction value to charged bekenstein-Hwaking black hole entropy, *Sciencein China Series G: Physics, mechanics & Astronomg*, 2008, 51(9): 1214-1220 (SCI:335UO)
55. Zhao Ren, Wu Yueqin, Zhang Lichun, Canonical entropy and phase transition of rotating black hole, *Chinese Physics Letters*, 2008,25(7):2385-2388(SCI:321SE)
56. Zhang Lichun, Wu Yueqin, Li Huaifan, Zhao Ren. Generalized Uncertainty Principle and Thermodynamic Quantities of SAdS5 Black Hole, *Commun. Theor. Phys.*, 2008, 50(1): 97-100(SCI: 333AQ,IF:0.726)
57. Li Huaifan, Zhang Shengli, Wu Yueqin, Zhao Ren, Entanlement Entropy of The Six-Dimensional Horwitz Strominger Black Hole, *International Journal of Modern Physics A*, 2008,23(13): 1963-1972(SCI: 321JE)
58. 张丽春, 胡双启, 李怀繁, 赵仁. 轴对称黑洞的量子统计熵. *物理学报*, 2008, 57(6): 3328-3332
59. Zhao Ren, Wu Yueqin, Zhang Lichun. Generalized uncertainty principle and thermodynamic quantities of the Achucarro-Ortiz black hole. *Modern Physics Letters A*, 2008,23(11): 839-846
60. Zhao Ren, Zhang ShengLi. Quantum statistical entropy corresponding to cosmic horizon in five-dimensional spacetime. *Sciencein China Series G: Physics, mechanics & Astronomg*, 2008, 51(2): 140-146
61. Liu Xinmei, Zhang Lichun, Wu Yueqin, Zhao Ren. Entropy of Garfinkle-Horowitz-

- Strominger dilaton black holes with the planck length. *IL Nuovo Cimento*, 2008, 122B(8): 909-917
62. Zhang Ya, Hu Shuangqi, Zhao Ren, Li Huaifan. Generalized uncertainty principle and correction value to the kerr black hole Entropy. *International Journal of Theoretical Physics*, 2008, 47(1): 520-525(SCI: 269WO)
 63. Zhao Ren, Zhao Haixia, Hu Shuangqi. General Logarithmic Corrections to Bekenstein-Hawking Entropy. *Modern Physics Letters A*, 2007, 22(23): 1737-1743, gr-qc/0609080(SCI: 243EV)
 64. 赵仁, 张丽春, 张胜利. 正则黑洞熵与相变. *物理学报*, 2007, 56(12): 7355-7358(SCI: 246PI, EI: 080311033748)
 65. Zhao Ren, Zhang Lihun, Wu Yueqin. Calculating Entropy of Plane Symmetry Black Hole via Generalized Uncertainty Relation. *International Journal of Theoretical Physics*, 2007, 46: 3128-3134(SCI: 235LS)
 66. 赵仁, 张胜利. 五维时空中宇宙视界对应的量子统计熵. *中国科学 G 辑 物理 力学 天文学*, 2007, 37, (4): 434-439
 67. Zhao Ren, Zhang Lichun, Zhang Shengli. Canonical Entropy of Reissner-Nordstrom Black Hole. *International Journal of Theoretical Physics*, 2007, 46(8): 2158-2167(SCI: 215KR)
 68. 赵仁, 张丽春, 张胜利. 正则黑洞熵. *物理学报*, 2007, 56(7): 3719-3722(SCI: 191ME)
 69. Zhao Haixia, Li Huaifan, Hu Shuangqi, Zhao Ren. Generalized uncertainty principle and black hole Entropy of higher-dimensional de sitter spacetime. *Commun. Theor. Phys.*, 2007, 48(3): 465-468(SCI: 212MJ)
 70. Zhao Ren, Li Huaifan, Hu Shuangqi. Hawking Radiation as Tunneling for Rotating Charged Black Strings. *Chinese Journal of Physics*, 2007, 45(1): 32-40(SCI: 138BL)
 71. Zhao Ren, Zhang Shengli. Generalized uncertainty principle and black hole entropy. *Physics Letters B*, 2006, 641: 208-211(SCI: 093WS, IF: 5.043)
 72. Zhao Ren Zhang Shengli. Canonical entropy of three-dimensional BTZ black hole. *Physics Letters B*, 2006, 641: 318-322; gr-qc/0608122(SCI: 092ZS, IF: 5.043)
 73. Hu Shuangqi, Zhang Lichun, Zhao Ren. Black Cylinder Entropy Without Brick Walls. *IL Nuovo Cimento*, 2006, 121B (03): 221-227 (SCI: 074ZQ, IF: 0.324)
 74. Zhao Ren, Zhang Lichun, Hu Shuangqi. (Anti)-de Sitter Black Hole Entropy and the Generalized Uncertainty Principle. *Commun. Theor. Phys.*, 2006, 45(4): 635-638(IF: 0.726)
 75. Zhao Ren, Wu Yueqin, Zhang Shengli. Quantum Statistical Entropy of the Five-Dimensional black hole. *Commun. Theor. Phys.*, 2006, 45(5): 849-852(SCI: 047IK, IF: 0.726)
 76. Zhao Ren, Li Huaifan, Zhang Shengli. Hawking Radiation as Tunneling for Kerr-Newman-de Sitter black hole. *Romanian Journal of Physics*, 2006, 51(7-8): 709-717
 77. 赵仁, 张丽春, 胡双启. 探讨黑洞 Hawking 辐射的新方法--量子统计法. *物理学报*, 2006, 55(8): 3898-3901(SCI: 073MF, IF: 1.051)
 78. 赵仁, 张丽春, 胡双启. 黑洞的统计熵. *物理学报*, 2006, 55(8): 3902-3905(SCI: 073MF, IF: 1.051)
 79. Zhao Ren, Hu Shuang-Qi. Quantum Statistical Entropy of the 5-Dimensional Stringy black hole. *Chinese Journal of Physics*, 2006, 44(3): 172-179(SCI: 053ZI)
 80. Zhao Ren, Hu Shuang-Qi. Quantum statistic entropy of three-dimensional BTZ black hole. *International Journal of Theoretical Physics*. 2006, 45(6): 1163-1170(SCI: 060WP)
 81. Zhao Ren, Zhang Sheng-Li. Cardy-Verlinde Formula and Thermodynamics of Black Hole in Higher Dimensional Space-Time. *International Journal of Theoretical Physics*, 2006,

- 45(6): 1116-1123(SCI: 060WP, IF: 0.389)
82. Zhang Lichun, Wu Yueqin, Li Huaifan. Canonical entropy of higher-dimension black hole. *IL Nuovo Cimento*, 2006, 121B(7): 743-750
 83. Zhao Ren, Zhang Shengli. Cardy-Verlinde formula and logarithmic correction of D-dimensional global monopole black hole. *Chinese Journal of Physics*, 2005, 43(6): 1044-1050(SCI:995QS, IF:0.440)
 84. Zhao Ren, Zhang Shengli. Entropy Correction for Kerr Black Hole. *Commun. Theor. Phys.*, 2005, 44(6): 1037-1040(SCI:001LC, IF:0.872)
 85. Hu Shuangqi, Zhao Ren. Uncertainty relation and black hole entropy of Kerr spacetime. *Chinese Physics*, 2005, 14(07): 1477-1481(SCI: 943CJ)
 86. Zhao Ren, Zhang Zizhen, Zhang Shengli. Uncertainty relation and black hole entropy of NUT-Kerr-Newman spacetime. *IL Nuovo Cimento*, 2005, 120B (1): 61-67(SCI: 963CM)
 87. Zhao Ren, Wu Yueqin, Zhang Lichun. The Nernst theorem and the statistical entropy of The NUT-Kerr-Newman black hole. *Bulgarian Journal of Physics*, 2005,32: 1-9
 88. Zhang Zizhen, Zhang Lichun. Calculating the entropy of Garfinkle- Horowitz- Strominger dilaton without brick-wall method. *IL Nuovo Cimento*, 2004, 119B(10): 1001-1006(SCI: 928TH)
 89. Zhao Ren, Zhang Shengli. Statistical entropy of the A torus-like black hole. *IL Nuovo Cimento*, 2004, 119B(6): 557-563(SCI: 901EJ)
 90. Hu Shuangqi, Zhao Ren. Uncertainty Relation and Black Hole Entropy of Toroidal Spacetime. *International Journal of Geometric Methods in Modern Physics*, 2004, 1(6):731-737(SCI: 888RZ)
 91. Ding Tianran, Zhao Ren. Quantum Statistical Entropy of Kerr-de Sitter Black Hole. *International Journal of Geometric Methods in Modern Physics*, 2004, 1(1):159-166(SCI: 885MF)
 92. Zhao Ren, Wu Yueqin, Zhang Shengli. Quantum Statistical Entropy of d-dimensional Horowitz -Strominger Black Hole. *Gen. Rel. Grav.*, 2004,36(11): 2539-2547(SCI:875EV)
 93. Zhao Ren, Zhang Li-Chun. Statistical entropy of a rotating higher-dimensional black holes. *IL Nuovo Cimento*, 2004, 119B(1): 33-40(SCI: 859OB)
 94. 张丽春, 赵仁. 具有双旋转参数 5-维黑洞的 Cardy-Verlinde 公式. *物理学报*, 2004, 53(12): 4435-4438(SCI: 775NT)
 95. 赵仁, 张丽春. 黑洞的量子统计熵. *数学物理学报*, 2004, 24A(5): 513-520
 96. Zhao Ren, Zhang Sheng-Li. Dilatonic black hole entropy without brick walls. *Gen. Rel. Grav.*, 2004, 36 (9): 2123-2130(SCI:847NN)
 97. Zhang Li-Chun, Zhao Ren, Lin Hai. Horowitz-Strominger Black Hole Entropy Without Brick Wall. *Chinese Physics Letters*, 2004,21(6)1009-1012(SCI: 831MM)
 98. Zhao Ren, Hu Shuang-Qi. Reissner-Nordstrom black hole without brick walls. *IL Nuovo Cimento*, 2004, 119B(2): 149-155(SCI: 859OC)
 99. Zhang Li-Chun, Wu Yue-Qin, Zhao Ren. Quantum Statistical Entropy for Kerr-de Sitter Black Hole. *Chinese Physics*, 2004, 13(06): 974-978
 100. Ding Tianran, Wu Yueqin, Zhang Lichun. Bosonic and fermionic entropy of black holes with different temperatures on horizon surface. *Chinese Physics*, 2004, 13(02):268-272(SCI: 770UK)
 101. Zhao Ren, Wu Yue-Qin, Zhang Li-Chun. Quantum Statistical Entropy of Sen Black Hole. *Turkish Journal of Physics*, 2004, 28(2): 81-87(EI: 04238192675)

102. 张丽春, 赵 仁. Sen 黑洞熵与能斯特定理. 物理学报, 2004, 53(2): 362-366(SCI: 775NT)
103. Zhao Ren, Guo Yong, Ding Bing Jun. The entropy of a Kim black hole and the Nernst theorem. IL Nuovo Cimento, 2003,118B(7) 685-691(SCI: 937PT)
104. Zhao Ren, Wu Yue-Qin, Zhang Li-Chun. Spherically symmetric black-hole without brick walls. Classical and Quantum Gravity, 2003, 20(22): 4885-4890(SCI: 752AC)
105. Zhao Ren, Wu Yue-Qin, Zhang Li-Chun. Nernst Theorem and the Statistical of 5-Dimensional Rotating black Hole. Communications in Theoretical Physics, 2003, 40(6): 745-748(SCI: 759LL)
106. Zhao Ren, Wu Yue-Qin, and Zhang Li-Chun. Kaluza-Klein black-hole entropy by quantum statistics. International Journal of Theoretical Physics, 2003, 42(4): 809-816(SCI: 695MH)
107. Zhao Ren, Guo Yong, Ding Bing Jun. Statistical Entropy of Higher-Dimensional Black Hole. Journal of the Korean Physical Society, 2003, 43(6): 987-990(SCI: 754JT)
108. Zhao Ren, Wu Yue-Qin, Zhang Li-Chun. Bosonic and Fermionic Entropy for $U(1) \otimes U(2)$ Dilaton Black Hole. Bulgarian Journal of Physics. 23(2003)(in press)
109. Zhao Ren, Wu Yue-Qin, Zhang Li-Chun. Entropy of N-dimensional spherically symmetric charged black hole. Communications in Theoretical Physics, 2003, 39(4): 425-428(SCI: 671AF)
110. 韩伏龙, 张丽春, 赵 仁. A torus-like 黑洞与熵能斯特定理. 数学物理学报, 2003, 23A(6): 655-659
111. 张丽春, 韩伏龙, 赵 仁. Reissner-Nordstrom 黑洞几何中 Dirac 场的统计熵与能斯特定理. 数学物理学报, 2003, 23A(1): 77-83
112. 赵 仁, 张丽春. 黑洞热力学关系式. 雁北师范学院学报, 2002, 18(5): 1-6
113. 赵 仁, 张丽春. 平面对称黑洞的统计熵. 物理学报, 2002, 51(1): 21-24(SCI: 512CZ)
114. Zhao Ren, Zhang Lichun. Statistical entropy of Kerr black hole. International Journal of Modern Physics Letters D, 2002, 11(9): 1381-1387(SCI: 641FD)
115. Zhao Ren, Zhang Junfang, Zhang Lichun. Quantum statistical entropy of black hole. Gen. Rel. Grav., 2002,34(12): 2063-2073(SCI: 616NN)
116. Zhao Ren, Zhang Lichun, Yang Chunhua. Statistical entropy of a rotating cylindrical black hole. Chinese Journal of Physics, 2002, 40(5): 505-511(SCI: 604YC)
117. Zhao Ren, Wu Yueqin, Zhang Lichun. Bosonic and fermionic entropy of tree-dimensional black hole. IL Nuovo Cimento, 2002, 117B(3): 367-372(SCI: 592UZ)
118. Zhao Ren, Zhang Lichun. Entropy of Reissner-Nordstrom-anti-de Sitter black hole. Czechoslovak Journal of Physics, 2002, 52(6): 775-780(SCI: 574QR)
119. Zhao Ren, Zhang Junfang, Zhang Lichun. Entropy of dilatonic black hole. International Journal of Theoretical Physics, 2002,41(7): 1369-1375(SCI: 582JN)
120. Zhao Ren, Zhang Lichun. Statistical entropy of Vaidya-de Sitter black hole. IL Nuovo Cimento, 2002, 117B(1): 69-73(SCI: 564KC)
121. Zhao Ren, Zhang Lichun. Entropy black hole. IL Nuovo Cimento, 2002, 117B(1): 129-136(SCI: 564KC)
122. 赵 仁, 张丽春. Kerr-Newman 黑洞的统计熵. 物理学报, 2002, 51(6): 1167-1170(SCI: 559XE)
123. Zhao Ren, Zhang Junfang, Zhang Lichun. Statistical entropy of black cylinder. Gen. Rel. Grav., 2002, 34(5): 571-576(SCI: 564TJ)
124. 张丽春, 武月琴, 赵 仁. 轴对称 Einstein-Maxwell-Dilaton-Axion 黑洞熵与能斯特定理. 数学物理学报, 2002, 22A(1): 115-120

125. Zhao Ren, Zhang Junfang, Zhang Lichun. Entropy of Reissner--Nordstrom--de Sitter black hole in non-thermal-equilibrium. *Communications in Theoretical Physics*, 2002, 37(1)45-48 (SCI: 515WT)
126. Zhao Ren, Zhang Junfang, Zhang Lichun. Statistical Entropy of Horowitz-Strominger Black Hole. *Communications in Theoretical Physics*, 2002,37(5): 564-566(SCI: 558RF)
127. Zhang Junfang, Zhang Lichun, Zhao Ren. Statistical entropy of a charged black hole. *IL Nuovo Cimento*, 2001, 116B(8): 959-963(SCI: 500UE)
128. Zhao Ren, Zhang Junfang, Zhang Lichun. The Nernst theorem and statistical entropy in 1+1 dimensional charged black hole. *IL Nuovo Cimento*, 2001, 116B (6): 707-711(SCI: 486TC)
129. Zhao Ren, Zhang Junfang, Zhang Lichun. Statistical entropy of axial symmetry Einstein-Maxwell-Dilaton-Axion black hole. *Bulgarian Journal of Physics*, 2001, 28(5/6): 200-208
130. Zhao Ren, Zhang Junfang, Zhang Lichun. Statistical entropy of a cylindrical black hole. *IL Nuovo Cimento*, 2001, 116B(10): 1181-1186(SCI: 524VL)
131. Zhang Lichun, Zhao Ren, Wu Yueqin. The entropy of the Dirac field on the background of the Reissner--Nordstrom black hole. *IL Nuovo Cimento*, 2001, 116B(5): 555-562(SCI: 477KA)
132. Zhang Lichun, Zhao Ren and Wu Yueqin. Statistical entropy in Kaluza--Klein Geometry. *IL Nuovo Cimento*, 2001, 116B(3): 335-339(SCI: 476BX)
133. Zhao Ren, Zhang Lichun. The Static Spherically Symmetric metric of a Schwarzschild black hole Surrounded by the Radiation Field. *IL Nuovo Cimento*, 2001,116B(5): 509-514(SCI: 477KA)
134. Zhao Ren, Zhang Lichun, and Wu Yueqin. Nernst theorem and entropy of the axisymmetric Einstein-Maxwell-Dilaton-Axion black hole. *International Journal of Theoretical Physics*, 2001, 40(9): 1657-1664(SCI: 479XH)
135. Zhao Ren, Zhang Junfang, Zhang Lichun. Entropy of Schwarzschild-De Sitter Black Hole in Non-Thermal-Equilibrium. *Modern Physics Letters A*, 2001, 16 (11): 719-723(SCI: 434TN)
136. Zhao Ren, Zhang Junfang, Zhang Lichun. Statistical entropy in Reissner-Nordstrom black hole. *Nuclear Physics B*, 2001,609: 247-252(SCI: 464EH)
137. Wu Yueqin, Zhang Lichun, Zhao Ren. Black Hole and Cosmic Entropy for Schwarzschild-de Sitter space-time. *International Journal of Theoretical Physics*, 2001, 40(5): 1001-1008(SCI: 438AW)
138. 赵仁, 张丽春. Kim 黑洞熵与能斯特定理. *物理学报*, 2001, 50(4): 593-596(SCI: 419KJ, EI: 04057987069)
139. 赵仁, 张丽春. Reissner--Nordstrom 几何中标量场的统计熵与能斯特定理. *物理学报*, 2001, 50(6): 1015-1018(SCI: 438TC)
140. Zhao Ren, Zhang Lichun. The Nernst theorem and the entropy of a cylindrical black hole. *Modern Physics Letters A*, 2000, 15(35): 2165-2170(SCI: 394DV)
141. 赵仁, 张丽春. De Sitter 宇宙的稳定性. *数学物理学报*, 2000, 20 增: 583-588
142. Zhao Ren, Zhang Lichun, Wu Yueqin. The Nernst theorem and the entropy of the Reissner-Nordstrom black hole. *Gen. Rel. Grav.*, 2000, 32(8): 1639 -1646(SCI: 348CP)
143. 赵仁, 张丽春. 充满物质的 Friedmann-Robertson-Walker 宇宙的稳定性. *物理学报*, 2000, 49(8): 1644-1647(SCI: 343CW)
144. 张丽春, 赵仁. 球对称带电动态时空中 Dirac 粒子的 Hawking 效应. *数学物理学报*, 1999,

19(5): 573-578

145. Zhang Lichun, Wu Yueqin, Zhao Ren. Hawking Effect of the Dirac Particles of Evaporating

146. 张丽春、张全龙、赵仁. 结合物理教学在学生中开展科学教育. 雁北师范学院学报
6(1999) 18-20

三、主持或参与的教研、科研项目

纵向课题：

1. 李怀繁、赵仁、郭雄英、赵惠华、刘芳：山西省青年科技研究基金“规范/引力对偶在强耦合凝聚态系统中的应用，(2012021003-4)”2012年1月-2014年12月
2. 李怀繁、赵仁、史建华、郭雄英、刘先锋：AdS/CFT 对在凝聚态物理中的应用(11205097)，国家自然科学基金青年基金。22万元，2013.01-2015.12
3. 张丽春、赵仁、李怀繁、马宇波、王晓伟：非引力黑洞的热辐射及相关特性的研究(11175109)，国家自然科学基金。52+52万元，2012.01-2015.12
4. 赵仁、张丽春、李怀繁、王晓明、郭雄英、刘芳、赵惠华：黑洞量子辐射与热性质(11075098)，国家自然科学基金。38+38万元，2011.01-2013.12
5. 赵仁、张丽春、武月琴等：黑洞熵与广义测不准关系(2006011012)，山西省自然科学基金。3+1.8万元，2007.01-2008.12
6. 赵仁、张丽春、林海等：引力效应与高能碰撞多重产生(20001009)，山西省自然科学基金。2+2万元，2000.1-2002.12
7. 赵仁、张丽春、林海等：黑洞物理与高能碰撞多重产生(971009)，山西省自然科学基金。3万元，1997.8-1999.8

主持教改课题(项目)：

1. 赵仁、张丽春、林海等：普通物理学课程教学内容、方法及教育技术的整合与深化，山西省21世纪高等教育教学改革项目。
2. 赵仁、郭永等：师范院校开设科学教育课的研究，山西省教育厅教学改革项目

四、出版著作与教材

1. 郭永，赵仁主编：《科学教育丛书》：奇妙的微观世界(本人编著) 解开光之迷、探索原子内部的奥秘、揭开电与磁的秘密；北京：兵器工业出版社，2000年8月

五、教学成果获奖情况

科研获奖

1. 2009年9月，赵仁、张丽春、李怀繁、武月琴、胡双启、张胜利：黑洞熵与广义测不准关系，获山西省高等学校科学技术奖(自然科学类)二等奖
2. 2006年2月，赵仁、张丽春、武月琴：引力效应与高能碰撞多重产生，获山西省科学技术奖(自然科学类)三等奖(2005-Z-3-009)
3. 2005年9月，赵仁、张丽春、武月琴：引力效应与高能碰撞多重产生，获山西省高等学校科学技术奖一等奖
4. 2003年4月，赵仁、张丽春、林海：黑洞物理与高能碰撞多重产生，获山西省科学技术奖(基础研究与应用基础研究类)二等奖(2002-Z-2-135)
5. 2002年11月，赵仁、张丽春、林海：黑洞物理与高能碰撞多重产生，获山西省高等学校科

学技术奖一等奖

教学获奖

1. 2001年9月，郭永、张丽春、张子珍、赵仁：师范院校开设科学教育课的研究（教材），获山西省教学成果二等奖

六、取得荣誉

1. 1995年被省教委评为山西省中青年骨干教师；
2. 1997年被山西大同大学校评为优秀教师；
3. 2000年评为山西大同大学教学名师；
4. 2001年评为山西省劳动模范；
5. 2006年评为山西大同大学教学名师；
6. 2007年评为大同市劳动模范，大同市劳动模范。
7. 2010年评为山西大同大学教学名师；
8. 2009年评为模范教师；

七、社会兼职

1. 大同市十一届政协常委
2. 山西省十届政协委员