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姜年权（博士，教授）

教育背景

2000 年 9 月 -2004 年 6 月　**硕、博连读研究生，**中国科技大学大学化学院，理学博士

1983 年 9 月 -1987 年 7 月　**本科，**安徽师范大学物理系，理学学位

经历

工作经历

2019 年 06 月 -现在　**教授，硕导，**　温州大学数理学院

2004 年 08 月 -2019 年 06 月　**副教授、教授，硕导，**温州大学物电学院

2004 年 06 月 -2004 年 08 月　**留校任教，**中国科技大学化学院材料系

学术交流经历

2013 年 12 月 ~2014 年 12 月　**高级访问学者，**　英国 University College London

教学经历

2004 年 8 月 -至今 **讲授课程**

- 光学
- 量子力学
- 高等量子力学
- 量子信息物理
- 原子物理
- 大学物理
- 量子光学
- 近代物理

研究方向

1 **量子信息**

2 **新能源**

3 **超导理论**

荣誉和奖励

1 温州市“551 人才工程”第二层次 （2006 年）

2 温州大学优秀教师（2012）

主持和参与项目

教学项目

2008 年 12 月 -2010 年 12 月 《高等量子力学》教学模式改革与实践，温州大学学位与研究生教育教，主持

学术项目

2010 年 01 月 -2012 年 12 月 量子态表象变换中的经典变换及其应用的研究（10947017/A05），国家自然科学基金；

2009 年 01 月 —2011 年 12 月 染料敏化太阳电池成套关键技术研发（2009AA050603），国家高技术研究发展计划（863 计划），参与；

2005 年 01 月 —2005 年 12 月 博士研究人员启动基金(10447128)，国家自然科学基金，主持；

2008 年 01 月 —2010 年 08 月 大面积低价长寿命太阳电池关键科学和技术问题的基础研究（2006CB202600），国家重点基础研究发展计划（973 计划），参与；

2008 年 01 月　高效低价太阳能电池电极的研究（G20080046），温州市科技
—2010 年 06 月　计划项，主持；
2011 年 01 月　基于光子回声技术的光量子信息固态存储研究（11074190），
—2013 年 12 月　国家自然科学基金，参与；
2014 年 01 月　宽波段高效率深刻蚀圆形聚焦光栅及其在太阳电池中的应用
-2017 年 12 月　（F050202），国家自然科学基金，参与；
2014 年 01 月　新型太阳能高效转化纳米无机结材料及其在杂化太阳能电池中
-2014 年 12 月　研究的应用（Z20140422），温州市引智项目(市级重点)，
主持。

论文

学术论文（*为通讯作者）

1. Yao Chen, Fo-Liang Lin, Xi Liang and Nian-Quan Jiang*, Programmable Quantum Processor with Quantum Dot Qubits， Chin. Phys. Lett. 2019, 36(7), 070302.
2. Yang-Qing Guo, Nian-Quan Jiang*， Controllably Coupling Superconducting Charge and Flux Qubits by Using Nanomechanical Resonator，Chin. Phys. Lett. 2017, 34 (5), 050302
3. Chunming Sun, Xiaodong Li, Guojie Wang, Pandeng Li, Wenjun Zhang, Tonggang Jiu, Nianquan Jiang* and Junfeng Fang, Highly efficient inverted polymer solar cells using fullerene derivative modified TiO2 nanorods as the buffer layer, RSC Adv., 2014,4, 19529-19532, DOI: 10.1039/C4RA02254H
4. Yanbo Guo, Guozhong Wang, Nianquan Jiang*, Generating χ-Type Four-Qubit Entangled States in Superconducting Transmon Qubit System, International Journal of Theoretical Physics, 2014, 53(9), 3135-3141, DOI: 10.1007/s10773-014-2110-0
5. Chunming Sun, Yulei Wu, Wenjun Zhang,Nianquan Jiang, Tonggang Jiu, and Junfeng Fang， Improving Efficiency by Hybrid TiO2 Nanorods with 1,10-Phenanthroline as A Cathode Buffer Layer for Inverted Organic Solar Cells, ACS Appl. Mater. Interfaces, 2014, 6 (2), pp 739–744, DOI: 10.1021/am404423k
6. Zhao Ying-Yan and Jiang Nian-Quan*， Mesoscopic entangled coherent states implemented with a circuit quantum electrodynamics system，Chin. Phys. B Vol. 22, No. 5 (2013) 050308
7. GAO Gui-Long, SONG Fu-Quan, HUANG Shou-Sheng,WANG Yan-Wei, FAN Zhi-Qiang,YUAN Xian-Zhang, JIANG Nian-Quan*, Producing and Distinguishing X-Type Four-Qubit States in Flux Qubits, CHIN. PHYS. LETT. Vol. 29, No. 4 (2012) 044214
8. Gao Gui-Long, Song Fu-Quan, Huang Shou-Sheng, Wang Hui, Yuan Xian-Zhang, Wang Ming-Feng, and Jiang Nian-Quan*, A simple scheme to generate X -type four-charge entangled states in circuit QED, Chin. Phys. B Vol.

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9. GAO Gui-Long , CAI Gen-Chang, HUANG Shou-Sheng ,WANG Ming-Feng, and JIANG Nian-Quan*, One-Step Generation of Multi-Qubit GHZ and W States in Superconducting Transmon Qubit System, Commun. Theor. Phys. 57 (2012) 205-208
10. Zhi-song Yu, Gui-hua Ren, Hong-yi Fan, Gen-Chang Cai, Nian-Quan Jiang*, Fock-Space Projector Studied in Weyl Ordering Approach, Int J Theor Phys (2012) 51:2256–2261
11. Ying-Yan Zhao, Nian-Quan Jiang*, Generating mesoscopic entanglement of coherence and squeezed states in circuit QED system, Physics Letters A 376 (2012) 3654-3657
12. Chen Jun-Hua, Fan Hong-Y, and Jiang Nian-Quan, Long-time limit behavior of the solution to an atom's master equation, Chin. Phys. B Vol. 21, No. 8 (2012) 083201
13. Gao GuiLong, Cai GenChang, Huang ShouSheng, Tang LongYing, Gu WenJing, Wang MingFeng and Jiang NianQuan*, 1→N quantum controlled phase gate realized in a circuit QED system, Science China Physics, Mechanics and Astronomy, 2012, Volume 55, Issue 8, pp 1422-1426
14. Nian-quan Jiang, Hong-yi Fan, Shuai Wang, Jun-hua Chen, Long-Ying Tang, Wen-Jing Gu, Gen-Chang Cai, Virial Theorem for Angular Displacement and Torque, Int J Theor Phys (2011) 50:3610–3615
15. Jiang Nian-Quan, Fan Hong-Yi, Xi Liu-Sheng,Tang Long-Ying, and Yuan Xian-Zhang, Evolution of a two-mode squeezed vacuum in the amplitude dissipative channel, Chin. Phys. B Vol. 20, No. 12 (2011) 120302
16. Gui-Long Gao, Liusheng Xi, Guoliang Gao, Jianping Zhong, Nian-Quan Jiang*, Preparing arbitrary mode superconducting LC entangled coherent state via a superconducting charge qubit, Physics Letters A, 375 (2011) 3946–3949
17. FAN HongYi, YUAN Hong Chun and JIANG NianQuan*, New identities about operator Hermite polynomials and their related, Science China Physics, Mechanics and Astronomy, 2011 Vol. 54 No. 12: 2145–2149
18. Hong-Yi Fan, Hong-Chun Yuan, Xue-Xiang Xu and Nian-Quan Jiang*, New approach for obtaining the squeezing-enhanced state and its Wigner function by virtue of the Weyl–Wigner quantization scheme, Phys. Scr. 83 (2011) 015403
19. Fan Hong-Yi, Xu Xue-Xiang, Yuan Hong-Chun,Wang Shuai, Wang Zhen, Xu Peng, and Jiang Nian-Quan*, A new approach to obtaining positive-definite Wigner operator for two entangled particles with different masses, Chin. Phys. B Vol. 20, No. 7 (2011) 070301
20. FAN HongYi, YUAN HongChun, CAI GenChang and JIANG NianQuan*, Operators' ordering: fromWeyl ordering to normal ordering, Sci China Phys Mech Astron, August (2011) Vol. 54 No. 8, 1394-1397
21. Xue Li, Huang Shou-Sheng, Wu Lie, Ji Yong-Yun, and Jiang Nian-Quan*, Scheme to generate and discriminate a type of multipartite maximally entangled states in ion-trap, Chin. Phys. B 20 (2011) 050313
22. Li Xue, Lie Wu, Gen-Chang Cai and Nian-Quan Jiang*, Maximal engtangled

four-qubit state and its preparation in cavity QED system, International Journal of Quantum Information, 9(3) (2011) 875
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25. FAN Hong-Yi and JIANG Nian-Quan*, Quantum Mechanical Correspondence of Poisson Integral Formula, Commun. Theor. Phys. 55 (2011) 217–220
26. Nian-Quan Jiang, Hong-Yi Fan and Li-yun Hu，Evolution of chaotic field in laser process: Evolution law of density operator and photon number decay, J. Phys. A: Math. Theor. 44 (2011) 195302
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36. Hong-Yi Fan and Nian-Quan Jiang*, Energy average formula of photon gas rederived by using the generalised Hermann–Feynman theorem, Chin. Phys. B, 19 (2010) 090301

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71. Hong-yi Fan and Nian-Quan Jiang, New Three-Mode Einstein-Podolsky-Rosen Entangled State Representation and Its Application in Squeezing Theory, Chin. Phys. Lett., 19 (2002) 1403
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教学论文（*为通讯作者）

[1] 张毅 姜年权*, EPR 型连续变量纠缠态的正规乘积方法求解, 大学物理, 27 (2008) 3。

指导硕士生

2006 级	张毅，王育建
2007 级	何勇，寇东星
2008 级	许朋，薛丽，王利军
2009 级	黄寿胜，高贵龙，李毅
2010 级	赵英燕，王辉
2011 级	陈娟，孙春明
2012 级	郭琰博，林初伦
2013 级	刘祥
2014 级	段慧慧，郭羊青
2016 级	陈垚
2017 级	林佛良
2018 级	梁喜

指导本科生竞赛

xxxx 年	奖项名称	奖项等级

科研获奖

姜年权，《多粒子纠缠态的产生、度量与应用的研究》获浙江省高等学校科研成果三等奖，2010 年；

姜年权，《多粒子体系相容可观测量的共同本征态》获温州市第十三届自然科学优秀论文二等奖，2009 年。