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# 热烈祝贺我院姚裕贵教授团队成果 获2018年度国家自然科学奖二等奖

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## 师资队伍

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### 准聘教授



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### 个人简历

- 2005/08-2009/02, 澳大利亚斯文本科技大学, 微光子中心, 博士, 导师: 顾敏 教授/院士
- 2002/09-2005/07, 南开大学, 物理学院光电信息科学系, 硕士, 导师: 吕可诚 教授
- 1998/09-2002/07, 南开大学, 物理学院光电信息科学系, 学士

### 工作经历

- 2018/12 - 至今, 北京理工大学物理学院, 准聘教授, 博导
- 2017/09 - 2017/12, 美国麻省理工学院, 纳米光子学及三维纳米加工实验室, 访问学者
- 2012/08 - 2018/12, 中国科学院物理研究所, 光物理实验室, 副研究员
- 2009/07 - 2012/08, 中国科学院物理研究所, 光物理实验室, 助理研究员
- 2009/03 - 2009/06, 澳大利亚斯文本科技大学, 微光子中心, 研究助理

### 科研方向

- 低维及三维人工微纳结构制备及功能器件研究
  - 基于FIB、EBL等工艺的纳米剪纸三维微纳制备技术及光电器件
  - 飞秒激光直写三维微纳加工发展与应用
  - 金属纳米颗粒及其复合纳米结构、半导体量子点的化学合成
- 表面等离激元光学物理及器件研究
  - 表面等离激元与增益介质的相互作用及调控: 损耗补偿、增益放大与荧光增强
  - 基于金纳米棒的辐射调控与应用
  - 金属微纳结构的非线性增强与调控
- 光子晶体物理及应用
  - 三维光子晶体的制备及其应用于半导体量子点辐射调控
  - 基于光子晶体的红外探测材料的研究

## 学术成就

自2005年开始一直从事表面等离子体及光子晶体结构中光和物质的相互作用研究，并致力于发展纳米剪纸、飞秒激光直写等三维微纳加工技术与应用，取得多项创新成果，在Science Advances, Light: Science & applications, Advanced Materials, Laser & Photonics Review等上发表期刊论文60余篇，引用1000余次(Google Scholar)。特别是2018年在国际上首次论证了纳米剪纸三维微纳加工概念[Science Advances 4, eaat4436 (2018)]，并撰写了该方向的首篇综述论文[Nanophotonics 7, 1637-1650 (2018)]，对该新兴技术进行了溯源、总结和应用探讨，为该领域的进一步发展奠定了基础。

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- 【2】 Jiafang Li\* and Zhiguang Liu, "Focused-ion-beam based nano-kirigami: from art to photonics", Nanophotonics 7, 1637–1650 (2018).
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每年拟招收2~3名研究生（硕士生、硕博连读生、博士生、联合培养研究生），涵盖微纳光子学领域的实验和理论方向，主观能动性  
强及英语写作能力强者优先。

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