

**兰伟**

副教授

性别：男

电子材料研究所  
凝聚态物理专业硕士生导师

地址：兰州市天水南路222号，兰州大学物理科学与技术学院

电话： 传真：0931-8913554

电子邮件：lanw@lzu.edu.cn

## 个人简介：

兰伟，男，1979年生，副教授，硕士生导师。2002年6月毕业于兰州大学物理系获理学学士学位；2007年6月，兰州大学物理科学与技术学院凝聚态物理专业半导体物理方向博士研究生毕业，获理学博士学位；之后留校工作，2008年12月被遴选为硕士生导师，2009年5月晋升为副教授。2010年10月开始在美国伊利诺伊大学香槟分校材料科学与工程系John A Rogers院士小组作博士后，从事碳纳米管与石墨烯基电子器件研究。曾主持和参与国家自然科学基金、北京市拔尖创新人才选拔计划、国防863子课题、甘肃省自然科学基金等多项研究。目前主要从事透明电子学和太阳能利用相关纳米材料方面的应用基础研究。

## 研究方向：

1. 透明电子学，以n型和p型透明导电氧化物薄膜为基础的材料制备与性能研究
2. 与太阳能利用相关的纳米材料制备与应用研究，包括太阳能光催化，太阳能电池

目前承担的主要科研项目：

1. 项目名称：透明氧化物半导体CuAlO<sub>2</sub>薄膜外延生长及其p型掺杂研究

经费来源：国家自然科学基金青年项目

起讫时间：2009.1-2011.12

2. 项目名称：低温化学沉积透明导电ZnO薄膜及其特性研究

经费来源：兰州大学交叉学科青年创新研究基金

## 研究工作：

起讫时间：2008.1-2010.4

3. 项目名称：p-CuO/n-TiO<sub>2</sub>异质结纳米纤维薄膜的制备及其光催化特性研究

经费来源：中央高校基本科研业务费专项资金自由探索项目

起讫时间：2010.1-2011.12

4. 项目名称：基于碳管纤维耦合嵌入式纳米结构的高性能纳米发电机的制备研究

经费来源：国家自然科学基金

起讫时间：2013.1-2015.12

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2. Bingan Lu, Chengquan Zhu, Zhenxing Zhang, Wei Lan and Erqing Xie, Preparation of highly porous TiO<sub>2</sub> nanotubes and their catalytic applications, *Journal of Materials Chemistry*, 22, 1375–1379 (2012);
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6. Wei Lan\*, Jiaqi Pan, Chenquan Zhu, Guoqing Wang, Qing Su, Xueqin Liu, Erqing Xie, H. Yan, Role of oxygen in structural properties of annealed CuAlO<sub>2</sub> films, *Journal of Crystal Growth*, 314: 370–373 (2011);
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12. W. Lan\*, W. L. Cao, M. Zhang, X. Q. Liu, Y. Y. Wang, E. Q. Xie, H. Yan, Annealing effect on the structural, optical, and electrical properties of CuAlO<sub>2</sub> films deposited by magnetron sputtering, *Journal of Materials Science* 44 (6):1594–1599 (2009);
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19. Wei Lan, Ming Zhang, Guobo Dong, Yinyue Wang and Hui Yan, The effect of oxygen on the properties of transparent conducting oxide Cu-Al-O films deposited by RF magnetron sputtering, *Materials Science and Engineering B* 139(2-3): 155-159 (2007);
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21. Yanping Liu, Zhijun Yan, Wei Lan, Chunming Huang, Yinyue Wang, Fabrication and optical properties of 3D composite photonic crystals of core-shell structures, *Applied Surface Science* 253 (2007) 8571-8574;
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24. 兰伟\*, 唐国梅, 曹文磊, 刘雪芹, 王印月, Ni掺杂ZnO薄膜的结构与光学特性研究, *物理学报* 58(12):8501-8505 (2009);

专利:

1. 大面积柔性导电薄膜的制备方法 201110412040.3
2. 一种基于静电纺丝技术的纳米材料连续式生产装置 201210031335.0
3. 一种基于静电纺丝技术的纳米材料连续式生产装置 201220045686.2
4. 用于静电纺丝技术的简易多孔喷丝头 201220108743.7
5. 一种新型的静电纺丝收集器 201220362143.3

研究成果:

研究小组老师: 刘雪芹(副教授), 苏庆(博士)  
研究小组成员: 研究小组学生:  
潘佳奇, 朱承泉, 张家旺, 李育仁, 邓伟, 景盼盼、柳翔, 孙亚如, 闫瑾, 张伟

登陆修改