

胡劲华导师信息

胡劲华，男，1984年10月出生，博士，副教授，中国光学学会高级会员、中国光学工程学会高级会员。2014年9月毕业于北京邮电大学信息光子学与光通信国家重点实验室，获得电子科学与技术专业，工学博士学位。在博士期间参与国家973项目与国家自然科学基金面上项目的研究工作，2014年12月至今工作于信电学院通信工程系。2017年9月获得教育部中西部高等学校青年骨干教师国内访问学者项目资助，在北京邮电大学信息光子学与光通信国家重点实验室访学一年，考核为优秀。近年来，在*Laser & Photonics Reviews*, *Applied Physics Letters*, *Optics Express*, *Journal of Lightwave Technology*, *Optics Communications*, *Chinese Optics Letters* 等期刊上发表论文50余篇，授权国家发明专利5项。担任SCI检索期刊《Materials》专题客座编辑；*Applied Physics Express*、*Japanese Journal of Applied Physics*、*Photonics*、《红外与激光工程》以及《激光与光电子进展》等国内外期刊审稿人；2022年获国际学术“Best Researcher Award”奖(*International Research Awards on Sensing Technology SENSORS 2022*)。2022年获河北工程大学优秀硕士学位论文指导教师荣誉；与上海交通大学、浙江大学、北京邮电大学等国内知名高校有着良好学术交流关系。欢迎有志青年学子报考。



一、研究方向

1. 光纤传感网与人工智能
2. 微纳光子学与信息感知
3. 光通信器件与网络技术

二、主要科研成果

1. 河北省高等学校科学技术研究项目,基于硅亚波长光栅的石墨烯光探测器研究, 2016/01-2018/12,主持, 结题
2. 河北省自然科学基金项目青年项目, 基于亚波长光栅的石墨烯光探测器研究, 2017/01-2019/12, 主持, 结题

三、主要研究论文

- [1] **J Hu**, K Di, D Ren, Y Deng, and J Zhao. Recognition and localization of asymmetric spectra in FBG sensing networks, **Opt. Express**, 2023,31, 10645-10656 (SCI)
- [2] **J Hu**, J Liang, J Zou, C Shi, J Zhao. Dual-band perfect graphene absorber with an all-dielectric zero-contrast grating-based resonant cavity. **Optics Communications**, 2023, 527: 128908.(SCI)
- [3] **J Hu**, J Yu, X Liu, J Zou, L Zhang, J Zhao. Tunable flat-top filtering response in cascaded resonant waveguide gratings. **IEEE Photonics Journal** 2021,13 (2):1-8 (SCI)
- [4] **J Hu**, J Fu, X Liu, D Ren, J Zhao, Y Huang. Perfect absorption in a monolayer graphene at the near-infrared using a compound waveguide grating by robust critical coupling. **Chinese Optics Letters** 2019,17 (1): 010501 (SCI)
- [5] **J Hu**, X Liu, J Zhao, J Zou. Investigation of Fano resonance in compound resonant waveguide gratings for optical sensing. **Chinese Optics Letters** 2017,15 (3): 030502 (SCI)
- [6] **J Hu**, Y Huang, X Duan, Q Wang, X Zhang, J Wang, X Ren. Enhanced absorption of graphene strips with a multilayer subwavelength grating structure. **Applied Physics Letters** 2014,105 (22):22111 (SCI)
- [7] **J Hu**, Y Huang, X Ren, X Duan, Y Li, Y Luo. Realization of quantum efficiency enhanced

PIN photodetector by assembling resonant waveguide grating. **Chinese Optics Letters** 2014,12 (7):072301 (SCI)

[8] J Hu, Y Huang, X Ren, X Duan, Y Li, Q Wang, X Zhang, J Wang. Modeling of Fano resonance in high-contrast resonant grating structures. **Chinese Physics Letters** 2014, 31 (6): 064205 (SCI)

[9] J Liang, J Hu*, X. Liu, J Zhao. Near-perfect narrow-band tunable graphene absorber with a dual-layer asymmetric meta-grating. **Photonics**. 2023, 10(1): 14 (SCI, 通讯作者)

[10] X Liu, C Shi, J Hu*, H Wang*, H Han, J Zhao. Improving the sensitivity of refractive index sensors with integrated double-layer resonant meta-grating structure. **Optics Communications**,2022,515:128171.(SCI 通讯作者)

[11] C. Shi, J. Hu*, X. Liu*, J. Liang, J. Zhao, H. Han, and Q. Zhu, Double-layer symmetric gratings with bound states in the continuum for dual-band high-Q optical sensing, . **Beilstein Journal of Nanotechnology**, 2022, 13(1): 1408-1417(SCI 通讯作者)

[12] C Shi, X Liu, J Hu, H Han, J Zhao. High performance optical sensor based on double compound symmetric gratings. **Chinese Optics Letters**,2022,20(2):021201.(SCI)

[13] J Zou, L Li, C Wang, Y Zhuang, X Wang, J Hu, S Luo, J J He. Novel high-resolution and large-bandwidth micro-spectrometer using multi-input counter propagating arrayed waveguide grating and dual-wavelength grating coupler on silicon on insulator. **Laser & Photonics Reviews**,2022, 2200355.(SCI, IF 13.138)

[14] Y Bao, X Liu, J Hu, J Zou, H Han, C Wang. Enhanced optical sensing performance in stacked resonant compound gratings. **Optics Express** 2021,29 (18): 29458-29465 (SCI)

[15] J Zou, X Ma, X Xia, C Wang, M Zhang, J Hu, X Wang, J J He. Novel Wavelength multiplexer using $(N+1) \times (N+1)$ arrayed waveguide grating and polarization-combiner-rotator on SOI platform. **Journal of Lightwave Technology** 2021,39 (8): 2431-2437 (SCI)

[16] J Zou, X Ma, X Xia, J Hu, C Wang, M Zhang, T Lang, J J He. High resolution and ultra-compact on-chip spectrometer using bidirectional edge-input arrayed waveguide grating. **Journal of Lightwave Technology** 2020,38 (16):4447-4453(SCI)

[17] J Zou, Y Zhang, J Hu, C Wang, M Zhang, Z Le. Grating coupler with reduced Back reflection using $\lambda/4$ offset at its grating sub-teeth **Journal of Lightwave Technology**. 2019, 37 (4):1195-1199 (SCI)

[18] J Zou, Z Le, J Hu, J J He. Performance improvement for silicon-based arrayed waveguide grating router. **Optics Express** 2017,25 (9): 9963-9973 (SCI)

四、主要科研项目

1. 国家自然科学基金项目, 基于微纳复合啁啾光栅结构的高性能光学生物传感器研究, 2020/01-2022/12, 主持, 24万
2. 河北省高等学校科学技术研究项目重点项目, 面向智慧医疗POCT的光栅型物传感器研究, 2021/01-2023/12, 主持, 9万
3. 企业横向合作课题项目 高性能光学生物传感技术及其系统开发, 2023/01-2023/12, 主研, 30万

五、联系方式

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