

教师个人主页

个人简介 学习经历 工作经历 研究方向 主要论文 主要著作 承担课题

个人信息



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联系方式



个人简介

包燕军, 广东省杰出青年基金获得者、暨南大学纳米光子学研究院教授、纳米操控光子学实验室副主任。2011年于中山大学物理科学与工程技术学院获理学学士学位, 2017年于北京大学物理学院获理学博士学位。2017-2020年在中山大学物理学院作为特聘研究员继续从事科学研究, 2020年加入暨南大学纳米光子学研究院。研究方向为超构表面微纳结构设计及光场调控。代表性论文发表于 Science Advances, Advanced Materials, Nano Letters, Light: Science & Applications, Advanced Functional Materials, Laser & Photonics Reviews 等国际学术期刊上, 论文引用1500余次(谷歌学术)。主持国家自然科学基金委重大研究计划培育项目、面上及青年项目, 广东省杰出青年基金、自由申请项目等, 参与国家重点研发计划、广东省重大科技专项等项目。

学习经历

2011.9 - 2017.6, 北京大学, 凝聚态物理, 博士
2007.9 - 2011.7, 中山大学, 物理学, 本科

工作经历

2020.7-至今, 暨南大学, 纳米光子学研究院, 教授, 实验室副主任
2017.7-2020.7, 中山大学, 物理学院, 特聘研究员

研究方向

超构表面结构器件设计, 衍射光学, 电磁波理论计算及数值模拟。

主要论文

Selected Publications (*表示通讯作者, †表示共同第一作者)

- [12] Yanjun Bao*, Qiang Weng, Baojun Li*, Conversion between arbitrary amplitude, phase, and polarization with minimal degrees of freedom of metasurface, **Laser & Photonics Reviews**, 2021, Accepted. (Web)
- [11] Yanjun Bao*, Long Wen, Qin Chen, Cheng-Wei Qiu*, and Baojun Li*, Toward the capacity limit of 2D planar Jones matrix with a single-layer metasurface, **Science Advances**, 7: eabh0365, 2021. (Web)
- [10] Yanjun Bao*, Jiahao Yan, Xiangang Yang, Cheng-Wei Qiu*, and Baojun Li*, Point-Source Geometric Metasurface Holography, **Nano Letters**, 21: 2332, 2021. (Web, 两江评论, Inside Back Cover)
- [9] Yanjun Bao†, Qiaoling Lin†, Rongbin Su, Zhang-Kai Zhou, Jindong Song, Juntao Li* and Xue-Hua Wang*, On-demand spin-state manipulation of single-photon emission from quantum dot integrated with metasurface, **Science Advances**, 6: eaba8761, 2020. (Web, 两江评论)
- [8] Yanjun Bao*, Jincheng Ni and Cheng-Wei Qiu*, A Minimalist Single-layer Metasurface for Arbitrary and Full Controls of Vector Vortex Beams, **Advanced Materials**, 32: 1905659, 2020. (Web, 两江评论, Materials Views China)

- [7] Yanjun Bao, Ying Yu, Haofei Xu, Chao Guo, Juntao Li, Shang Sun, Zhang-Kai Zhou*, Cheng-Wei Qiu* and Xuehua Wang*, Full-colour nanoprint-hologram synchronous metasurface with arbitrary hue-saturation-brightness control, **Light: Science & Applications**, 8: 95, 2019. ([Web](#), [两江评论](#))
- [6] Yanjun Bao†, Ying Yu†, Haofei Xu, Qiaoling Lin, Yin Wang, Juntao Li, Zhang-Kai Zhou* and Xue-Hua Wang, Coherent Pixel Design of Metasurface for Multidimensional Optical Control of Multiple Printing-Image Switching and Encoding, **Advanced Functional Materials**, 28: 1805306, 2018. ([Web](#), [Inside Back Cover](#), [两江评论](#))
- [5] Qiao Jiang†, Yanjun Bao†, Feng Lin, Xing Zhu, Shuang Zhang, and Zheyu Fang*, Spin-controlled integrated Near- and Far-field Optical Launcher, **Advanced Functional Materials**, 28: 1705503, 2018. ([Web](#))
- [4] Yanjun Bao†, Qiao Jiang†, Yimin Kang, Xing Zhu and Zheyu Fang*, Enhanced Optical Performance of Multifocal Metalens with Conic Shapes, **Light: Science & Applications**, 6: e17071, 2017. ([Web](#))
- [3] Yanjun Bao, Shuai Zu, Wei Liu, Lei Zhou, Xing Zhu and Zheyu Fang*, Revealing the spin optics in conic-shaped metasurfaces, **Physical Review B**, 95: 081406 (Rapid Communication), 2017. ([Web](#))
- [2] Yanjun Bao, Shuai Zu, Yifei Zhang and Zheyu Fang*. Active Control of Graphene-Based Unidirectional Surface Plasmon Launcher, **ACS Photonics**, 2: 1135-1140, 2015. ([Web](#))
- [1] Yanjun Bao†, Zhijian Hu†, Ziwei Li, Xing Zhu and Zheyu Fang*, Magnetic plasmonic Fano resonance at optical frequency, **Small**, 11: 2177-2181, 2015. ([Web](#), [Inside Front Cover](#), [Materials Views China](#))

Full Publications:

2021

- [27] Yanjun Bao*, Qiang Weng, Baojun Li*, Conversion between arbitrary amplitude, phase, and polarization with minimal degrees of freedom of metasurface, **Laser & Photonics Reviews**, 2021, Accepted. ([Web](#))
- [26] Yanjun Bao*, Long Wen, Qin Chen, Cheng-Wei Qiu*, and Baojun Li*, Toward the capacity limit of 2D planar Jones matrix with a single-layer metasurface, **Science Advances**, 7: eabh0365, 2021. ([Web](#))
- [25] Yanjun Bao*, Jiahao Yan, Xiangyang Yang, Cheng-Wei Qiu*, and Baojun Li*, Point-Source Geometric Metasurface Holography, **Nano Letters**, 21: 2332, 2021. ([Web](#), [两江评论](#), [Inside Back Cover](#))

2020

- [24] Qiao Jiang, Yanjun Bao, Jing Li, Lifeng Tian, Tong Cui, Lin Sun, Bowen Du, Bowen Li, Benfeng Bai, Jia Wang, Hongbo Sun, Bo Shen, Han Zhang, Feng Lin, Xing Zhu and Zheyu Fang*. Bi-channel near- and far-field optical vortex generator based on a single plasmonic metasurface, **Photonics Research**, 8: 986, 2020. ([Web](#))
- [23] Yanjun Bao*, Jincheng Ni and Cheng-Wei Qiu*. A Minimalist Single-Layer Metasurface for Arbitrary and Full Control of Vector Vortex Beams, **Advanced Materials**, 32: 1905659, 2020. ([Web](#), [两江评论](#), [Materials Views China](#))
- [22] Yanjun Bao†, Qiaoling Lin†, Rongbin Su, Zhang-Kai Zhou, Jindong Song, Juntao Li* and Xue-Hua Wang*. On-demand spin-state manipulation of single-photon emission from quantum dot integrated with metasurface, **Science Advances**, 6: eaba8761, 2020. ([Web](#), [两江评论](#))

2019

- [21] Zhang-Kai Zhou, Jingfeng Liu, Yanjun Bao, Lin Wu, ChingEng Png, Xue-Hua Wang* and Cheng-Wei Qiu*. Quantum plasmonics get applied, **Progress in Quantum Electronics**, 65: 1, 2019. ([Web](#))
- [20] Ying Yu, Xiankun Zhang, Zhangkai Zhou, Zheng Zhang, Yanjun Bao, Haofei Xu, Limin Lin, Yue Zhang* and Xuehua Wang*. Microscopic pump-probe optical technique to characterize the defect of monolayer transition metal dichalcogenides, **Photonics Research**, 7: 711, 2019. ([Web](#))
- [19] Ying Yu, Yanjun Bao, Limin Lin, Haofei Xu, Renming Liu and Zhangkai Zhou*. Large third-order optical nonlinearity and ultrafast optical response in thin Au nanodisks, **Optical Materials Express**, 9: 3021, 2019. ([Web](#))
- [18] Tingting Song, Zhanxu Chen, Wenbo Zhang, Limin Lin, Yanjun Bao, Lin Wu and Zhang-Kai Zhou. Compounding Plasmon-Exciton Strong Coupling System with Gold Nanofilm to Boost Rabi Splitting, **Nanomaterials**, 9: 564, 2019. ([Web](#))
- [17] Yanjun Bao, Ying Yu, Haofei Xu, Chao Guo, Juntao Li, Shang Sun, Zhang-Kai Zhou*, Cheng-Wei Qiu* and Xue-Hua Wang*. Full-colour nanoprint-hologram synchronous metasurface with arbitrary hue-saturation-brightness control, **Light: Science & Applications**, 8: 95, 2019. ([Web](#), [两江评论](#))

2018

- [16] Qiao Jiang†, **YanJun Bao**†, Feng Lin, Xing Zhu, Shuang Zhang and Zheyu Fang*. Spin-Controlled Integrated Near- and Far-Field Optical Launcher, **Advanced Functional Materials**, 28: 1705503, 2018. ([Web](#))
- [15] **YanJun Bao**†, Ying Yu†, Haofei Xu, Qiaoling Lin, Yin Wang, Juntao Li, Zhang-Kai Zhou* and Xue-Hua Wang. Coherent Pixel Design of Metasurfaces for Multidimensional Optical Control of Multiple Printing-Image Switching and Encoding, **Advanced Functional Materials**, 28: 1805306, 2018. ([Web](#), [Inside Back Cover](#), [两江评论](#))

2017

- [14] Run Shi, Yinhu Cao, **YanJun Bao**, Yufei Zhao, Geoffrey I. N. Waterhouse, Zheyu Fang, Li-Zhu Wu, Chen-Ho Tung, Yadong Yin and Tierui Zhang*. Self-Assembled Au/CdSe Nanocrystal Clusters for Plasmon-Mediated Photocatalytic Hydrogen Evolution, **Advanced Materials**, 29: 1700803, 2017. ([Web](#))
- [13] **YanJun Bao**, Shuai Zu, Wei Liu, Lei Zhou, Xing Zhu and Zheyu Fang*. Revealing the spin optics in conic-shaped metasurfaces, **Physical Review B**, 95: 081406 (Rapid Communication), 2017. ([Web](#))
- [12] **YanJun Bao**†, Qiao Jiang†, Yimin Kang, Xing Zhu and Zheyu Fang*. Enhanced Optical Performance of Multifocal Metalens with Conic Shapes, **Light: Science & Applications**, 6: e17071, 2017. ([Web](#))

2016

- [11] Shuai Zu, **YanJun Bao** and Zheyu Fang. Planar plasmonic chiral nanostructures, **Nanoscale**, 8: 3900, 2016. ([Web](#))
- [10] Zhijian Hu, **YanJun Bao**, Ziwei Li, Yongji Gong, Rui Feng, Yingdong Xiao, Xiaochun Wu, Zhaohui Zhang, Xing Zhu, Pulickel M Ajayan and Zheyu Fang*. Temperature dependent Raman and photoluminescence of vertical WS₂/MoS₂ monolayer heterostructures, **Science Bulletin**, 62: 16, 2016. ([Web](#))

2015

- [9] Xueying Zhan, **YanJun Bao**, Fengmei Wang, Qisheng Wang, Zhongzhou Cheng, Zhenxing Wang, Kai Xu, Zheyu Fang and Jun He*. Surface plasmon resonance enhanced light absorption of Au decorated composition-tuned ZnO/ZnxCd1-xSeyTe1-y core/shell nanowires for efficient H₂ production, **Applied Physics Letters**, 106: 123904, 2015. ([Web](#))
- [8] **YanJun Bao**, Shuai Zu, Yifei Zhang and Zheyu Fang*. Active Control of Graphene-Based Unidirectional Surface Plasmon Launcher, **ACS Photonics**, 2: 1135, 2015. ([Web](#))
- [7] **YanJun Bao**, Xing Zhu and Zheyu Fang*. Plasmonic toroidal dipolar response under radially polarized excitation, **Scientific Reports**, 5: 11793, 2015. ([Web](#))
- [6] **YanJun Bao**†, Zhijian Hu†, Ziwei Li, Xing Zhu and Zheyu Fang*. Magnetic plasmonic Fano resonance at optical frequency, **Small**, 11: 2177-2181, 2015. ([Web](#), [Inside Front Cover](#), [Materials Views China](#))
- [5] **YanJun Bao** and Zheyu Fang*. Plasmon-enhanced photodetection in nanostructures, **Nanotechnology Reviews**, 4: 325, 2015. ([Web](#))
- [4] **YanJun Bao**, Yumin Hou* and Zongpeng Wang. Huge Electric Field Enhancement of Magnetic Resonator Integrated with Multiple Concentric Rings, **Plasmonics**, 10: 251, 2015. ([Web](#))

2014

- [3] Yimin Kang, Sina Najmaei, Zheng Liu, **YanJun Bao**, Yumin Wang, Xing Zhu, Naomi J Halas, Peter Nordlander, Pulickel M Ajayan, Jun Lou and Zheyu Fang*. Plasmonic hot electron induced structural phase transition in a MoS₂ monolayer, **Advanced Materials**, 26: 6467, 2014. ([Web](#))
- [2] **YanJun Bao**, Yumin Hou* and Zongpeng Wang. Magnetic hybridization enhanced transmission through ultra-long subwavelength hole, **Journal of Optics**, 16: 105101, 2014. ([Web](#))
- [1] **YanJun Bao**, Yumin Hou* and Zongpeng Wang. Robust existence of the broadband optical transmission effect in multiple-layer gratings, **Journal of the Optical Society of America B**, 31: 255, 2014. ([Web](#))

承担课题

在研:

1. 国家自然科学基金重大研究计划培育项目, 2022-2024, 主持

2. 国家自然科学基金面上项目, 2021-2024, 主持
 3. 国家自然科学基金青年项目, 2019-2021, 主持
 4. 广东省杰出青年基金, 2022-2024, 主持
 5. 广州市科技基金项目, 2022-2024, 主持
 6. 国家重点研发计划, 2018-2023, 参与
 7. 广东省科技计划项目, 2019-2022, 参与
- 结题:

1. 广东省自然科学基金自由申请项目, 2018-2020, 主持
2. 中山大学高校基本业务费, 2019-2021, 主持

发明专利

1. 可显示双套彩色打印和全息图像的超构表面及其设计方法(申请号: 2020109085138)
2. 基于点光源照射的多功能超构表面光器件及其设计方法(申请号: 2020109305195)
3. 一种实现多维光操控图像变换的超表面结构设计方法(申请号: 2019102529493)

讲授课程

工程光学, 2021秋季, (专硕, 学硕)

荣誉奖励

省级青年人才

社会职务

ACS Nano, Nano Energy, Optica, ACS Photonics, Photonics Research, Scientific Reports等期刊审稿人