

**Prof. Fan Wang**

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**Google Scholar:** <https://scholar.google.com/citations?user=CcB3PgYAAAAJ>

## Education

**Ph.D. in Optical Physics (holographic optical tweezers)**

**Feb 2010 – Jan 2014**

University of New South Wales, Sydney, NSW, Australia

Ph.D. Dissertation: " *Spectroscopic Characterization of Optically Trapped Semiconductor Nanowires and Nanoparticles* ", School of Physics. Supervisor: Dr Peter Reece

**M.S. in Optoelectronics and Photonics**

**Jul 2008 – Jul 2009**

University of New South Wales, Sydney, NSW, Australia

**B.A. in Science**

**Sep 2003 – Aug 2007**

Beihang University, Beijing, China

Applied Physics (Optoelectronics Engineering), Department of Science

## Employment History

**University of Sydney, Research Assistant**

**Jul 2009 – Dec 2009**

In the ARC Centre of Excellence for Ultrahigh bandwidth Devices for Optical Systems (CUDOS) node

**Australian National University, Postdoctoral Research Fellow**

**Aug 2013 – Mar 2015**

Leading the photonics research direction in Prof Chennupati Jagadish's group.

**Macquarie University, Postdoctoral Research Fellow**

**Mar 2015 – Mar 2017**

In the ARC Centre of Excellence for Nanoscale Bio-Photonics (CNBP) node, including supervising two PhD students.

**University of Technology Sydney, Postdoctoral Research Fellow**

**Mar 2017 – Jan 2019**

A research theme leader in biophotonics, including supervising four PhD students.

**University of Technology Sydney, Chancellor's Postdoctoral Research Fellow**

**Jan 2019 - Dec 2021**

Fellowship to establish my independent research on super-resolution imaging.

**University of Technology Sydney, Lecturer**

**April 2020 -Dec 2021**

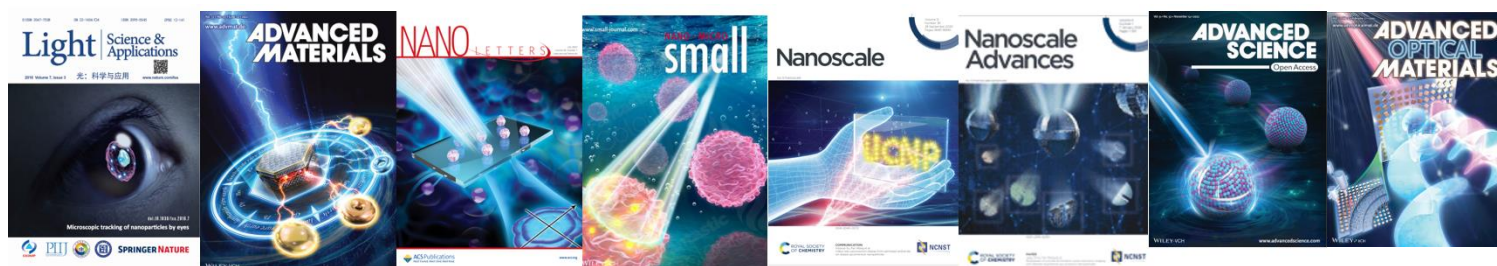
In the UTS School of Electrical and Data Engineering as a lecturer and principal investigator to establish my nano-optoelectronics group. I was awarded an ARC DECRA fellowship (2020) to conduct my biological laser cooling technology research.

**Beihang University, Professor**

**Jan 2022 - Now**

In the Beihang University, School of physics as a Professor and principal investigator to establish my nanophotonics group.

## Research Achievements and Contributions



My publications have been cited more than **5000**times, and my h index is **36** in Google Scholar. In my research discipline and my career level, this is considered **top** of the range. My research articles are published in premier international journals in nanophotonics, biophotonics, and nanotechnology, typically within the top **5%** range of my disciplines. I have published in *Nature* (IF ~42.7), *Nature Nanotechnology* (IF ~31.5), *Nature Photonics*×2 (IF ~31.2), *Nature Communications*×5 (IF ~12.1), *Optica* (IF ~11.1), *Nano Letters*×12 (IF ~11.2), *Advanced Materials*×3 (IF ~27.3), *Advanced Science* (IF~17.5), *Advanced Functional Materials* (IF ~16.8), *ACS Nano* (IF ~14.6), *Light: Science*

& *Application*×4 (IF ~ 14.1), and *Small* (IF~11.5). This has resulted in a very high average IF **10** over my publications. I have published **12** papers (including 5 leading author papers) in *Nano Letters*. Of my **81** journal papers, I have **22** leading author papers.

*Top 5 publications from last three years relevant to the proposal include:*

1. *Nature Nanotechnology* (2021) – Shan, Xuchen<sup>†</sup>, **Wang, Fan\*<sup>†</sup>**, Wang, Dejiang, Wen, Shihui, Chen, Chaohao, Di, Xiangjun, Nie, Peng, Liao, Jiayan, Liu, Yongtao, Ding, Lei, Reece, Peter\* & Jin, Dayong\*, “Optical tweezers beyond refractive index mismatch using highly doped nanoparticles”, vol 16 (5), 531-537. [IF: 31.5] [co-first author, co-corresponding author]
2. *Nature Communication* (2021) – Liu, Yongtao<sup>†</sup>, Zhou, Zhiguang<sup>†</sup>, **Wang, Fan\*<sup>†</sup>**, Kewes, Günter, Wen, Shihui, Burger, Sven, Wakiani, Majid Ebrahimi, Xi, Peng, Yang, Jiong, Yang, Xusan, Benson, Oliver\* & Jin, Dayong\*, “Axial Localization and Tracking of Self-interference Nanoparticles by Lateral Point Spread Functions”, 12(1), 1-9. [IF: 12.1] [co-first author, co-corresponding author]
3. *Advanced Materials* (2021) – Chaohao Chen, Baolei Liu, Yongtao Liu, Jiayan Liao, Xuchen Shan, **Fan Wang\*<sup>†</sup>**, and Dayong Jin\*, “Heterochromatic Nonlinear Optical Responses in Upconversion Nanoparticles for Super-resolution Nanoscopy”, vol 33 (23), 2008847. [**published as the front cover**] [IF: 27] [co-corresponding author]
4. *Nature Communication* (2018) – C. Chen<sup>†</sup>, **F. Wang\*<sup>†</sup>**, S. Wen, Q. P. Su, M. C.L. Wu, Y. Liu, B. Wang, D. Li, X. Shan, M. Kianinia, I. Aharonovich, M. Toth, S. P. Jackson, P. Xi and D. Jin\*, "Multi-photon near-infrared emission saturation nanoscopy using upconversion nanoparticles", vol. 9(1), 4, 2018. [co-first author, co-corresponding author]
5. *Light: Science & Applications* (2018) - **F. Wang\***, S. Wen, H. He, B. Wang, Z. Zhou, O. Shimoni, D. Jin\*, "Microscopic inspection and tracking of single upconversion nanoparticles in living cells", vol. 7(4), 18007, 2018, [**published as the front cover**] [first author, co-corresponding author]

### Research support income

- 2023 Natural Science Foundation of Beijing, China, **Fan Wang**, (¥200,000)
- 2022 The Top Young and Middle-aged Innovative Talents of Beihang University, **Fan Wang**, (¥500,000)
- 2022: National Natural Science Foundation of China, **Fan Wang**, (¥590,000)
- 2022: National Natural Science Foundation of China, **Fan Wang**, (¥3,000,000)
- 2022: Discovery Project (DP220101417, ARC), “Laser-free on-chip super-resolution microscopy”, (First Chief Investigator, \$495,000.00)
- 2021: Linkage Infrastructure, Equipment and Facilities (LE210100125, ARC), “National Facility for Infrared Technologies”, 2021-2022, (sixth Chief Investigator, \$837,000.00)
- 2020: Discovery Early Career Researcher Award (DE200100074, ARC), **Fan Wang**, “Nanoscale laser cooling in physiological environment”, 2020-2022, (Chief Investigator, \$418,210).
- 2019: Discovery Projects (DP190101058, ARC), Milos Toth, Igor Aharonovich, Carlo Bradac, **Fan Wang**, “Super-resolution imaging techniques based on van der Waals materials”, 2019-2022, (fourth Chief Investigator, \$397,500).
- 2019: Chancellor's Postdoctoral Research Fellowship (CPDRF, UTS), **Fan Wang**, “Developing new tools for super-resolution tracking cells’ talk within a mini-organ”, 2019-2023 (Chief Investigator, \$450,000).
- 2018: Early Career Researcher Grants Scheme (ECRGS, UTS), **Fan Wang**, “Controlling photons to assemble nanoscale photonic devices”, 2018-May 2019 (Chief Investigator, \$30,000).
- 2017: Capital Expenditure Grant (UTS), Dayong Jin, **Fan Wang**, “Developing bioimaging system”, 2017-2018 (Second Chief Investigator, \$200,000).
- 2017: Capital Expenditure Grant (UTS), Dayong Jin, **Fan Wang**, “Developing super-resolution imaging system”, 2017-2018, (Second Chief Investigator, \$250,000).
- 2016: Macquarie University Research Development Grants (MURDG, MQU), Yong Liu, **Fan Wang**, Lu Yan, Tom Lawson, “Electrically stimulated regeneration of Optic Nerve”, 2016-2017, (Second Chief Investigator, \$39,680).

- 2010: University International Postgraduate Award (UIPA, UNSW), **Fan Wang**, “Optically trapped semiconductor nanowires and nanoparticles”, 2010-July 2013, (Chief Investigator, \$100,000).

### Peer recognition of research: awards and prizes

- iCANX Young Scientist Award 2021
- David Syme research prize 2021.
- ARC Discovery Early Career Researcher Award 2020
- UNSW International Postgraduate Award 2010

### Professional Activities

- I am a reviewer for *Nature Photonics*, *Nature Communications*, *Nano Letters*, *Light: Science & Applications*, *Journal of the American Chemical Society*, *Optica*, *Cell Reports Physical Science*, *Small Methods*, *IEEE Transactions on Medical Imaging*, *Nanoscale*, *Photonics Research*, *APL Photonics*, *Optics Express*, *Biomedical Optics Express*, *Optics Letters*, *The Journal of Physical Chemistry Letters*, *Journal Nano-Structures & Nano-Objects*, *Journal of Raman Spectroscopy journals*, *Journal of Physics and Chemistry of Solids*, *Frontiers in Chemistry section catalysis and Photocatalysis*, *Journal of Physics D Applied Physics*, *Advanced devices and instrumentation*, *ACS Applied Materials & Interfaces*
- Chinese Optical Society, Youth Committee of Biophotonics
- Associate-editor for *Frontiers in Chemistry*
- Guest-editor for *MDPI Photonics*
- Guest-editor for *MDPI Sensors*
- Guest-editor for *European Physical Journal*

### Conference organizer and chair

- I organized the section of Optical Sensors for Chemical and Biological applications for Photonics and Electromagnetics Research Symposium 2021.
- I am on the program committee for the 35th International Conference on the Physics of Semiconductors, Sydney, August 2020
- I chaired a session for the International Conference on Nanoscience and Nanotechnology / International Conference on BioNano Innovation, Brisbane, February 2020
- I chaired a session for the 9th International Conference on Nanophotonics, 2016
- I organised the IBMD Sydney nano seminars in 2018. More than 20 distinguished scientists (including 13 professors) from Australia and internationally presented their work at UTS.

### Invited talks

- Invited presentation for “International Conference on Emerging Advanced Nanomaterials”, Newcastle, Australia, Oct 2022
- **Keynote** presentation for “Mathematic, Physics, Mechanical Electrical and Electronic Engineering Session at the 13th Research Symposium”, Australia, November 2021
- Invited presentation for “Materials Oceania 2021”, Australia, October 2021
- **Keynote** presentation for “OIT21: Optical Systems, Optoelectronic Instruments, Novel Display and Imaging Technology”, China, 2022
- Invited presentation for “Photonics and Electromagnetics Research Symposium”, China, 2022
- Invited presentation for “OSA Technical Groups Webinar”, November 2020
- Invited presentation for “SPIE Optical Engineering + Applications”, August 2020
- Invited presentation for “BioNano Innovation”, June 2020;
- Invited presentation for “International Conference on Nanoscience and Nanotechnology / International Conference on BioNano Innovation”, Brisbane, February 2020;
- **Keynote** presentation for “The International Conference on Nanomaterials & Atomaterials Science and Applications” , Melbourne, February 2020

- Invited presentation “International Conference on Energy and Healthcare Materials”, Sydney, February 2020;
- Invited presentation for “International Conference on Emerging Energy and Environmental Technologies 2019: Young Academic Forum”, Sydney, December 2019;
- Invited presentation for “the International Union of Materials Research Societies – International Conference in Asia”, Perth, September 2019;
- Invited presentation for “International Symposium on Future Materials”, Wollongong, Australia, February 2019
- Invited presentation for “the 9th International Conference on Nanophotonics”, Taiwan, March 2016

### Invited Seminar

- iCANX Talks, 2022
- Peking University, China; December 2019
- Beijing An Zhen Hospital, Affiliated of Capital University of Medical Sciences, China; December 2019
- Hunan University, China; December 2019
- Central South University, China; December 2019
- Swinburne university of technology, Australia; April 2019
- RMIT University, Australia; April 2019
- Consiglio Nazionale delle Ricerche, Istituto Processi Chimico-Fisici, Italy; April 2018
- The Australian National University; September 2017
- CUDOS seminar, University of Sydney, Australia; May 2016
- MQ photonics seminar, Macquarie University, Australia; April 2015
- Beihang University, China; October 2014

### Patents

- Gao, L., **Wang, F.**, Shang, X., Li, S. CN211786462U, 2020-10-27 (Chinese Patent)
- Gao, L., **Wang, F.**, Shang, X., Li, S. CN211786516U, 2020-10-27 (Chinese Patent)
- **Wang, F.**, Jin, D. & Chen, C. WO2020028942A1, 2020-02-13 (PCT, World Patent)
- Chen, C., Jin, D. & **Wang, F.** AU2018902855A0, 2018-08-16 (Australian Patent)

### Outreach activities, e.g. public events, media

- I run my own YouTube channel, introducing my research and short lectures to the public. My short video introducing biophotonics has been watched 373 times since November 2019 and an open lecture on upconversion nanoparticles has been watched 484 times since January 2021.
- I have appeared in diverse online media news: *Global Times, EurekAlert, Florida News Times, Worlds News Network, Australian Online News, Bollyinside, Scimex, Sciencedaily, Phys.org, Nanowerk, Lab+Life Scientist, UTS Newsroom, The Imaging wire, Doctorportal, Twitter and WeChat* media
- Since 2017 I have represented my school and institute at the UTS open day to explain STEM to students and parents.
- Media appearances including Sydney radio station 2GB 873AM about a new world record of imaging resolution through thick biological tissue, and a video interview by Xinhua Net about a breakthrough that overcame a fundamental issue that has limited biophotonics technologies for more than 20 years.
- Outreach to industry has resulted in:
  - Designing portable single particle characterization system for LightLife
  - Designing on-road imaging system for Industrial Monitoring & Control Pty Ltd
  - Designing augmented reality integrated motor helmet for Heads Up Safety Systems Pty Ltd
  - Characterising the optical transmission efficiency of the detection tip in a cervical cancer screening device for Truscreen
  - Designing light diffusers in an air cleaner for Design+Industry

### Teaching experience

Lecturer

- Advanced Optics, 19113105, 2023, Beihang University
- Optics, B3I192320, 2022, Beihang University

- Electronics and Circuits, 48520, 2020-2021, UTS
- Medical Imaging Technology (Endoscopy), 68202, 2017, UTS
- Medical Imaging (Endoscopy), 91403, 2017, UTS
- Medical Devices and Diagnostics (Biophotonics I; Biophotonics II), 91705, 2017, UTS
- Nanophotonics (Plasmonic waveguides and resonators), 68513, 2018, UTS
- Advanced Nanomaterials (Module 3: Optical tweezers), 68002, 2019, UTS

Laboratory demonstrator / Teaching assistant

- Optoelectronics Laboratory I, PHYS 9761, Semester 1 2010, UNSW
- Optoelectronics Laboratory II, PHYS 9762, Semester 2 2010, UNSW
- Brave New World, GENS4015, Semester 1 2011, UNSW
- Laser and Spectroscopy Laboratory, PHYS3770, Semester 1 2010-2013, UNSW
- Photonics Laboratory, PHYS3780, Semester 2 2010-2013, UNSW
- Foundations of Physics, 68101, 2019, UTS
- Physics in Action, 68201, 2019, UTS

Research internship

- 3<sup>rd</sup>-year students
- Capstone project

### Other professional activities

Under my co-supervision, three honours students (UNSW) and one master student (the University of Sydney) completed their degrees in the field of optical trapping; one co-supervised PhD student completed his degree in the field of photonics application of upconversion nanoparticles; and one co-supervised PhD student completed his degree in the field of optimizing upconversion nanoparticles for nanoscale barcoding. I am currently a principal supervisor of four PhD students in the field of super-resolution imaging and optical tweezers. Under my supervision, my student obtained a *Prizmatix Young Investigator Award* in SPIE Photonics West 2019. I am also a co-supervisor of one PhD student in the field of optical characterisation of nanoparticles, and one PhD student on UV enhanced nanoparticles. Under my supervision, my PhD students Yongtao Liu and Baolei Liu were the winners of UTS 2020 HDR Student Paper of the Month.

### Refereed Journal Articles

#### *Leading author works*

1. *Optics Express* (2023) –D Wang, B Liu, J Song, Y Wang, X Shan, X Zhong, F Wang, " Dual-mode adaptive-SVD ghost imaging", vol. 31 (9), 14225-14239. [IF: 3.4].
2. *Advanced Optcal Materials* (2022) – Jianfeng Zhu, Yang Yang\*, **Fan Wang\***, Jiexin Lai, Mengze Li, “3-D Printed Spin-Decoupled Transmissive Metasurfaces Based on Versatile Broadband Cross-Polarization Rotation Meta-Atom”, accepted. [IF:10.1] [**published as a cover paper**]
3. *Nano Letters* (2022) - Chao hao Chen, Lei Ding, Baolei Liu\*, Ziqing Du, Yongtao Liu, Xiangjun Di, Xuchen Shan, Chenxiao Lin, Min Zhang, Xiaoxue Xu, Xiaolan Zhong, Jianfeng Wang, Lingqian Chang, Benjamin Halkon, Xin Chen, Faliang Cheng\*, and **Fan Wang\***, " Exploiting Dynamic Nonlinearity in Upconversion Nanoparticles for Super-Resolution Imaging", 22, 17, 7136–7143. [IF: 12.1]
4. *Advanced Science* (2022) – Lei Ding, Xuchen Shan, Dejiang Wang, Baolei Liu \*, Ziqing Du, Xiangjun Di, Chao hao Chen \*, Mahnaz Maddahfar, Ling Zhang, Yuzhi Shi, Peter Reece, Ben J. Halkon, Igor Aharonovich, Xiaoxue Xu \*, **Fan Wang\***, “Lanthanide ion resonance-driven Rayleigh scattering of nanoparticles for dual-modality interferometric scattering microscopy”, *accepted*. [IF: 17.521] [**published as a cover paper**]
5. *Frontiers in Chemistry* (2021) – **Wang Fan\***, Yang Xusan\*, Zhan Qiuqiang\*, Nandi Chayan K\*, “Recent Advances in Fluorescent Probes for Super-Resolution Microscopy”, vol. 9:698531. [IF: 5.221]
6. *Nanoscale Advances* (2021) – Baolei Liu, Jiayan Liao, Yiliao Song, Chao hao Chen, Lei Ding, Jie Lu, Jiajia Zhou\*, **Fan Wang\***, “Multiplexed structured illumination super-resolution imaging with lifetime-engineered upconversion nanoparticles”, *accepted*, [IF: 4.38]. [**published as the front cover**]

7. *IEEE Photonics Journal* (2021) – Baolei Liu, **Wang, Fan\***, Chaohao Chen, David McGloin\*, “Single-Pixel Diffuser Camera”, vol.13, 6, 7800205. [IF: 2.443]
8. *Optica* (2021) – Baolei Liu, **Wang, Fan\***, Chaohao Chen, Fei Dong, David McGloin\*, “Self-evolving ghost imaging”, vol. 8, 10, 1340-1349. [IF: 11.1]
9. *Nature Nanotechnology* (2021) – Shan, Xuchen<sup>†</sup>, **Wang, Fan\***<sup>†</sup>, Wang, Dejiang, Wen, Shihui, Chen, Chaohao, Di, Xiangjun, Nie, Peng, Liao, Jiayan, Liu, Yongtao, Ding, Lei, Reece, Peter\* and Jin, Dayong\*, “Optical tweezers beyond refractive index mismatch using highly doped nanoparticles”, vol 16 (5), 531-537. [IF: 31.5]
10. *Nature Communication* (2021) – Liu, Yongtao<sup>†</sup>, Zhou, Zhiguang<sup>†</sup>, **Wang, Fan\***<sup>†</sup>, Kewes, Günter, Wen, Shihui, Burger, Sven, Wakiani, Majid Ebrahimi, Xi, Peng, Yang, Jiong, Yang, Xusan, Benson, Oliver\* & Jin, Dayong\*, “Axial Localization and Tracking of Self-interference Nanoparticles by Lateral Point Spread Functions”, 12(1), 1-9. [IF: 12.1]
11. *Advanced Materials* (2021) – Chaohao Chen, Baolei Liu, Yongtao Liu, Jiayan Liao, Xuchen Shan, **Fan Wang\***, and Dayong Jin\*, “Heterochromatic Nonlinear Optical Responses in Upconversion Nanoparticles for Super-resolution Nanoscopy”, vol 33 (23), 2008847. [IF: 27]
12. *Nanoscale* (2020) –L. Gao, X. Shan, X. Xu, Y. Liu, B. Liu, S. Li, S. Wen, C. Ma, D. Jin, and **F. Wang\***, “Video-rate upconversion display from optimized lanthanide ion doped upconversion nanoparticles”, 2020,12, 18595-18599. [published as a cover paper]
13. *Nano Letters* (2020) – B. Liu, C. Chen, X. Di, J. Liao, S. Wen, Q.P. Su, X. Shan, Z.Q. Xu, L.A. Ju, C. Mi, **F. Wang\***, and D. Jin\*, “Upconversion Nonlinear Structured Illumination Microscopy”, 20, 7, 4775–4781. [published as a cover paper]
14. *Small* (2020) – Y. Liu, **F. Wang\***, H. Lu, S. Wen, C. Chen, X. Shan, G. Fang, M. Stenzel and D. Jin, “Super-resolution mapping of single nanoparticles inside spheroids”, 16 (6), 1905572. [IF: 10.856; published as a cover paper]
15. *APL Photonics* (2019) –X.X. Xu, Z. Zhou, Y. Liu, S. Wen, Z. Guo, L. Gao and **F. Wang\***, “Optimizing passivation shell thickness of single upconversion nanoparticles using a time-resolved spectrometer”, vol. 4, 026104, 2019.
16. *Nanoscale* (2019) –X. Yuan\*, L. Li, Z. Li, **F. Wang\***, N. Wang, L. Fu, J. He, H.H. Tan and C. Jagadish, “Unexpected Benefits of Stacking Faults on the Electronic Structure and Optical Emission in Wurtzite GaAs/GaInP Core/Shell Nanowires”, in press. [IF: 7.2]
17. *Nature Communication* (2018) – C. Chen<sup>†</sup>, **F. Wang\***<sup>†</sup>, S. Wen, Q. P. Su, M. C.L. Wu, Y. Liu, B. Wang, D. Li, X. Shan, M. Kianinia, I. Aharonovich, M. Toth, S. P. Jackson, P. Xi and D. Jin, “Multi-photon near-infrared emission saturation nanoscopy using upconversion nanoparticles”, vol. 9(1), 4, 2018. [IF: 12.1]
18. *Light: Science & Applications* (2018) - **F. Wang\***, S. Wen, H. He, B. Wang, Z. Zhou, O. Shimoni, D. Jin\*, “Microscopic inspection and tracking of single upconversion nanoparticles in living cells”, vol. 7(4), 18007, 2018, [IF: 14.1, citation:11; ranked 3/92 in Optics, published by Nature publication group; published as the front cover]
19. *Nano Letters* (2017) - C. Ma, X. Xu\*, **F. Wang\***, Z. Zhou, D. Liu, J. Zhao, M. Guan, C. I. Lang and D. Jin\*, “Optimal Sensitizer Concentration in Single Upconversion Nanocrystals”, vol. 17(5), pp.2858-2864, 2017, (IF: 12.1)
20. *Nano Letters* (2015) - **F. Wang\***, Q. Gao, K. Peng, Y. Guo, Z. Li, L. Fu, L.M. Smith, H. H. Tan and C. Jagadish, "Spatially Resolved Doping Concentration and Nonradiative Lifetime Profiles in Single Si-Doped InP Nanowires Using Photoluminescence Mapping", vol. 15, pp.3017-3023, 2015. [IF: 12.1]
21. *Nano Letters* (2013) - **F. Wang**, W. J. Toe, W. M. Lee, D. McGloin, M. Gao, H. H. Tan, C. Jagadish and P.J. Reece\*, "Resolving Stable Axial Trapping Points of Nanowires in an Optical Tweezers using Photoluminescence Mapping", vol. 13, pp.1185-1191, 2013. [IF: 12.1]
22. *Nano Letters* (2011) - **F. Wang**, P. J. Reece\*, S. Paiman, M. Gao, H. H. Tan and C. Jagadish, "Nonlinear Optical Processes in Optically Trapped InP Nanowires", vol. 11, pp.4149-4153, 2011. [IF: 12.1]

#### **Collaborative works**

23. *Optics Express* (2023) –Jiaqi Song, Baolei Liu, Xuchen Shan, **Fan Wang**, and Xiaolan Zhong, " Multi-functional dual-path self-aligned polarization interference lithography", vol. 31 (11), 17629-17644. [IF: 3.4].



24. *Journal of Physics: Photonics* (2023) –Giovanni Volpe, Onofrio M. Maragò, Halina Rubinzstein-Dunlop, Giuseppe Pesce, Alexander B. Stilgoe, Giorgio Volpe, Georgiy Tkachenko, Viet Giang Truong, Síle Nic Chormaic, Fatemeh Kalantarifard, Parviz Elahi, Mikael Käll, Agnese Callegari, Manuel I. Marqués, Antonio A. R. Neves, Wendel L. Moreira, Adriana Fontes, Carlos L. Cesar, Rosalba Saija, Abir SaidiPaul Beck, Jörg S. Eismann, Peter Banzer, Thales F. D. Fernandes, Francesco Pedaci, Warwick P. Bowen, Rahul Vaippully, Muruga Lokesh, Basudev Roy, Gregor Thalhammer-Thurner, Monika Ritsch-Marte, Laura Pérez García, Alejandro V. Arzola, Isaac Pérez Castillo, Aykut Argun, Till M. Muenker, Bart E. Vos, Timo Betz, Ilaria Cristiani, Paolo Minzioni, Peter J. Reece, **Fan Wang**, David McGloin, Justus C. Ndukaife, Romain Quidant, Reece P. Roberts, Cyril Laplane, Thomas Volz, Reuven Gordon, Dag Hanstorp, Javier Tello Marmolejo, Graham D. Bruce, Kishan Dholakia, Tongcang Li, Oto Brzobohatý, Stephen H. Simpson, Pavel Zemánek, Felix Ritort, Yael Roichman, Valeriia Bobkova, Raphael Wittkowski, Cornelia Denz, G. V. Pavan Kumar, Antonino Foti, Maria Grazia Donato, Pietro G. Gucciardi, Lucia Gardini, Giulio Bianchi, Anatolii V. Kashchuk, Marco Capitanio, Lynn Paterson, Philip H. Jones, Kirstine Berg-Sørensen, Younes F. Barooji, Lene B. Oddershede, Pegah Pouladian, Daryl Preece, Caroline Beck Adiels, Anna Chiara De Luca, Alessandro Magazzù, David Bronte Ciriza, Maria Antonia Iatì, Grover A. Swartzlander, “Roadmap for optical tweezers”, vol. 5 (2), 022501.
25. *JOSA B*. (2023) – Ling Zhang, Anna Szmalenberg, Kevin Cook, Baolei Liu, Lei Ding, **Fan Wang**, David McGloin\*. “Trapped aerosol sizes under fiber-based counterpropagation optical trapping”. 2023, 40 (2), 460-468.
26. *Phys. Rev. Lett.* (2022) – Shi, Y.; Zhu, T.; Liu, A. Q.; Zhou, L.-M.; Nieto-Vesperinas, M.; Hassanfiroozi, A.; Liu, J.; Tsai, D. P.; Li, Z.; Ding, W.; **Wang, F.**; Li, H.; Song, Q.; Xu, X.; Li, B.; Cheng, X.; Wu, P. C.; Chan, C. T.; Qiu, C.-W. “Inverse Optical Torques on Dielectric Nanoparticles in Elliptically Polarized Light Waves”. 2022, 129 (5), 53902. <https://doi.org/10.1103/PhysRevLett.129.053902>.
27. *Laser & Photonics Reviews* (2022) – Shi, Y., Wu, Y., Chin, L. K., Li, Z., Liu, J., Chen, M. K., Wang, S., Zhang, Y., Liu, P. Y., Zhou, X., Cai, H., Jin, W., Yu, Y., Yu, R., Huang, W., Yap, P. H., Xiao, L., Ser, W., Nguyen, T. T. B., Lin, Y.-T., Wu, P. C., Liao, J., **Wang, F.**, Chan, C. T., Kivshar, Y., Tsai, D. P., Liu, A. Q., “Multifunctional Virus Manipulation with Large-Scale Arrays of All-Dielectric Resonant Nanocavities”. 2022, 16, 2100197. <https://doi.org/10.1002/lpor.202100197>
28. *The European Physical Journal Special Topics* (2022) – Rajesh V. Nair\*, **Fan Wang**, Xusan Yang, Chennupati Jagadish, “Photonic materials: from fundamentals to applications”, online. [IF: 2.707]
29. *Frontiers in Physics* (2022) – Wang Haoqing, Guo Yuze, Zou Ran, Hu Huiqian, Wang Yao, **Wang Fan**, Ju Lining Arnold\*, “Recent Advances of Optical Tweezers–Based Dynamic Force Spectroscopy and Mechanical Measurement Assays for Live-Cell Mechanobiology”, vol. 10, 96. [IF: 3.56]
30. *Nanoscale* (2022) – Li Ziyuan\*, Li Li, **Wang Fan**, Xu Lei, Gao Qian, Alabadla Ahmed, Peng Kun, Vora Kaushal, Hattori Haroldo T., Tan Hark Hoe, Jagadish Chennupati, Fu Lan\*, “Investigation of light-matter interaction in single vertical nanowires in ordered nanowire arrays”, 14(9), 3527-3536. [IF: 7.79]
31. *The Journal of Physical Chemistry Letters* (2022) – Shihui Wen\*, Du Li, Yongtao Liu, Chaohao Chen, **Fan Wang**, Jiajia Zhou, Guochen Bao, Le Zhang, and Dayong Jin, “Power-Dependent Optimal Concentrations of Tm<sup>3+</sup> and Yb<sup>3+</sup> in Upconversion Nanoparticles”, 13, 23, 5316–5323. [IF: 6.475]
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