

# Yue Zhang

Ph.D student at Institute of Semiconductors, Chinese Academy of Sciences

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## Education

**Institute of Semiconductors, Chinese Academy of Sciences & University of Chinese**

**Academy of Sciences**

PhD in Physical Electronics

Sep. 2018 - Jun. 2023 (expected)

**University of Chinese Academy of Sciences**

Minor in Computer Science

Sep. 2018 - Jun. 2019

**Nankai University**

BSc-Honours in Physics

Sep. 2014 - Jun. 2018

## Technical Skills

**Programming**

C++, Python, OpenCV, Linux, PyTorch, Web development

**Professional Softwares**

MATLAB, Zemax

**Other**

Hardware development

## Publications

- [1] **Zhang, Y.**, Wang, X., Lei, P., Wang, S., Yang, Y., Sun, L. and Zhou, Y., "Smart vector-inspired optical vision guiding method for autonomous underwater vehicle docking and formation," *Opt. Lett.*, 47(11), 2919 (2022).
- [2] **Zhang, Y.**, Wang, X. and Zhou, Y., "Monte-Carlo simulation for range intensity profile of underwater range gated imaging," *Eighth Symposium on Novel Photoelectronic Detection Technology and Applications 12169*, 2739–2747, SPIE (2022).
- [3] Wang, M., Wang, X., **Zhang, Y.**, Sun, L., Lei, P., Yang, Y., Chen, J., He, J. and Zhou, Y., "Range-intensity-profile prior dehazing method for underwater range-gated imaging," *Opt. Express*, 29(5), 7630 (2021).
- [4] Wang Xinwei, Sun Liang, Lei Pingshun, Chen Jianan, Yang Yuqing, **Zhang Yue**, Zhong Xin, He Jun, Wang Minmin and Zhou Yan., "Underwater light ranging and imaging for macro marine life in-situ observation and measurement," *Infrared and Laser Engineering*, 29(5), 7630 (2021).
- [5] He, X.-L., Weng, X.-J., **Zhang, Y.**, Zhao, Z., Wang, Z., Xu, B., Oganov, A. R., Tian, Y., Zhou, X.-F. and Wang, H.-T., "Two-dimensional boron on Pb (1 1 0) surface," *FlatChem*, 7, 34–41 (2018).
- [6] **Zhang, Y.**, Wang X., Lei, P., Zhou, Y., "An underwater optical fairing," *Chinese Patent*, CN113071636A (2021).
- [7] Wang X., Wang, S., **Zhang, Y.**, Lei, P., Zhou, Y., "Underwater vector-inspired optical vision guidance method and device," *Chinese Patent*, CN111498070A (2021).

## Research & Engineering Projects

**Smart underwater vector-inspired optical vision guiding method**

Design, simulation, and algorithm

*Beijing, China*

Aug. 202x - Jan. 2021

**Monte-Carlo simulation of underwater range-gated imaging**

Modeling, programming, system parameter optimization

*Beijing, China*

Jul. 2019 - Jun. 2021

**Underwater low resistance optical fairing**

Zemax optical design, imaging performance simulation

*Beijing, China*

Apr. 2021 - Jul. 2021

**Underwater color image enhancement**

Dataset acquisition, algorithm and training

*Beijing, China*

Jan. 2021 - Now

**Underwater fishing net detection**

Algorithm design, dataset collection and annotation, model training and deployment

*Beijing, China*

Sept. 2020 - May. 2021

## Awards and Honors

2014-2022

**Scholarship:** Different scholarships for 8 times

*NKU, CAS*

Jun. 2019

**Contest:** First Prize in SeeLight Optical System Simulation Competition of UCAS

*UCAS*

Jun. 2018

**Honor:** Excellent Graduate of Nankai University

*NKU*

Apr. 2016

**Contest:** 12th place in the 8th International Physicists Tournament (Team)

*Paris*

Apr. 2015

**Contest:** Second Prize in Tianjin Undergraduate Students Mathematics Contest

*Tianjin*