Zhenghao Yin

Takeuchi-lab, Departments of Electronic Science and Engineering,
Graduate School of Engineering, Kyoto University
A1-211, Kyoto University Katsura, Nishikyo-ku, Kyoto, 615-8510, JAPAN
E-mail: yin.zhenghao.77w@st.kyoto-u.ac.jp Tel: (+81)-075-383-2289

EDUCATION and DEGREES

- ***M.Eng. in electronics***
  Department of Electronic Science and Engineering, Graduate School of Engineering, Kyoto University, Japan
  2017/10 – 2020/03
- ***B.S. in Physics***
  Department of Physics, School of Physics, Nanjing University, China
  2013/09 – 2017/06

SKILLS

- ***Integrated photonic device simulation***
  Using commercial software and open source package to evaluate optical device properties, especially waveguide dispersion
- ***Nano fabrication of silicon and silicon nitride material***
  Fully experience on film deposition, lithography and selective dry etching
- ***Optical experiments, especially concerning in-line fiber components***
  Able to realize automatic operation and run-time data acquisition using NI LabVIEW instrumental communication
- ***Numerical computation and data processing***
  professional on python-based data processing and advanced Scipy packages

Research Experience

- ***Broadband frequency entangled photon generation using silicon nitride ring cavities***

  with Prof. Shigeki Takeuchi, 2017/10 – Present, Kyoto University, Japan
  We are collaborating with Yokoyama Lab at Kyushu University, and focusing on realization of on-chip high-intensity broadband entangled photon sources based on SiNx and other material platforms.
  - study of phase matching condition for entangled photon source
  - optical device nano-fabrication, especially high quality factor micro-ring resonators
  - realization of long-time stable frequency-correlated photon pairs broadband
- ***Integrated quantum photonics***

with Prof. Xiaosong Ma 2015/09 – 2017/06, Nanjing University, China

My initial research interest in MaLab was QKD and Bell states measurement and finally turned into the integration of quantum optical devices.

- nano-fabrication based on commercial SOI/SiNOI wafers
- demonstration and automation of the integration photonics test system

CONFERENCE PRESENTATIONS

- **Conference Proceedings**
  1. Z. Yin, K. Sugiura, et al. Design and fabrication of a silicon nitride ring resonator for on-chip broadband entangled photon sources. in The 80th JSAP Autumn Meeting 2019, JSAP-OSA Joint Symposia (2019).
  2. K. Sugiura, Z. Yin, et al. On-chip broadband entangled photon sources using HICDG and SiN waveguide devices (poster). in EU-USA-Japan International Symposium on Quantum Technology (2019).
- **Journal Articles**
  1. K. Sugiura, Z. Yin, et al. Broadband generation of photon-pairs from a CMOS compatible device. (in submission)

FUNDING and ACADEMIC AWARDS

- **Second Prize**

  among the participating instruments of National Seminar for Demonstrative Physics awarded by Committee of Physics Teaching in Department of Higher Education of Ministry of Education, 2015/10, Suzhou, China

REFERENCES

- Shigeki TAKEUCHI
  takeuchi@kuee.kyoto-u.ac.jp
  Vice Dean, Graduate School of Engineering Professor, Department of Electronic Science and Engineering Kyoto University
- Takashi ASANO
  tasano@qoe.kuee.kyoto-u.ac.jp
  Associate Professor, Department of Electronic Science and Engineering Kyoto University