

# Ryota Kabe, Ph.D.

---

Assistant Professor (PI)

Organic Optoelectronics Unit

Okinawa Institute of Science and Technology Graduate University (OIST)

1919-1 Tancha, Onna-son, Okinawa, 904-0495 Japan

TEL:(+81)98-966-1589

HP: <https://www.oist.jp/research/research-units/ouu>

E-mail: [ryota.kabe@oist.jp](mailto:ryota.kabe@oist.jp)

Dr. Ryota Kabe is an Assistant Professor at the Okinawa Institute of Science and Technology Graduate University (OIST), where he leads the Organic Optoelectronics Unit. He obtained his Bachelor degree from Kansai University (2005), Master degree from Osaka University (2007), and Ph.D. from Kyushu University (2010). Dr. Kabe's postdoctoral research included positions at Bowling Green State University (2010–2011), the Max Planck Institute for Polymer Research (2011–2012), and Kyushu University (2012–2014). He then served as an Assistant Professor at Kyushu University, collaborating with Prof. Chihaya Adachi from 2014 to 2019. In 2019, he joined OIST to advance research in organic optoelectronics. His research focuses on the design and synthesis of novel organic materials, the manipulation of organic exciton dynamics, and their implementation in next-generation optoelectronic devices.

---

## Research Experience

---

Aug 2019 – Present	Assistant Professor (PI) of OIST
Feb 2014 – Sep 2019	Assistant Professor of Kyushu University (Prof. C. Adachi Group)
Feb 2014 – Sep 2019	Group Reader of JST ERATO Adachi Molecular Exciton Engineering Project
Apr 2011 – Jan 2014	Research fellow of the Japan Society for the Promotion of Science (JSPS) (Prof. C. Adachi Group)
Apr 2011 – Aug 2012	Postdoctoral research fellow of Max Planck Institute for Polymer Research (Prof. K. Müllen Group)
Apr 2010 – Mar 2011	Postdoctoral research fellow of Bowling Green State University (Prof. P. Anzenbacher, Jr. Group)
Jul 2009 – Nov 2009	Visiting scholar of University of Southern California (Prof. M. E. Thompson Group)
Apr 2008 – Mar 2010	Research fellow of the Japan Society for the Promotion of Science (JSPS) (Prof. S. Ogo Group)

---

## Education

---

2007 – 2010	Ph.D. Department of Chemistry and Biochemistry, Kyushu University Supervisor: Prof. Seiji Ogo and Prof. Chihaya Adachi
2005 – 2007	M.D. Department of Material and Life Science, Osaka University Supervisor: Prof. Shunichi Fukuzumi and Prof. Seiji Ogo
2001 – 2005	B.A. Department of Applied Chemistry, Kansai University Supervisor: Prof. Osamu Yamauchi

---

## Awards

---

- Nanoscale Emerging Investigators (Royal Society of Chemistry), 2021
  - The Young Scientists' Prize, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology (MEXT), Japan, 2019
- 

## Selected Publications

---

[17] Lin Z, Li M, Yoshioka R, Oyama R, Kabe R\*.

Oxygen-Tolerant Near-Infrared Organic Long-Persistent Luminescent Copolymers.

**Angew. Chem. Int. Ed.** e202314500 (2023) <https://doi.org/10.1002/anie.202314500>.

[16] Jinnai, K., Kabe, R.\*, Lin, Z., Adachi, C.\*

Organic long-persistent luminescence stimulated by visible light in p-type systems based on organic photoredox catalyst dopants.

**Nat. Mater.** 21, 338–344 (2022) [DOI:10.1038/s41563-021-01150-9](https://doi.org/10.1038/s41563-021-01150-9)

[15] Sakurai, M., Kabe, R.\*, Fuki, M., Lin, Z., Jinnai, K., Kobori, Y., Adachi, C., Tachikawa, T.\*

Organic photostimulated luminescence associated with persistent spin-correlated radical pairs

**Commun. Mater.** 2, 74 (2021) [DOI:10.1038/s43246-021-00178-3](https://doi.org/10.1038/s43246-021-00178-3)

[14] Tan, S., Jinnai, K., Kabe, R.\*, Adachi, C.\*

Long-persistent luminescence from an exciplex-based organic light-emitting diode

**Adv. Mater.** 2008844 (2021) [DOI:10.1002/adma.202008844](https://doi.org/10.1002/adma.202008844)

[13] Jinnai, K., Nishimura, N., Adachi, C.\*, Kabe, R.\*

Thermally activated processes in an organic long-persistent luminescence system

**Nanoscale** 13, 8412–8417 (2021) [DOI:10.1039/D0NR09227D](https://doi.org/10.1039/D0NR09227D) [[Nanoscale Emerging Investigators 2021](#)]

[12] Nishimura, N., Lin, Z., Jinnai, K., Kabe, R.\*, Adachi, C.\*

Many exciplex systems exhibit organic long-persistent luminescence

**Adv. Funct. Mater.** 30, 2000795 (2020). [DOI:10.1002/adfm.202000795](https://doi.org/10.1002/adfm.202000795) [[Inside front cover](#)]

[11] Lin, Z., Kabe, R.\*, Wang, K., Adachi, C.\*

Influence of energy gap between charge-transfer and locally excited states on organic long persistence

luminescence

**Nat. Commun.** *11*, 191 (2020). [DOI:10.1038/s41467-019-14035-y](https://doi.org/10.1038/s41467-019-14035-y)

[10] Lin, Z., [Kabe, R.\\*](#), Nishimura, N., Jinnai, K., Adachi, C.\*

Organic long-persistent luminescence from a flexible and transparent doped polymer

**Adv. Mater.** *30*, 1803713 (2018). [DOI:10.1002/adma.201803713](https://doi.org/10.1002/adma.201803713) [[Frontispiece](#)]

[9] Jinnai, K., [Kabe, R.\\*](#), Adachi, C.\*

Wide-range tuning and enhancement of organic long-persistent luminescence using emitter dopants

**Adv. Mater.** *30*, 1800365 (2018). [DOI:10.1002/adma.201800365](https://doi.org/10.1002/adma.201800365) [[Frontispiece](#)]

[8] [Kabe, R.\\*](#), Adachi, C.\*

Organic long persistent luminescence

**Nature** *550*, 384–387 (2017). [DOI:10.1038/nature24010](https://doi.org/10.1038/nature24010)

[7] Notsuka, N., [Kabe, R.\\*](#), Goushi, K., Adachi, C.\*

Confinement of long-lived triplet excitons in organic semiconducting host-guest systems

**Adv. Funct. Mater.** *27*, 1703902 (2017). [DOI:10.1002/adfm.201703902](https://doi.org/10.1002/adfm.201703902) [[Back Cover](#)]

[6] Mieno, H., [Kabe, R.\\*](#), Notsuka, N., Allendorf, M.D., Adachi, C.\*

Long-lived room-temperature phosphorescence of coronene in zeolitic imidazolate framework ZIF-8

**Adv. Opt. Mater.** *4*, 1015–1021 (2016). [DOI:10.1002/adom.201600103](https://doi.org/10.1002/adom.201600103)

[5] [Kabe, R.](#), Notsuka, N., Yoshida, K., Adachi, C.\*

Afterglow organic light-emitting diode

**Adv. Mater.** *28*, 655–660 (2016). [DOI:10.1002/adma.201504321](https://doi.org/10.1002/adma.201504321)

[4] [Kabe, R.](#), Feng, X.\*, Adachi, C.\*, Müllen, K.\*

Exfoliation of graphite into graphene in polar solvents mediated by amphiphilic hexa-peri-hexabenzocoronene

**Chem. - An Asian J.** *9*, 3125–3129 (2014). [DOI:10.1002/asia.201402535](https://doi.org/10.1002/asia.201402535)

[3] [Kabe, R.](#), Lynch, V.M., Anzenbacher Jr., P.\*

Enhanced phosphorescence in dibenzophosphole chalcogenide mixed crystal

**CrystEngComm.** *13*, 5423 (2011). [DOI:10.1039/c1ce05388d](https://doi.org/10.1039/c1ce05388d)

[2] [Kabe, R.](#), Nakanotani, H., Sakanoue, T., Yahiro, M., Adachi, C.\*

Effect of molecular morphology on amplified spontaneous emission of bis-styrylbenzene derivatives

**Adv. Mater.** *21*, 4034–4038 (2009). [DOI:10.1002/adma.200803588](https://doi.org/10.1002/adma.200803588)

[1] Ogo, S.\*, [Kabe, R.](#), Uehara, K., Kure, B., Nishimura, T., Menon, S.C., Harada, R., Fukuzumi, S., Higuchi, Y., Ohhara, T., Tamada, T., Kuroki, R.

A Dinuclear Ni( $\mu$ -H)Ru Complex Derived from H<sub>2</sub>

**Science** *316*, 585–587 (2007). [DOI:10.1126/science.1138751](https://doi.org/10.1126/science.1138751)