

**Chandu G Krishnan**

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DOB. 25.06.1995

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Nationality: India

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Education:

Integrated BS-MS (2014-2019): IISER Thiruvananthapuram, Kerala, India (Thesis Advisor: Dr. Ramesh Rasappan)

Ph.D. (2019-2022): Osaka University, Japan (Thesis Advisor: Prof. Hiroaki Sasai, Supervisors: Prof. Takayoshi Suzuki, Prof. Shinobu Takizawa)

Research Experience:

- March 2017-2019: Asymmetric transition metal catalyzed cross coupling reactions. Supervisor: Dr. Ramesh Rasappan, Department of Organic Chemistry, Indian Institute of Science Education and Research, Trivandrum, India)
- 2019- 2022: Asymmetric photoswitchable catalysis. Supervisor: Prof. Hiroaki Sasai, Prof. Shinobu Takizawa)

Honors and Awards

- (2019-2022) MEXT Research Fellow, Osaka University, Japan (Advisor: Prof. Takayoshi Suzuki)
- Received the Student Excellence Presentation Award (oral presentation) at the 142nd Annual Meeting of the Pharmaceutical Society of Japan (Nagoya).
- Qualified Graduate Aptitude Test in Engineering (GATE 2019)
- (2014- 2019) Inspire Fellow (Second most prestigious award for undergraduate students in India), IISER TVM, Kerala, India. (Advisor: Dr. Ramesh Rasappan)

Research Interests

My research interest aims to discover novel molecular motors, photocatalysts, transition metal as well as organocatalyst based photoresponsive asymmetric catalysts. I am particularly interested to learn and explore computational techniques as well as machine learning techniques to develop novel catalyst designs for creating innovative new methodologies for controlling the catalyst functions.

Publications:

1. Photoswitchable Chiral Cation-Binding Catalyst: Photocontrol of Catalytic Activity on Enantioselective Amino Acid Synthesis.

Chandu G. Krishnan, Masaru Kondo, Kento Nakamura, Hiroaki Sasai, and Shinobu Takizawa. *Org. Lett.*, **2022**, 24, 14, 2670–2674.

2. Light driven pK_a modular Approach to Enantioselective Aza-Friedel–Crafts Reaction.

Chandu G. Krishnan, Masaru Kondo, Osamu Yasuda, Kento Nakamura, Hiroaki Sasai, and Shinobu Takizawa. (*Manuscript in preparation*)

3. Photoswitchable Chiral Phase Transfer Catalyst”, Masaru Kondo, Kento Nakamura, **Chandu G. Krishnan**, Shinobu Takizawa, Hiroaki Sasai.

ACS Catal., **2021**, 11, 3, 1863–1867.

4. Azopyridine-based chiral oxazolines with rare-earth metals for photoswitchable catalysis. Masaru Kondo, Kento Nakamura, **Chandu G. Krishnan**, Shinobu Takizawa, Hiroaki Sasai.

Chemical Communications, **2021**, 57 (60), 7414-7417.

5. A Free-Radical Reduction and Cyclization of Alkyl Halides Mediated by FeCl₂.

Feba Thomas Pulikottil, Ramadevi Pilli, Vetrivelan Murugesan, **Chandu G. Krishnan**, Ramesh Rasappan.

ChemCatChem, **2019**, 11, 2438–2442.

Conference contributions

International Conference

1) “Molecular Chirality Asia 2020 Title: Photoswitchable Chiral Phase Transfer Catalyst • **Chandu G. Krishnan** (First author), Masaru Kondo, Kento Nakamura, Shinobu Takizawa, Tsukasa Abe, Hiroaki Sasai.

2) 10th JACI 2021 Title; Photoswitchable Chiral Cation Binding Catalyst. **Chandu G. Krishnan** (First author), Masaru Kondo, Kento Nakamura, Shinobu Takizawa, Tsukasa Abe, Hiroaki Sasai.

3) PSJ conference, Nagoya, Japan, 2022. 142nd Annual Meeting of the Pharmaceutical Society of Japan (Nagoya). Title; Photoswitchable Chiral Cation Binding Catalyst. **Chandu G. Krishnan** (First author), Masaru Kondo, Kento Nakamura, Shinobu Takizawa, Tsukasa Abe, Hiroaki Sasai.