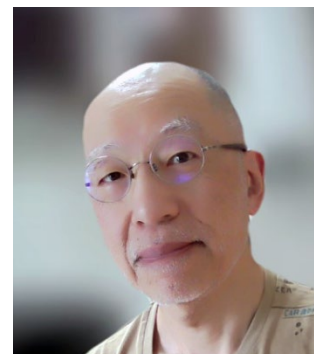


# Bunsho Ohtani

## Summary:

The research work on photocatalysis by Professor Ohtani started in 1981 when he was a Ph. D. course student in Kyoto University. Since then he has been studying photocatalysis and related topics for more than 40 years and published more than 350 original papers (h-index: 78) and two single-author books. After gaining his Ph. D. degree from Kyoto University in 1985, he became an assistant professor in the university. In 1996, he was promoted to an associate professor in Division of Chemistry, Graduate School of Science, Hokkaido University and was then awarded a full professor position in the Catalysis Research Center (presently Institute for Catalysis), Hokkaido University in 1998. For the education of graduate students, Professor Ohtani's laboratory has belonged to the Graduate School of Environmental Science, Hokkaido University since 1999. He was awarded 2005 Scientific Achievement Award of The Electrochemical Society of Japan, The Japanese Photochemistry Association Award 2006, Catalysis Society of Japan Award for 2013, The Japanese Photochemistry Association Lectureship Award (2017) and The Award of The Electrochemical Society of Japan (Takei Award), 2018. After the retirement from Hokkaido University at the end of March 2022 (Professor Emeritus), he established Nonprofitable Organization touche NPO in Sapporo to support scientists by providing a web system for organization of scientific meetings and measuring solid materials with reversed double-beam photoacoustic spectroscopy.



**Title:** Chairman

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**Education:** BS: Hydrocarbon Chemistry, Kyoto University, March 24, 1979; MS: Hydrocarbon Chemistry, Kyoto University, March 23, 1981; Ph.D.: Hydrocarbon Chemistry, Kyoto University, March 23, 1985 (thesis title: Photocatalytic Redox Reactions by Aqueous Suspension of Titanium Dioxide)

## Professional Appointments:

Assistant Professor, Department of Hydrocarbon Chemistry, Kyoto University, February 16, 1985—March 31, 1996

Associate Professor, Division of Chemistry, Graduate School of Science, Hokkaido University, April 1, 1996—August 31, 1998

Professor, Catalysis Research Center (Institute for Catalysis from October 1, 2015), Hokkaido University, September 1, 1998—March 31, 2022

Professor, Division of Environmental Materials Science, Graduate School of Environmental Science, Hokkaido University, February 1, 1999—March 31, 2022

Chairman, Nonprofitable Organization touche NPO, May 18, 2023—

## Awards:

2005 Scientific Achievement Award of The Electrochemical Society of Japan

The Japanese Photochemistry Association Award, 2006

Catalysis Society of Japan Award for 2013

The Japanese Photochemistry Association Lectureship Award 2017

The Award of The Electrochemical Society of Japan (Takei Award), 2018

Fellow, The Electrochemical Society of Japan, 2020

Catalysis Development Excellence Award, The Asia-Pacific Association of Catalysis Societies, 2023

### Plenary, Keynote and Invited Talks in International/Domestic Meetings

Academic year of 2015: 14, 2016: 25, 2017: 25, 2018: 28, 2019: 30, 2020: 8, 2021: 34 and 2022-2024 > 40 times

### Publications:

More than 350 original papers in total (Web of Science). Hirsh index (h-index): 78. Two single-authored books in Japanese

### Selected Representative Publications:

- 1) Ohtani, B.; Takashima, M. Happy Photocatalysts and Unhappy Photocatalysts: Electron Trap-distribution Analysis for Metal Oxide-sample Identification. *Catal. Sci. Technol.* **2022**, *12*, 354-359.
- 2) Shen, Y.; Nitta, A.; Takashima, M.; Ohtani, B. Do particles interact electronically? —Proof of Interparticle Charge-Transfer Excitation between Adjoined Anatase and Rutile Particles. *Chem. Lett.* **2021**, *50*, 80-83.
- 3) Ketwong, P.; Yoshihara, S.; Takeuchi, S.; Takashima, M.; Ohtani, B. Light intensity-dependence studies on the role of surface deposits for titania-photocatalyzed oxygen evolution: Are they really cocatalyst?. *J. Chem. Phys.* **2020**, *153*, 124709.
- 4) Nitta, A.; Takase, M.; Takashima, M.; Murakami, N.; Ohtani, B. A Fingerprint of Metal-oxide Powders: Energy-resolved Distribution of Electron Traps. *Chem. Commun.* **2016**, *52*, 12096-12099.
- 5) Ohtani, B. Revisiting the Fundamental Physical Chemistry in Heterogeneous Photocatalysis: Its Thermodynamics and Kinetics. *Phys. Chem. Chem. Phys.* **2014**, *16*, 1788-1797.
- 6) Ohnuma, A.; Cho, E. C.; Ohtani, B. A Strategy to Form an Amorphous Arrangement of Gold Nanoparticles using Eccentric Hybrid Particles. *Chem. Lett.* **2012**, *41*, 1319-1321.
- 7) Ohtani, B. Photocatalysis A to Z—What We Know and What We Don't Know. *J. Photochem. Photobiol. C Photochem. Rev.* **2010**, *11*, 157-178.
- 8) Ohtani, B.; Prieto-Mahaney, O.-O.; Li, D.; Abe, R. What is Degussa (Evonik) P25? Crystal composition analysis, reconstruction from isolated pure particles, and photocatalytic activity test. *J. Photochem. Photobiol. A Chem.* **2010**, *216*, 179-182.
- 9) Ohtani, B. Preparing Articles on Photocatalysis—Beyond The Illusions, Misconceptions, and Speculation. *Chem. Lett.* **2008**, *37*, 217-229.
- 10) Yan, X.; Ohno, T.; Nishijima, K.; Abe, R.; Ohtani, B. Is methylene blue an appropriate substrate for a photocatalytic activity test? A study with visible-light responsive titania. *Chem. Phys. Lett.* **2006**, *429*, 606-610.
- 11) Ohtani, B.; Ogawa, Y.; Nishimoto, S.-i. Photocatalytic Activity of Amorphous-Anatase Mixture of Titanium(IV) Oxide Particles Suspended in Aqueous Solutions. *J. Phys. Chem. B* **1997**, *101*, 3746-3752.