

Ryukoku University  
Professor  
Environmental Science Course,  
Faculty of Advanced Science & Technology

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## Tetsuji OKUDA

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### Doctor (PhD Engineering)

Doctor of Engineering (Graduate School of Engineering, Hiroshima university) 2000.11

Born in 1973

#### AFFILIATIONS

Environmental science, Environmental load reduction/restoration technology, Environmental dynamics, Environmental materials, Recycling technology

#### MEJOR CONFERENCE

Member of Japan Society on Water Environment, Member of International Ozone Association, Member of the Society of Chemical Engineers Japan, Member of Society of Environmental Conservation Engineering , Member of Japan Society of Material Cycles and Waste Management.

#### WORK EXPERIENCES

Postdoctoral Fellowship, 2000.12-2001.9

Korean Advanced Institute of Science and Technology (KAIST), Korea

Research Associate, 2001.10-2004.3

Department of Chemical Engineering

Graduate School of Engineering, Hiroshima University, Japan

Assistant Professor, 2004.4- 2016.3

Environmental Research and Management Center

Hiroshima University, Japan

Associate Professor, 2016.4-2020.3

Department of Environmental Solution Technology,

Faculty of Science and Technology, Ryukoku University

Professor, 2020.4-2025.3

Department of Ecology and Environmental Engineering Course,

Faculty of Advanced Science and Technology, Ryukoku University

Professor, 2025.4-present

Department of Environmental Sciences Course,

Faculty of Advanced Science and Technology, Ryukoku University

#### MAJOR ONGOING RESEARCH PROJECTS

JST-NEXUS (Networked Exchange, United Strength for Stronger Partnerships between Japan and ASEAN): JPMJNX24A1

##### **Bio-based Pretreatment for Enhanced Seawater Desalination**

*Principal Investigator (PI), January 2025 – December 2027.*

JST-SATREPS (Science and Technology Research Partnership for Sustainable Development): JPMJSA2201

##### **Synergistic Effect of Forward Osmosis and Capacitive Deionization for Water Purification and Recovery**

*Co-investigator of group 1 (PI: Takahiro Fujioka), April 2022 – March 2027.*

## SELECTED PUBLICATIONS

- Sandrine Boivin, Hideaki Sano, Osamu Nakagoe, Tetsuji Okuda, Takahiro Fujioka (2025) Pre-coagulation of surface water for mitigating membrane fouling during submerged nanofiltration, *Desalination*, 612, 1, 118959.
- Satoshi Nakao, Kohsuke Akita, Asako Ozaki, Keiko Masumoto, Tetsuji Okuda (2021) Circulation of fibrous microplastic (microfiber) in sewage and sewage sludge treatment processes, *Science of The Total Environment*, 795.
- Kurumi HASHIMOTO, Narumi KUBOTA, Tetsuji OKUDA, Satoshi NAKAI, Wataru NISHIJIMA, Hiroshi MOTOSHIGE (2021) Reduction of ozone dosage by using ozone in ultrafine bubbles to reduce sludge volume, *Chemosphere*, 2021,129922.
- Satoshi Nakai, Asmit Das, Yuya Maeda, Nurlaili Humaidah, Masaki Ohno, Wataru Nishijima, Takehiko Gotoh, Tetsuji Okuda (2020) A Novel Strain of *Aurantiochytrium* sp. strain L3W and Its Characteristics of Biomass and Lipid Production Including Valuable Fatty Acids, *Journal of Water and Environment Technology*, 19(1), 24-34.
- Asaoka S., Okamura H., Kim K., Hatanaka Y., Nakamoto K., Hino K., Oikawa T., Hayakawa S., Okuda T. (2017) Optimum reaction ratio of coal fly ash to blast furnace cement for effective removal of hydrogen sulfide, *Chemosphere*. 168, 384-389.
- Tetsuji Okuda, Wataru Nishijima, Mayo Sugimoto, Naoyuki Saka, Satoshi Nakai, Kazuyasu Tanabe, Junki Ito, Kenji Takenaka and Mitsumasa Okada (2014) Removal of Coagulant Aluminum from Water Treatment Residuals by Acid, *Water Research*, 60, 75-81.
- Tetsuji Okuda, Satoshi Asaoka, Hitomi Yano, Kouji Yoshitsugu, Satoshi Nakai, Wataru Nishijima, Kenji Sugimoto, Daijirou Matsunami, Yorihide Asaoka, Mitsumasa Okada (2014) Chemical Behavior of Sand Alternatives in the Marine Environment, *Chemosphere*, 111, 164-168.
- Tetsuji Okuda, Yuki Uehara, Tsung-Yueh Tsai, Satoshi Nakai, Michihiro Akiba, Wataru Nishijima and Mitsumasa Okada (2009) Production of Assimilable Organic Carbon (AOC) from Bacteria and Picophytoplanktons by Chlorination, *Water Science & Technology: Water Supply*, 9(3), 337-342.
- Tetsuji OKUDA, Keisuke KUROSE, Wataru NISHIJIMA, Mitsumasa OKADA (2007) Separation of polyvinyl chloride from plastic mixture by froth floatation after surface modification with ozone, *Ozone Science & Engineering*, 29, 5, 373-377.
- Tetsuji OKUDA, Martha Alcántara, Masahiro Suzuki, Chikara MATSUI, Tomohiro KOSE, Wataru NISHIJIMA, Mitsumasa OKADA (2007) Enhancement of biodegradation of oil adsorbed on fine soils in bioslurry reactor, *Chemosphere*, 68, 2, 281-286.
- Tetsuji OKUDA, Phengxay DEEVANHXAY, Wataru NISHIJIMA and Mitsumasa OKADA (2006) Improvement of sedimentation by the coagulation using poly-silicate iron for the removal of *Cryptosporidium* oocyst, *Separation Science and Technology*, 41, 15, 3387-3396.
- Tetsuji OKUDA, Wataru NISHIJIMA, Mitsumasa OKADA (2006) Assimilable organic carbon (AOC) originated from picophytoplankton in drinking water, *Water Science & Technology : Water Supply*, 6, 2, 169-176.
- Tetsuji OKUDA, Phengxay DEEVANHXAY, Wataru NISHIJIMA, Takao HASEGAWA and Mitsumasa OKADA (2006) Enhancement of *cryptosporidium* oocyst removal by coagulation and sedimentation with poly-silicate iron (PSI), *Journal of Chemical Engineering of Japan*, 39, 2, 137-143.
- Tetsuji OKUDA, Aloysius U. BAES, Wataru NISHIJIMA and Mitsumasa OKADA (1999) Improvement of extraction method of coagulation active components from *Moringa oleifera* seed, *Water Research*, 33, 15, 3373-3378.