

CURRICULUM VITAE

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AREAS OF EXPERTISE

- Occurrence, fate, transport and risk assessment of contaminants of emerging concern (CECs), including pharmaceuticals, personal care products, perfluoroalkyl substances, in the aquatic environment: chemical analysis, source apportionment, pollution pathway inference, environmental fate models, QSAR modeling
- Subsurface geochemistry and mitigation technologies of contaminants, including arsenic and health-related microbes: hydrogeological survey, isotope tracers, point-of-use water treatment devices
- Environmental management for disasters: bioassays for rapid pollutant identification, environmental modeling of radionuclides, water use scenario and accompanying health risk in emergency
- Response to COVID-19: wastewater-based epidemiology, risk assessment of antiviral drugs

EDUCATION

Ph.D. of Engineering, The University of Tokyo, March 2010.

Major: Environmental Engineering

Dissertation: *Evaluation of Potential Uses of Groundwater for the Improvement of Urban Environments.*

Master of Engineering, The University of Tokyo, March 2007.

Bachelor of Engineering, The University of Tokyo, March 2001.

RESEARCH AND PROFESSIONAL EXPERIENCE

2019-Today	Toyama Prefectural University <i>Associate Professor</i>
2017-2019	National Institute for Environmental Studies (NIES), Fukushima Branch. <i>Senior Scientist</i>
2014-2016	National Institute for Environmental Studies (NIES) <i>Project Scientist</i>
2011-2014	Graduate School of Engineering, The University of Tokyo <i>Postdoctoral Research Fellow</i>
2010-2011	Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland <i>Postdoctoral Research Fellow</i>
2001-2005	Department of Water Works Designing, Nippon Jogesuido Sekkei Co., Limited, Japan (NJS Consultants) <i>Water Supply Planner</i>

GRANTS AND FELLOWSHIPS

- Grants-in-Aid for Scientific Research “KAKENHI”, 2020-2021.
Japanese Society for the Promotion of Science, 400,000 yen.
- Grants-in-Aid for Scientific Research “KAKENHI”, 2019-2021.

Japanese Society for the Promotion of Science, 1,200,000 yen.

- Research Grant, 2019-2020, PI
Kurita Water and Environment Foundation, 975,000 yen.
- Overseas Travel Grant, 2017, PI
Kurita Water and Environment Foundation, 120,000 yen.
- Center of Excellence (COE) Student Project Grant, 2007-2009, PI
The University of Tokyo, 600,000 yen.
- Grants-in-Aid for Scientific Research “KAKENHI”, 2009-2011, PI
Japanese Society for the Promotion of Science, 1,400,000 yen.
- Nishihara Environmental Scholarship, 2007-2009, PI
Nishihara Cultural Foundation, 2,400,000 yen.
- JSPS Research Fellowships for Young Scientists, 2009-2011, PI
Japanese Society for the Promotion of Science, 6,768,000 yen.

PUBLICATIONS, peer reviewed

Manish Kumar, Alok Kumar Thakur, Payal Mazumder, Keisuke Kuroda, Sanjeeb Mohapatra, Jörg Rinklebe, AL. Ramanathan, Zeynep Cetecioglu, Sharad Jain, Vinay Kumar Tyagi, Petros Gikas, Sudip Chakraborty, M. Tahmidul Islam, Arslan Ahmad, Anil V. Shah, Arbind Kumar Patel, Toru Watanabe, Meththika Vithanage, Kyle Bibby, Masaaki Kitajima, Prosun Bhattacharya (2020) Frontier Review on the Propensity and Repercussion of SARS-CoV-2 Migration to Aquatic Environment, *Journal of Hazardous Materials Letters*, in press.

Heng-Chen Liu, Hui-Xian Wang, Yu Yang, Zhao-Yong Ye, Keisuke Kuroda, Li-an Hou (2021) *In situ* assembly of PB/SiO₂ composite PVDF membrane for selective removal of trace radiocesium from aqueous environment, *Separation and Purification Technology* 254, 117557.

Keisuke Kuroda and Jun Kobayashi (2021) Pharmaceuticals, Personal Care Products and Artificial Sweeteners in Asian Groundwater: A Review, In: Contaminants in Drinking and Wastewater Sources- Challenges and Reigning Technologies, Kumar M ed., Springer, 3–36.

Manish Kumar, Keisuke Kuroda, K Dhangar, Payal Mazumder, Christian Sonne, Jorg Rinklebe and Masaaki Kitajima (2020) Potential emergence of antiviral-resistant pandemic viruses via environmental drug exposure of animal reservoirs, *Environmental Science & Technology*, 54 (14), 8503–8505.

Aaron Bivins, ..., Keisuke Kuroda, ... Kyle Bibby (2020) Wastewater-Based Epidemiology: Global Collaborative to Maximize Contributions in the Fight Against COVID-19, *Environmental Science & Technology*, 54 (13), 7754–7757.

Manish Kumar, Keisuke Kuroda, Kiran Dhangar (2020) The most eagerly awaited summer of the Anthropocene: A perspective of SARS-CoV-2 decay and seasonal change, *Groundwater for Sustainable Development*, 100400.

Ronald C Estoque, Kei Gomi, Takuya Togawa, Makoto Ooba, Yasuaki Hijioka, Chiaki M Akiyama, Shogo Nakamura, Akira Yoshioka and Keisuke Kuroda (2019) Scenario-based land abandonment projections: Method, application and implications, *Science of The Total Environment* 692, 903–916.

Takeo Sakurai, Yoshitaka Imaizumi, Keisuke Kuroda, Takehiko I Hayashi and Noriyuki Suzuki (2019) Georeferenced multimedia environmental fate of volatile methylsiloxanes modeled in the populous Tokyo Bay catchment basin, *Science of The Total Environment* 689, 843–853.

Junko Kawahara, Yoshitaka Imaizumi, Keisuke Kuroda, Yasunobu Aoki and Noriyuki Suzuki, Estimation of long-term dietary exposure to acrylamide in Japanese, *Food Additives and Contaminants*, 35 (9) 1689–1702.

Keisuke Kuroda, Takeshi Hayashi, Ayako Funabiki, An Thuan Do, Vu Duc Canh, Tran Thi Viet Nga and Satoshi Takizawa (2017) Holocene estuarine sediments as a source of arsenic in Pleistocene groundwater in suburbs of Hanoi, Vietnam, *Hydrogeology Journal*, 25 (4) 1137–1152.

- Keisuke Kuroda, Takeshi Hayashi, An Thuan Do, Vu Duc Canh, Tran Thi Viet Nga, Ayako Funabiki and Satoshi Takizawa (2017) Groundwater recharge in suburban areas of Hanoi, Vietnam: Effect of decreasing surface water bodies and land-use change, *Hydrogeology Journal*, 25 (3) 727–742.
- Yoshitaka Imaizumi, Keisuke Kuroda, Seiji Hayashi, Noriyuki Suzuki (2016) Analysis of Temporal Changes in Terrestrial Cesium-137 Using Publicly Available Monitoring Data in Japan, *Global Environmental Research* 20 (1&2), 59–66.
- Keisuke Kuroda, Rene Itten, Lubomira Kovalova, Christoph Ort, David Weissbrodt and Christa S. McArdell (2016) Hospital-Use Pharmaceuticals in Swiss Waters Modeled at High Spatial Resolution, *Environmental Science & Technology* 50 (9), 4742–4751.
- Koichi Matsubara, An Thuan Do, Keisuke Kuroda, Tran Nga, Satoshi Takizawa (2015) Estimation of the Access to Safe Drinking Water Sources and Improvement by Household Water Treatment in Hanoi City, Vietnam, *Journal of Japan Society of Civil Engineers, Ser. G (Environmental Research)* 71 (7) III_69–III_78. (in Japanese with English abstract)
- Keisuke Kuroda, Norihide Nakada, Seiya Hanamoto, Manami Inaba, Hiroyuki Katayama, An Thuan Do, Tran Thi Viet Nga, Kumiko Oguma, Takeshi Hayashi and Satoshi Takizawa (2015) Pepper mild mottle virus as an indicator and a tracer of fecal pollution in water environments: Comparative evaluation with wastewater-tracer pharmaceuticals in Hanoi, Vietnam, *Science of the Total Environment* 506–507, pp. 287–298.
- Keisuke Kuroda, Michio Murakami, Kumiko Oguma, Hideshige Takada and Satoshi Takizawa (2014) Investigating sources and pathways of perfluoroalkyl acids (PFAAs) in aquifers in Tokyo using multiple tracers, *Science of the Total Environment* 488–489, pp. 51–60.
- Keisuke Kuroda, Takeshi Hayashi, Naoko Watanabe, Kumiko Oguma, Tran Thi Viet Nga and Satoshi Takizawa (2013) Influence of Pond Seepage on Groundwater Pollution by Arsenic in Hanoi, Viet Nam, *Journal of Japan Society of Civil Engineers, Ser. G (Environmental Research)* 69 (7) pp. 17–28 (in Japanese with English abstract)
- An Thuan Do, Keisuke Kuroda, Takeshi Hayashi, Tran Thi Viet Nga, Kumiko Oguma and Satoshi Takizawa (2013) Household Survey of Installation and Treatment Efficiency of Point-of-Use Water Treatment Systems in Hanoi, Vietnam, *Journal of Water Supply: Research and Technology—AQUA* 63 (2), 154–161 (doi:10.2166/aqua.2013.011).
- Koji Kosaka, Keisuke Kuroda, Michio Murakami, Nobue Yoshida, Mari Asami, Kumiko Oguma, Satoshi Takizawa and Michihiro Akiba (2013) Occurrence of chlorate and perchlorate in groundwater in Tokyo, *Journal of Japan Society of Civil Engineers, Ser. G (Environmental Research)* 69 (1), pp.10–18 (in Japanese with English abstract).
- Ryosuke Sato, Michio Murakami, Kumiko Oguma, Keisuke Kuroda, Masaatsu Aichi, Hiroshi Sakai and Satoshi Takizawa (2013) Investigation of Spring Water in the Otomeyama Park in Shinjuku and Evaluation of its Recovery with Infiltration Facilities, *Journal of Water and Waste* 55 (2) pp.145–152 (in Japanese with English abstract).
- Keisuke Kuroda, Michio Murakami, Kumiko Oguma, Yuki Muramatsu, Hideshige Takada and Satoshi Takizawa (2012) Assessment of Groundwater Pollution in Tokyo using PPCPs as Sewage Markers. *Environmental Science & Technology* 46(3), pp.1455–1464.
- Michio Murakami, Eri Hiraoka, Keisuke Kuroda, Kumiko Oguma and Satoshi Takizawa (2010) Water supply and demand in disasters and potential use of groundwater in Chiyoda Ward, Tokyo, *Journal of Water and Waste* 52(2) pp.125–135 (in Japanese with English abstract).
- Murakami, M., Kuroda, K., Sato, N., Fukushi, T., Takizawa, S., Takada, H., Groundwater pollution by perfluorinated surfactants in Tokyo, *Environmental Science & Technology* **43**, 3480–3486, 2009.
- Kuroda, K., Fukushi, T., Oguma, K., Takizawa, S., Distribution Characteristics of Dissolved Iron Concentration and Redox Potential in Groundwaters in the Central Tokyo District, *Journal of Japanese Association of Hydrological Sciences*, 38, 63–70, 2008 (in Japanese, with English abstract).

Nakada, N., Kiri, K., Shinohara, H., Harada, A., Kuroda, K., Takizawa, S., Takada, H., Evaluation of Pharmaceuticals and Personal Care Products as Water-soluble Molecular Markers of Sewage. *Environmental Science & Technology* 42, 6347-6353, 2008.

Keisuke Kuroda, Tetsuo Fukushi, Satoshi Takizawa, Michio Murakami, Hideshige Takada, Norhide Nakada, Masaatsu Aichi, Takeshi Hayashi and Tomochika Tokunaga (2008) Sources of, and influencing factors of groundwater contamination in Tokyo metropolitan area, *Groundwater Quality: Securing Groundwater Quality in Urban and Industrial Environments*, IAHS Publ. 324, pp.16–23.

Keisuke Kuroda and Tetsuo Fukushi (2008) Analysis of Groundwater Contamination in Urban Areas, Chapter 7, In: *Groundwater management in Asian cities*, Takizawa S. ed., Springer, March 2008.

Kuroda, K., Fukushi, T., Takizawa, Aichi, M., Hayashi, T., Tokunaga, T., Source Estimation of Nitrogen Contamination in Groundwaters in Tokyo Metropolitan Area, *Environmental Engineering Research* 45, 31-38, 2007 (in Japanese, with English abstract).

Kuroda, K., Fukushi, T., Takizawa, S., Aichi, M., Hayashi, T., Tokunaga, T., Groundwater Contamination and its Sources in the Tokyo Metropolitan Area, *Journal of Water and Waste* 48, 37–45, 2006 (in Japanese, with English abstract).

Non-reviewed journal articles and book chapters

An Thuan Do, Keisuke Kuroda, Tran Thi Viet Nga, Kumiko Oguma, Takeshi Hayashi and Satoshi Takizawa (2015) Impacts of Rising Temperature and Point-of-Use (POU) Water Treatment System Usage on Future Water Demand in Hanoi, Vietnam. Proceedings of The 10th International Symposium on Water Supply Technology, 380–386.

Manish Kumar, Gurmeet Singh, Tushara Chaminda, Pham Van Quan and Keisuke Kuroda (2014) Emerging Water Quality Problems in Developing Countries, *The Scientific World Journal* Volume 2014, Article ID 215848

Michio Murakami, Keisuke Kuroda and Satoshi Takizawa (2009) Recent developments on preservation and beneficial use of urban groundwater, *Kagaku*, 79(12), pp.1319–1321 (in Japanese).

Keisuke Kuroda and Hiroyuki Katayama (2007) Groundwater Contamination in Urban Areas and Estimation Methods of Contamination Sources, *Journal of Japan Society on Water Environment* 30(9), pp.497–501 (in Japanese).

Selected oral presentations (international)

Keisuke Kuroda, Jun Kobayashi, Asuka Tanaka and Daisuke Nakajima (2019) Incubation Experiments of Groundwater with Organic Matter: Insight into Elevated Endotoxin in Groundwater after Earthquakes, the 7th IWA Specialist Conference on Natural Organic Matter in Water (NOM7), Abstracts, October 2019, Tokyo, Japan.

Keisuke Kuroda, Jun Kobayashi, Yoshikatsu Takazawa, Yasuyuki Zushi, Fujio Shiraishi, Miho Yamasaki and Daisuke Nakajima (2017) Rapid screening of groundwater pollution after an earthquake by recombinant yeast assays. 10th Micropol & Ecohazard Conference 2017, Abstracts, September 2017, Vienna, Austria.

Keisuke Kuroda and Satoshi Takizawa (2013) Hydrogeological factors affecting PPCPs and PFAAs in aquifers: Why the concentrations of groundwater in Tokyo could be higher than those of secondary effluent? Proceedings of IWA Micropol & Ecohazard 2013, pp.212-213 (Zurich, June 2013).

Keisuke Kuroda, Michio Murakami, Kumiko Oguma, Hideshige Takada and Satoshi Takizawa (2012) A multi-tracer approach for analyzing occurrence and sources of perfluorinated compounds (PFCs) in groundwater in Tokyo. Proceedings of The 4th IWA Asia-Pacific Young Water Professionals Conference 2012, pp.89-92 (Tokyo, December 2012).

Keisuke Kuroda, Michio Murakami, Kumiko Oguma, Hideshige Takada and Satoshi Takizawa (2012) PPCPs and PFCs in aquifers of Tokyo within complex hydrogeological settings, ACS Spring Meeting, ENVR-82 (San Diego, March 2012).

Keisuke Kuroda, Rene Itten, Kovalova Lubomira, Christoph Ort, David Weissbrodt and Christa S. McArdell (2011) Validating modeled input of pharmaceuticals from wastewater treatment plants and hospitals as point sources into the Swiss environment, Proceedings of IWA Aspire 2011, pp.326-332 (Tokyo, October 2011).

Keisuke Kuroda, Michio Murakami, Kumiko Oguma, Hideshige Takada and Satoshi Takizawa (2011) Occurrence and sources of PFCs in groundwater in Tokyo, Proceedings of IWA Micropol & Ecohazard 2011 (Sydney, July 2011).

Kuroda, K., Fukushi, T., Murakami, M., Oguma, K., Takada, H. and Takizawa, S., Pharmaceuticals as markers of sewage pollution in groundwater in Tokyo, Proceedings of 2009 American Water Works Association Water Quality Technology Conference, ST4-5. (Seattle, November 2009)

Kuroda, K., Fukushi, T., Murakami, M., Oguma, K., Takada, H., and Takizawa, S., Anthropogenic gadolinium and pharmaceuticals as tracers of groundwater contamination in Tokyo, Proceedings of Micropol & Ecohazard 2009, 86-87. (San Francisco, June 2009)

Selected Poster Presentations (international)

Keisuke Kuroda, Yoshitaka Imaizumi, Noriyuki Suzuki and Seiji Hayashi (2017) Predicting long-term fate of radioactive cesium on forest soil: implementing different tree species. The 4th International Conference on Radioecology and Environmental Radioactivity, Abstracts, 506-507. (Berlin, September 2017)

Kuroda K., Imaizumi Y., Takagi M., Suzuki N., Hayashi S., Ohara T. Long-term and large-scale prediction of air radiation dose rate in Fukushima: incorporating vertical migration of radioactive cesium. SETAC Europe 26th Annual Meeting abstracts MO226. (Nantes, May 2016)

Kuroda, K., Fukushi, T., Takizawa, S., Murakami, M., Takada, H., Nakada, N., Aichi, M., Hayashi, T., Tokunaga, T., Groundwater Quality: Securing Groundwater Quality in Urban and Industrial Environments, Proceedings of the 6th International Groundwater Quality Conference (Fremantle, December 2007).

Kuroda, K., Ooka, R., Ichinose, T., Takizawa, S., Cooling Tokyo: Effectiveness and Environmental Impacts of Spraying Groundwater to Mitigate Urban Heat-island, Proceedings of 16th Annual Meeting of the Groundwater Resources Association of California, 47 (Sacramento, September 2007).

PRIZES, HONOURS AND OTHER RECOGNITION

2019

2009

2016

2007

2007

2014

2012

Best Poster Award, the 7th IWA Specialist Conference on Natural Organic Matter in Water (NOM7, as a co-author)

2010

Best Paper Award for Young Professionals, Japan Society of Civil Engineers (JSCE, as a co-author)

Best Paper Award for Young Professionals, Japan Society of Civil Engineers (JSCE, as the lead author)
Award for Asian Young Professionals on Water Research (*Ohgaki* Award, as a co-author)
Distinguished Doctoral Research Award, Department of Urban Engineering, The University of Tokyo
Doctoral Research Award (*Organo* Award), Japan Society of Water Environment
Best Poster Award, Japan Society of Civil Engineers (JSCE, as a co-author)
Best Presentation Award (*Kurita* Award), 41th Annual Meeting of Japan Society of Water Environment

EDITORIAL EXPERIENCE

2020 Co-Guest Editor, Journal of Environmental Management (JEMA), Elsevier, Netherland, Special issue on Cross-cutting approaches for tackling water security of the Anthropocene.
2016-today Editorial Board, Science of the Total Environment (STOTEN), Elsevier, Netherland.
2013 Co-Guest Editor, The Scientific World Journal, special issue on 'Emerging Water Quality Problems in Developing Countries', Hindawi Publishing, Cairo.

PERSONAL INFORMATION

- First language: Japanese
- Citizenship: Japanese