YUKAKO KOMAKI

Research Assistant Professor
University of Shizuoka
School of Food and Nutritional Sciences
Department of Environmental and Life Sciences
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EDUCATION

Ph.D.	Environmental Engineering, University of Illinois, Urbana, IL, USA	2013
M.S.	Urban and Environmental Engineering, Kyoto University, Japan (Honor admission)	2007
B.S.	Global Engineering, Kyoto University, Japan	2005

PROFESSIONAL & RESEARCH EXPERIENCES

Research Assistant Professor 7/1/2017-
University of Shizuoka, Shizuoka, Japan present
Department of Environmental and Life Sciences

Project: Nucleotide excision repair inhibition by dibromoacetonitrile
Project: Cell cycle disruption by haloacetonitriles

Postdoctoral Scholar/JSPS Overseas Research Fellow 6/18/2016-
Stanford University, Stanford, CA, USA 6/17/2017
Department of Civil and Environmental Engineering
(PI: William A. Mitch)

Project: Protein degradation by reactive halogen species
Description: The objective of this project is to evaluate the contribution of blood plasma halide to oxidative damage in proteins resulting in 1) amino acid residue degradation and 2) enzymatic activity destruction, via exposure to free radicals (e.g., OH^*, CO_3^{*-}, Cl*, Cl_2^{*-}, Br_2^{*-}, $ClBr^{*-}$).

Project: Characterizing the formation of vegetable-derived disinfection byproducts
Description: The objective of this project is to investigate the formation of volatile disinfection byproducts and oxidized amino acid residues during chlorination in food processing.

Postdoctoral Research Associate 12/1/2013-
University of Illinois, Urbana, IL, USA 6/17//2016
Department of Civil and Environmental Engineering

Project: Molecular mechanism for wavelength-specific UV inactivation of bacteriophage PR772, a potential surrogate for waterborne human adenovirus (PI: Benito J. Mariñas)

Project: Investigating nuclear enzyme topoisomerase II as a putative molecular target of haloacetonitriles in mammalian cell toxicity (PI: Michael J. Plewa)

Project: Comparative cell toxicity of disinfection byproduct mixture
(PIs: Benito J. Mariñas, Michael J. Plewa)

Graduate Research Assistant 8/16/2007-
University of Illinois, Urbana, IL, USA 11/30/2013
Department of Civil and Environmental Engineering

Project: Mode of toxic action of DBPs: Genomic DNA damage induction, DNA damage repair and cell cycle alterations induced by haloacetonitriles and haloacetic acids (PIs: Benito J. Mariñas, Michael J. Plewa)

Project: Development of a point-of-care platform for cytotoxicity assessment of DBPs (PIs: Benito J. Mariñas, Michael J. Plewa, Logan G. Liu)

Project: Bone char fixed-bed reactor for fluoride removal (PI: Benito J. Mariñas)

Post-master Research Assistant 4/1/2007-
Kyoto University, Kyoto, Japan 7/31/2007
Department of Urban and Environmental Engineering

Project: Elemental analysis of mineral scale from the remains of water towers in Pompeii, Italy, using X-ray fluorescence (PI: Yoshihisa Shimizu)

M.S. Research 4/2005-
Kyoto University, Kyoto, Japan 3/2007
Department of Urban and Environmental Engineering

Project: Microbial community analysis in bioremediation of oil contaminated soil under sulfate reducing conditions (PI: Yoshihisa Shimizu)

Study Abroad 9/2005-
University of Illinois, Urbana, IL, USA 12/2005
Department of Civil and Environmental Engineering

Project: Trichloroethylene biodegradation using *Dehalococcoides ethenogenes* strain FL2 with varied amendments (PI: Kevin T. Finneran)

Senior Research 4/2004-
Kyoto University, Kyoto, Japan 3/2005
Department of Global Engineering

Project: Microbial community analysis in polycyclic aromatic hydrocarbon degradation experiment for oil contaminated soil (PI: Yoshihisa Shimizu)

TEACHING EXPERIENCES

Co-instructor, University of Shizuoka, Shizuoka, Japan

Introduction to Environmental Sciences (7037200)	Spring 2019-2022
Advanced Topics in Radiation Biology (26302800)	Spring 2018-2021
Environmental Sciences English II (7273000)	Spring 2018
Experiments in Environmental and Life Sciences II (7272300)	Spring 2018, 2019, 2021, 2022, Fall 2020
Fundamental Experiments in Environmental (7276000)	Spring 2019, 2021, Fall 2020
Environmental Measuring (7271700)	Fall 2017, 2018 Spring 2019-2022

Primary Instructor, University of Illinois, Urbana, IL, USA

Water Quality Control Process I (CEE 537)	Fall 2013, 2014

Co-Instructor, University of Illinois, Urbana, IL, USA

Environmental Engineering Laboratory (CEE 449)	Spring 2016

Water Quality Control Process I (CEE 537) Fall 2015

Head Teaching Assistant, University of Illinois, Urbana, IL, USA
Environmental Engineering Laboratory (CEE 449) Spring 2013
Instructor: Professor Benito J. Mariñas
Duty: Tanzania field trip; Course material and assignment preparation; Student advising for the team reports and presentations

Guest Lectures, University of Illinois, Urbana, IL, USA
Environmental Engineering Laboratory (CEE 449) Spring 2014
Environmental Engineering Laboratory (CEE 449) Spring 2013
Water Quality Control Process I (CEE 537) Fall 2011

Certificate in Foundation of Teaching, Center for Innovation in Teaching & Learning, University of Illinois, Urbana, IL, USA April 2013

PUBLICATIONS

Peer-Reviewed Journal Articles

1. **Komaki, Y.**, Ono, S., Okuya, T., Ibuki, Y. Glucose starvation impairs NER and γ-H2AX after UVB irradiation. *Toxicol. In Vitro* **2023,** *86*, 105503.
2. Tanaka, M., **Komaki, Y.**, Toyooka, T., Ibuki, Y. Butyrate Enhances γ-H2AX Induced by Benzo[*a*]pyrene. *Chem. Res. Toxicol.* **2022**, *35(12)*, 2241-2251.
3. **Komaki, Y.,** Suganuma, K., Ibuki, Y. Protective role of electrophile-reactive glutathione for DNA damage repair inhibitory effect of dibromoacetonitrile. *J. Environ. Sci*. **2022,** *117*, 305-314.
4. **Komaki, Y.**, Ibuki, Y., Inhibition of nucleotide excision repair and damage response signaling by dibromoacetonitrile: a novel genotoxicity mechanism of a water disinfection byproduct. *J. Hazard. Mater.* **2022,** *423*, 127194.
5. Shikata, M., Toyooka, T., **Komaki, Y.**, Ibuki, Y. 4-(Methylnitrosamino)-1-(3-pyridyl)-1-butanone-Induced Histone Acetylation via α7nAChR-Mediated PI3K/Akt Activation and Its Impact on γ-H2AX Generation. *Chem. Res. Toxicol.* **2021**, *34*(12), 2512-2521.
6. Fukuda, T., **Komaki, Y.**, Mori, Y., Ibuki, Y. Low extracellular pH inhibits nucleotide excision repair. *Mutat. Res.* **2021,** *867*, 503374.
7. Ibuki, Y., **Komaki, Y.**, Yang, G., Toyooka, T. Long-wavelength UVA enhances UVB-induced cell death in cultured keratinocytes: DSB formation and suppressed survival pathway. *Photochem. Photobiol. Sci.* **2021,** *20*(5), 639-652.
8. Choe, J. K., Hua, L.-C., **Komaki, Y.**, Simpson, A. M. A., McCurry, D. L., Mitch, W. A. Evaluation of histidine reactivity and byproduct formation during peptide chlorination. *Environ. Sci. Technol.* **2021**, *55*(3), 1790-1799.
9. Yamashita, R., **Komaki, Y.**, Yang, G., Ibuki, Y. Cell line-dependent difference in glutathione levels affects the cigarette sidestream smoke-induced inhibition of nucleotide excision repair. *Mutat. Res.* **2020**, *858-860*, 503273.
10. Yang, G., **Komaki, Y.**, Yoshida, I., Ibuki, Y. Formaldehyde inhibits UV-induced phosphorylation of histone H2AX. *Toxicol. In Vitro* **2019**, *61*, 104687.
11. **Komaki, Y.**, Simpson, A. M., Choe, J. K., Pinney, M. M., Herschlag, D., Chuang, Y. H., Mitch, W. A. Serum electrolytes can promote hydroxyl radical-initiated biomolecular damage from inflammation. *Free Radic. Biol. Med*. **2019**, *141*, 475-482.
12. Yang, G., **Komaki, Y.**, Ibuki, Y. Aldehyde-mediated protein degradation is responsible for the inhibition of nucleotide excision repair by cigarette sidestream smoke. *Mutat. Res.* **2018**, *834*, 42-50

13. **Komaki, Y.**, Simpson, A. M.-A. Choe, J. K., Plewa, M. J., Mitch, W. A. Chlorotyrosines versus volatile byproducts from chlorine disinfection during washing of spinach and lettuce. *Environ. Sci. Technol.* **2018**, *52*(16), 9361-9369.
14. **Komaki, Y.**, Plewa, M. J. Investigation of nuclear enzyme topoisomerase as a putative molecular target of monohaloacetonitrile disinfection by-products. *J. Environ. Sci.* **2017**, *58*, 231-238.
15. Kimura, S. Y., Vu, T. N., **Komaki, Y.**, Plewa, M. J., Mariñas, B. J. Acetonitrile and *N*-chloroacetamide formation from the reaction of acetaldehyde and monochloramine. *Environ. Sci. Technol.* **2015**, *49*(16), 9954-9963.
16. Yang, Y.*, **Komaki, Y.***, Kimura, S. Y.*, Hu, H.-Y., Wagner, E. D., Mariñas, B. J., Plewa, M. J. Toxic impact of bromide and iodide on drinking water disinfected with chlorine or chloramines. *Environ. Sci. Technol.* **2014,** *48*(20), 12362-12369. (*These authors contributed equally to this work)
17. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Toxicity of drinking water disinfection byproducts: Cell cycle alterations induced by the monohaloacetonitriles. *Environ. Sci. Technol.* **2014,** *48*(19), 11662-11669.
18. Kimura, S. Y., **Komaki, Y.**, Plewa, M. J., Mariñas, B. J. Chloroacetonitrile and *N*,2-dichloroacetamide formation from the reaction of chloroacetaldehyde and monochloramine in water. *Environ. Sci. Technol.* **2013**, *47*(21), 12382-12390.
19. Saenz de Jubera, A. M., Herbison, J. H., **Komaki, Y.**, Plewa, M. J., Moore, J. S., Cahill, D. G., Mariñas, B. J. Development and performance characterization of a polyamide nanofiltration membrane modified with covalently bonded aramide dendrimers. *Environ. Sci. Technol.* **2013**, *47*(15), 8642-8649.
20. Hsiao, A.*, **Komaki, Y.***, Imaad, S. M., Mariñas, B. J., Plewa, M. J., Liu, G. L. Cytotoxicity analysis of water disinfection byproducts with a micro-pillar microfluidic device. *Lab Chip* **2012,** *12*(20), 3891-3900. (*These authors contributed equally to this work)
21. **Komaki, Y.**, Pals, J., Wagner, E. D., Mariñas, B. J., Plewa, M. J. Mammalian cell DNA damage and repair kinetics of monohaloacetic acid drinking water disinfection by-products. *Environ. Sci. Technol.* **2009**, *43*(21), 8437-8442.
22. **Kumada, Y.**, Kisa, T., Ohkuma, T., Kuwano, Y., Tanaka, H., Shimizu, Y. Effects of surfactant addition on PAHs degradation and microbial community. *Journal of EICA* **2007**, *12*(2/3), 45-52. (*in Japanese*)

PRESENTATIONS

Conference Oral Presentations

1. Mori, Y., **Komaki, Y.**, Toyooka, T., Ibuki, Y. Heat stress-induced deoxyribonuclease I release and phosphorylation of histone H2AX. The 95th Annual Meeting of the Japanese Biochemical Society, Nagoya, Japan, November 9-11, 2022.
2. Suzuki, T., Amano, M., **Komaki, Y.**, Ibuki, Y. Delay of nucleotide excision repair and the formation of DSBs in senescence cells. The 95th Annual Meeting of the Japanese Biochemical Society, Nagoya, Japan, November 9-11, 2022.
3. Suzuki, T., Amano, M., **Komaki, Y.**, Ibuki, Y. Delay of nucleotide excision repair and DSBs formation in senescence cells. The 65th Annual Meeting of the Japanese Radiation Research Society, Osaka, Japan, September 15-17, 2022.
4. Ibuki, Y., **Komaki, Y.**, Kumagai, H. Delayed UV-induced DNA damage repair and translocation of XPC to nucleolus by heat stress. The 44th Annual Meeting of the Japanese Society for Photomedicine and Photobiology, Tokyo, Japan, June 25-26, 2022.

5. **Komaki,Y.**, Suganuma, K., Ibuki, Y. The role of glutathione in the toxicity of disinfection by-product dibromoacetonitrile. The 56th Annual Conference of Japan Society on Water Environment, March 16-18, 2022. (*Online*)
6. Suzuki, T., Amano, M., **Komaki, Y.**, Ibuki, Y. Senescence delayed UV-induced DNA damage repair in association with DDR factor phosphorylated histone H2AX. The 94th Annual Meeting of the Japanese Biochemical Society, Japan, November 3-5, 2021. (*Online*)
7. Mori, Y., **Komaki, Y.**, Fukuda, T., Toyooka, T., Ibuki, Y. Heat stress-caused actin disruption and phosphorylation of histone γ-H2AX. The 64th Annual Meeting of the Japanese Radiation Research Society, Japan, September 22-24, 2021. (*Online*)
8. Okuya, T., Ono, S., **Komaki, Y.**, Ibuki, Y. Histone modification and UV-induced DNA damage repair response by cigarette sidestream smoke. The 42nd Annual Meeting of the Japanese Society for Photomedicine and Photobiology, Online, Japan, January 22-23, 2021.
9. Mori, Y., Fukuda, T., **Komaki, Y.**, Toyooka, T., Ibuki, Y. Heat stress-induced cytoskeleton change and phosphorylation of histone H2AX. The 49th Annual Meeting of the Japanese Environmental Mutagen Society, Numadzu, Japan, November 26-27, 2020.
10. Suzuki, T., Amano, M., **Komaki, Y.**, Ibuki, Y. Senescence-associated alteration of UV-induced histone γ-H2AX. The 49th Annual Meeting of the Japanese Environmental Mutagen Society, Numadzu, Japan, November 26-27, 2020.
11. Okuya, T., Yang, G., **Komaki, Y.**, Ibuki, Y. Cigarette side stream smoke decrease UV-induced DNA damage repair and changes histone levels. The 49th Annual Meeting of the Japanese Environmental Mutagen Society, Numadzu, Japan, November 26-27, 2020.
12. **Komaki, Y.**, Ibuki, Y. Nucleotide excision repair inhibition by dibromoacetonitrile. The 54th Annual Meeting of the Japan Society on Water Environment, Morioka, Japan, March 16-18, 2020. (*Cancelled*)
13. **Komaki, Y.**, Ibuki, Y. Nucleotide excision repair disruption by dibromoacetonitrile. The 6th Asian Congress on Environmental Mutagens and the 48th Annual Meeting of the Japanese Environmental Mutagen Society, Tokyo, Japan, November 18-20, 2019.
14. Amano, M., **Komaki, Y.**, Ibuki, Y. Histone modification change with aging and repair response to UV-induced DNA damage. The 92nd Annual Meeting of the Japanese Biochemical Society, Yokohama, Japan, September 18-20, 2019.
15. Amano, M., **Komaki, Y.**, Ibuki, Y. Histone modification change with aging and repair response to UV-induced DNA damage. The 41st Annual Meeting of the Japanese Society for Photomedicine and Photobiology, Toyama, Japan, July 19-20, 2019.
16. Tanaka, M., **Komaki, Y.**, Toyooka, T., Ibuki, Y. HDAC inhibitor enhances γ-H2AX induced by benzo[a]pyrene. The 47th Annual Meeting of the Japanese Environmental Mutagen Society, Kyoto, Japan, November 1-2, 2018.
17. Mitch, W., **Komaki, Y.**, Choe, J. K. When ROS are not ROS: The effect of salts on the degradation of protein. The 255th American Chemical Society (ACS) National Meeting, New Orleans, LA, USA, March 18-22, 2018.
18. Mitch, W., **Komaki, Y.**, Simpson, A. Chlorotyrosines versus volatile byproducts from disinfection during washing of lettuce and spinach. The 255th ACS National Meeting, New Orleans, LA, USA, March 18-22, 2018.
19. **Komaki, Y.**, Plewa, M. J. Investigation of molecular target of haloacetonitrile disinfection byproducts. The 52nd Annual Meeting of the Japan Society on Water Environment, Sapporo, Japan, March 15-17, 2018.
20. Mitch, W., **Komaki, Y.**, Simpson, A. Chlorotyrosines as byproducts of disinfection during washing of lettuce and spinach. Pittcon 2018, Orlando, FL, USA, February 26-March 1, 2018.

21. **Komaki, Y.**, Choe, J. K., Mitch, W. Formation of vegetable-derived disinfection byproducts. The 253rd ACS National Meeting, San Francisco, CA, USA, April 2-6, 2017.
22. **Komaki, Y.**, Choe, J. K., Mitch, W. Impact of halides on the degradation of amino acid residues in biomolecules. The 253rd ACS National Meeting, San Francisco, CA, USA, April 2-6, 2017.
23. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Cell cycle alterations induced by haloacetonitrile disinfection byproducts. The 248th ACS National Meeting, San Francisco, CA, USA, August 10-14, 2014.
24. **Komaki, Y.**, Kimura, S. Y., Yang, Y., Mariñas, B. J., Wagner, E. D., Plewa, M. J. Comparative toxicity of free and combined chlorination with different levels of halide ions. The 248th ACS National Meeting, San Francisco, CA, USA, August 10-14, 2014.
25. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Analyses of cell cycle alteration induced by haloacetonitriles: Toxicity of drinking water disinfection by-products. The 4th Annual Postdoctoral Research Symposium. University of Illinois, Urbana, IL, USA, January 31, 2014.
26. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Measurement of genotoxicity induction and subsequent repair efficiency rate of monohaloacetonitriles using mammalian cells. The 4th International Water Association Asia-Pacific Region Conference, Tokyo, Japan, October 2-6, 2011.
27. **Kumada, Y.**, Kisa, T., Ohkuma, T., Kuwano, Y., Shimizu, Y. Surfactant enhanced bioremediation of oil contaminated soil. The 2nd International Conference on Environmental Science and Technology, Houston, TX, USA, August 19-22, 2006.
28. **Kumada, Y.**, Kisa, T., Ohkuma, T., Kuwano, Y., Tanaka, H., Shimizu, Y. Evaluation on the effect of surfactants for bioremediation of oil contaminated soil. The 28th Symposium of the Association of Environmental and Sanitary Engineering Research, Kyoto, Japan, July 18-19, 2006 (*in Japanese*).
29. **Kumada, Y.**, Kisa, T., Kuwano, Y., Koshikawa, H., Tashiro, E., Yasukagawa, T., Shimizu, Y. Microbial community analysis of PAHs degradation in soil. Korea-Japan Joint Seminar on Geoenvironmental Engineering, Seoul, South Korea, June 2005.

Conference Poster Presentations

30. **Komaki, Y.,** Ibuki, Y. Cigarette sidestream smoke-induced cellular senescence and associated role of histone H2AX. The 51st Annual Meeting of the Japanese Environmental Mutagen and Genome Society, Hiroshima, Japan, November 15-16, 2022.
31. Suzuki, T., **Komaki, Y.,** Ibuki, Y. Formaldehyde induces premature senescence and delayed nucleotide excision repair. The 51st Annual Meeting of the Japanese Environmental Mutagen and Genome Society, Hiroshima, Japan, November 15-16, 2022.
32. Mori, Y., **Komaki, Y.,** Toyooka, T., Ibuki, Y. A novel mechanism of γ-H2AX induction via nuclease release from endoplasmic reticulum. The 51st Annual Meeting of the Japanese Environmental Mutagen and Genome Society, Hiroshima, Japan, November 15-16, 2022.
33. Narimichi, M., **Komaki, Y.**, Ibuki, Y. DNA double strand breaks formation and DNA release to cytosol by co-exposure to long-wavelength UVA1 and UVB. The 95th Annual Meeting of the Japanese Biochemical Society, Nagoya, Japan, November 9-11, 2022.
34. Ito, R., **Komaki, Y.**, Ibuki, Y. Relationship between cellular senescence and MMP-1 elevated by cigarette smoke and ultraviolet rays. The 95th Annual Meeting of the Japanese Biochemical Society, Nagoya, Japan, November 9-11, 2022.
35. Suzuki, T., Amano, M., **Komaki, Y.**, Ibuki, Y. Delay of nucleotide excision repair and the formation of DSBs in senescence cells. The 95th Annual Meeting of the Japanese Biochemical Society, Nagoya, Japan, November 9-11, 2022.

36. Mori, Y., **Komaki, Y.**, Toyooka, T., Ibuki, Y. Heat stress-induced deoxyribonuclease I release and phosphorylation of histone H2AX. The 95th Annual Meeting of the Japanese Biochemical Society, Nagoya, Japan, November 9-11, 2022.
37. Mori, Y., Suzuki, T., Toyooka, T., **Komaki, Y.**, Ibuki Y. Development of assessment method for tissue-aging using histone H2AX phosphorylation induced by heat stress. The 94th Annual Meeting of the Japanese Biochemical Society, Japan, November 3-5, 2021. (*Online*)
38. Suganuma, K, **Komaki, Y.**, Ibuki, Y. Disinfection byproducts dibromoacetonitrile facilitated cellular senescence and affected DNA damage repair. The 94th Annual Meeting of the Japanese Biochemical Society, Japan, November 3-5, 2021. (*Online*)
39. Kumagai, H., Mori, Y., **Komaki, Y.**, Ibuki, Y. Elevated skin temperature inhibited UV-induced DNA damage repair and the phosphorylation of histone H2AX. The 94th Annual Meeting of the Japanese Biochemical Society, Japan, November 3-5, 2021. (*Online*)
40. Mori, Y., Suzuki, T., Toyooka, T., **Komaki, Y.**, Ibuki, Y. A novel assessment method for tissue-aging using histone H2AX phosphorylation induced by heat stress. The 50th Anniversary Annual Meeting of the Japanese Environmental Mutagen Genome Society, Yokosuka, Japan, November 1-2, 2021.
41. Suzuki, T., Amano, M., **Komaki, Y.**, Ibuki, Y. Senescence-caused change of γ-H2AX induction after UV irradiation―relationship with delayed NER-protein release from damaged sites. The 50th Anniversary Annual Meeting of the Japanese Environmental Mutagen Genome Society, Yokosuka, Japan, November 1-2, 2021.
42. **Komaki, Y.**, Ibuki, Y. Cigarette sidestream smoke induced cellular senescence and altered DNA damage response. The 50th Anniversary Annual Meeting of the Japanese Environmental Mutagen Genome Society, Yokosuka, Japan, November 1-2, 2021.
43. Okuya, T., **Komaki, Y.**, Ibuki, Y. Alteration of γ-H2AX by glucose environment. The 50th Anniversary Annual Meeting of the Japanese Environmental Mutagen Genome Society, Yokosuka, Japan, November 1-2, 2021.
44. Ibuki, Y., Komaki, Y., Yang, G., Toyooka, T. Long-wavelength UVA enhances UVB-induced cell death in cultured keratinocytes: DSB formation and survival signal suppression. The 64th Annual Meeting of the Japanese Radiation Research Society, Japan, September 22-24, 2021. (*Online*)
45. Suganuma, K., **Komaki, Y.**, Ibuki, Y. Relationship between nucleotide excision repair inhibition and glutathione depletion by dibromoacetonitrile. The 55th Annual Meeting of the Japan Society on Water Environment, Kyoto, Japan, March 10-12, 2021. (*Online*)
46. **Komaki, Y.**, Ibuki, Y. Nucleotide excision repair disruption by dibromoacetonitrile. The 6th Asian Congress on Environmental Mutagens and the 48th Annual Meeting of the Japanese Environmental Mutagen Society, Tokyo, Japan, November 18-20, 2019.
47. Ibuki,Y., Fukuda, T., **Komaki, Y.** Acid condition delays nucleotide excision repair. The 6th Asian Congress on Environmental Mutagens and the 48th Annual Meeting of the Japanese Environmental Mutagen Society, Tokyo, Japan, November 18-20, 2019.
48. Shindo, T., **Komaki, Y.**, Ibuki, Y. Chlorination of bisphenol A changed histone acetylation and DNA damage response. The 6th Asian Congress on Environmental Mutagens and the 48th Annual Meeting of the Japanese Environmental Mutagen Society, Tokyo, Japan, November 18-20, 2019.
49. Fukuda, T., **Komaki, Y.**, Ibuki, Y. Actin disruption causes DNA double strand breaks. The 6th Asian Congress on Environmental Mutagens and the 48th Annual Meeting of the Japanese Environmental Mutagen Society, Tokyo, Japan, November 18-20, 2019.
50. Ibuki, Y., Ono, S., Okuya, T., **Komaki, Y**. Energy metabolism changes histone H2AX phosphorylation after UV irradiation. The 62nd Annual Meeting of the Japanese Radiation Research Society, Kyoto, Japan, November 14-16, 2019.

51. Amano, M., **Komaki, Y.**, Ibuki, Y. Aging altered histone modification and repair response to UV-induced DNA damage. The 24th Shizuoka Forum on Health and Longevity, Shizuoka, Japan, November 9-10, 2019.
52. Okuya, T., **Komaki, Y.**, Ibuki, Y. Repair response to DNA damage altered by glucose concentration. The 24th Shizuoka Forum on Health and Longevity, Shizuoka, Japan, November 9-10, 2019.
53. Fukuda, T., **Komaki, Y.**, Ibuki, Y. Acidic condition delays nucleotide excision repair. The 24th Shizuoka Forum on Health and Longevity, Shizuoka, Japan, November 9-10, 2019.
54. Ono, S., **Komaki, Y.**, Ibuki, Y. The effect of glucose concentration in culture medium on phosphorylation of histone H2AX induced by ultraviolet irradiation. The 92nd Annual Meeting of the Japanese Biochemical Society, Yokohama, Japan, September 18-20, 2019.
55. Amano, M., **Komaki, Y.**, Ibuki, Y. Histone modification change with aging and repair response to UV-induced DNA damage. The 92nd Annual Meeting of the Japanese Biochemical Society, Yokohama, Japan, September 18-20, 2019.
56. Yang, G., **Komaki, Y.**, Ibuki, Y. Formaldehyde inhibits UV induced phosphorylation of histone H2AX. The 16th International Congress of Radiation Research, Manchester, UK, August 25-29, 2019.
57. **Komaki, Y.**, Ibuki, Y. Dibromoacetonitrile disrupts nucleotide excision repair. Gordon Research Conference on Water Disinfection, Byproducts and Health, South Hadley, MA, July 28-August 2, 2019.
58. Yang, G., **Komaki, Y.**, Ibuki, Y. Cigarette sidestream smoke delays nucleotide excision repair: inhibited accumulation of repair proteins at DNA lesions. The 23rd Shizuoka Forum on Health and Longevity, Shizuoka, Japan, November 16-17, 2018.
59. Tanaka, M., **Komaki, Y.**, Toyooka, T., Ibuki, Y. HDAC inhibitor enhances γ-H2AX induced by benzo[a]pyrene. The 47th Annual Meeting of the Japanese Environmental Mutagen Society, Kyoto, Japan, November 1-2, 2018.
60. Hirai, M., **Komaki, Y.**, Ibuki, Y. Phosphorylation of histone H3 at serine 10 after exposure to UVA1, Consortium of Biological Sciences (ConBio) 2017, Kobe, Japan, December 6-9, 2017
61. **Komaki, Y.**, Choe, J. K., Mitch, W. A. Application of disinfection chemistry to biochemistry: Reactive halogen species as a potential culprit of oxidative stress in biological systems. Gordon Research Conference on DBPs, South Hadley, MA, July 30-August 4, 2017.
62. Simpson, A., **Komaki, Y.**, Choe, J. K., Mitch, W. A. Juxtaposing volatile DBP formation with the formation of tyrosine derivatives during the chlorination of spinach and lettuce. Gordon Research Seminar & Conference on DBPs, South Hadley, MA, July 29-August 4, 2017.
63. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Inhibition of topoisomerase enzyme by haloacetonitrile disinfection byproducts. Gordon Research Seminar & Conference on DBPs, South Hadley, MA, August 8-14, 2015.
64. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Biological mechanism of the toxicity of haloacetonitrile disinfection byproducts. Association of Environmental Engineering and Science Professors Research & Education Conference, New Haven, CT, June 13-16, 2015.
65. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. DNA damage induction, DNA repair, and cell cycle alterations by monohalogenated disinfection byproducts: Haloacetic acids and haloacetonitriles. The 248th ACS National Meeting, San Francisco, CA, August 10-14, 2014.
66. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Cell cycle blockage effect induced by haloacetonitriles in Chinese hamster ovary cells. Association of Environmental Engineering and Science Professors Research & Education Conference, Golden, CO, July 14-16, 2013.
67. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Toxicity of haloacetonitrile DBPs. Gordon Research Conference on DBPs. South Hadley, MA, August 5-10, 2012.

68. **Komaki, Y.**, Mariñas, B. J., Plewa, M. J. Elucidating DNA repair kinetics of haloacetonitriles in Chinese hamster ovary cells and effect on cell cycle arrest. The 42nd Environmental Mutagen Society Annual Meeting, Montréal, Québec, October 15-19, 2011.
69. **Komaki, Y.**, Pals, J., Wagner, E. D., Mariñas, B. J., Plewa, M. J. Comparative DNA damage and repair kinetics study of monohaloacetonitriles in mammalian cells. The 41st Environmental Mutagen Society Annual Meeting, Fort Worth, TX, October 23-27, 2010.
70. **Komaki, Y.**, Kimura, S., Pals, J., Wagner, E. D., Plewa, M. J., Mariñas, B. J. DNA repair kinetics study of monohaloacetonitriles in mammalian cells. The 239th ACS National Meeting, San Francisco, CA, March 21-25, 2010.
71. **Komaki, Y.**, Pals, J., Wagner, E. D., Mariñas, B. J., Plewa, M. J. Comparative DNA damage and repair kinetics study in mammalian cells by chloro-, bromo-, and iodoacetic acid. The 40th Environmental Mutagen Society Annual Meeting, St. Louis, MO, October 24-28, 2009.
72. **Komaki, Y.**, Pals, J., Wagner, E. D., Mariñas, B. J., Plewa, M. J. Comparative DNA damage and repair kinetics study in mammalian cells by chloro-, bromo-, and iodoacetic acid. Gordon Research Conference on DBPs. South Hadley, MA, August 9-14, 2009.
73. Pals, J., **Komaki, Y.**, Wagner, E. D., Mariñas, B. J., Plewa, M. J. Comparative DNA damage and repair kinetics study in mammalian cells by chloro-, bromo-, and iodoacetic acid. Material Research Society Spring Meeting, San Francisco, CA, April 13-17, 2009.
74. **Kumada, Y.**, Kimura, S., Mariñas, B. J., Pals, J., Wagner, E. D., Plewa M. J. DNA damage and repair kinetics in mammalian cells by reactants, intermediates and products associated with the reaction of combined chlorine and formaldehyde in drinking water. The 235th ACS National Meeting, New Orleans, LA, April 6-10, 2008.
75. **Kumada, Y.**, Kisa T., Kuwano, Y., Koshikawa, H., Tashiro, E., Yasukagawa, T., Shimizu, Y. Microbial community analysis in PAHs degradation experiment for oil contaminated soil. Workshop on Groundwater and Soil Contamination and Prevention Measures against those Contamination, Chiba, Japan, June 2005 (*in Japanese*).

INVITED TALKS

1. Komaki, Y. The future of bioassay – DNA damage induction and repair of drinking water disinfection byproducts. The 23rd Japan Society on Water Environment Symposium, Japan, September 9-10, 2020. (*Online*)
2. Komaki, Y. Disinfection byproducts and their toxicity evaluations in wastewater reuse. The 2nd Lecture Series on Leading Edge Wastewater Technologies, Environmental Engineering and Surrounding Areas, Japanese Society of Civil Engineers, Tokyo, Japan, January 31, 2019.
3. Komaki, Y. Protecting water and human health: Understanding toxicological property of haloacetonitrile disinfection byproducts. The George Washington University, DC, August 7, 2017.
4. Komaki, Y. Characterize the formation of volatile disinfection byproducts and chlorinated tyrosine during fresh produce washing. RIKEN Sakura Symposium, RIKEN, Yokohama, Japan, March 29-30, 2017.
5. Komaki, Y. Toward safe drinking water: How can toxicity assays play a role in environmental engineering? Civil and Environmental Engineering Rising Stars workshop, Massachusetts Institute of Technology, Cambridge, MA, October 15-16, 2015.

AWARDS & HONORS

Selected for 15 Oral Presenters at RIKEN Sakura Symposium, RIKEN 2017

Japan Science for the Promotion of Science Postdoctoral Fellowships for Research Abroad (189 out of 977, ~$100,000)	2016-2018
Elected Co-Chair of the 5th Disinfection Byproducts Gordon Research Seminar	2017
Selected for Civil and Environmental Engineering Rising Stars workshop (20 out of 122), Massachusetts Institute of Technology	2015
"Outstanding" in the List of Teachers Ranked as Excellent by Their Students (CEE 449: Environmental Engineering Laboratory), Center for Innovation in Teaching and Learning, University of Illinois at Urbana-Champaign	2013
Gordon Conference Young Researcher Fellowship	2012
Best poster award, The 18th Annual Environmental Engineering and Science Spring Symposium, University of Illinois at Urbana-Champaign	2012
Racheff Graduate Student Travel Award, Environmental Engineering Science, University of Illinois at Urbana-Champaign	2009, 2011 & 2012
WaterCAMPWS Student Leadership Council Conference Travel Grant	2009
Student Travel Award, Environmental Mutagen Society	2009
Graduate College Conference Travel Award (declined)	2009
Invited to the Phi Kappa Phi Honor Society	2009
Heiwa Nakajima Foundation Scholarship (24 out of 227, ~$48,000)	2007-2009
Exempt from repayment (~$9,000), Japanese Student Services Organization scholarship loan program	2007
Honor admission to the graduate college of Kyoto University	2005

PROFESSIONAL SERVICES & ACTIVITIES

Academic Service	Organizing Committee, The 47th Annual Meeting of the Japanese Environmental Mutagen Society	Nov. 2018
	Co-chair, Gordon Research Seminar on DBPs (elected)	July 2017
	Member, WASH-Toxics Interdisciplinary Working Group	Since 2016
	Discussion Leader, Gordon Research Seminar on DBPs	August 2015
	Seminar Coordinator, Environmental Engineering Program Seminar (CEE 595AG), UIUC	2014-2015
	Advisor to Student CEE 595AG Seminar Committee, UIUC	2014- 2015
	Graduate Student Organizer, Water for Life: Addressing a 21st Century Crisis, Graduate College Focal Point Project, UIUC	2010-2011
	Student Officer, Phi Kappa Phi Honor Society, UIUC	2009
Departmental Activity	Member, Cultural Awareness and Speech Enhancement, UIUC	2007-2012
	Coordinator, Mariñas research group meeting, UIUC	2008
Journal Review	*Chemosphere* *Environmental and Molecular Mutagenesis* *Environmental Science and Technology* *Environment International* *Frontiers of Environmental Science and Engineering* *Genes and Environment* *Journal - American Water Works Association* *Journal of Environmental Sciences* *Journal of Hazardous Materials* *Journal of Water and Health*	

	Nature Sustainability *Ozone Science & Engineering* *Science of Total Environment* *Water Research*	
Membership	Japan Society on Water Environment The Molecular Biology Society of Japan The Japanese Environmental Mutagen Society	
Community	Volunteer for Japan Bio Community forum	2016
Service & Activity	Volunteer for Community and Campus Day of Service	2014
	Volunteer for Boneyard Creek Community Day litter clean up event	2012
	Engineering open house, exhibition of "Drinking Water Treatment," 2nd place in the real-world division	2009