

2018 水環境制御研究室 研究業績一覧

○ 学術雑誌論文/Peer-reviewed papers

* 英文雑誌

- (1) Kazuma Hamaguchi, Daniel Kuo, Miaomiao Liu, Takeshi Sakamoto, Masafumi Yoshio (2018) Nanostructured Virus Filtration Membranes Based on Two-Component Columnar Liquid Crystals, ACS Macro Letters, Vol.8, pp.24-30.
- (2) Pornkulwat, P., Kurisu, F., Soonglerdsongpha, S., Banjongproo, P., Srithep, P. and Limpiyakorn, T. (2018) Incorporation of $^{13}\text{C}\text{-HCO}_3^-$ by ammonia-oxidizing archaea and bacteria during ammonia oxidation of sludge from a municipal wastewater treatment plant, Applied Microbiology and Biotechnology, Vol.102, No.24, pp.10767-10777.
- (3) Jia Niu, Ikuro Kasuga, Futoshi Kurisu, and Hiroaki Furumai (2018) Effects of backwashing on granular activated carbon with ammonium removal potential in a full-scale drinking water purification plant, Water, Vol.10 (12), 1830.
- (4) Vu Duc Canh, Hideki Osawa, Kentaro Inoue, Ikuro Kasuga, Satoshi Takizawa, Hiroaki Furumai, and Hiroyuki Katayama (2018) Ferrihydrite treatment to mitigate inhibition of RT-qPCR virus detection from large-volume environmental water samples, Journal of Virological Methods, Vol.263, pp.60-67.
- (5) Phungsai Phanwatt, Futoshi Kurisu, Ikuro Kasuga and Hiroaki Furumai (2018) Changes in dissolved organic matter composition and disinfection byproduct precursors in advanced drinking water Treatment Processes, Environmental Science and Technology, Vol.52, No.6, pp.3392-3401.
- (6) Poopipatta Chomphunnt, Misaki Nakajima, Ikuro Kasuga, Futoshi Kurisu, Hiroyuki Katayama, Hiroaki Furumai (2018) Spatial-temporal distribution of PPCPs and microbial fecal indicators as sewage pollution markers in Tokyo coastal area after rainfall events, Journal of Water and Environment Technology, Vol.16, No.3, pp.149-160. **[Best paper award (Metawater award)]**
- (7) Ryuichi Kato, Tatsuya Asami, Etsuko Utagawa, Hiroaki Furumai, Hiroyuki Katayama (2018) Pepper mild mottle virus as a process indicator at drinking water treatment plants employing coagulation-sedimentation, rapid sand filtration, ozonation, and biological activated carbon treatments in Japan, Water Research, Vol.132, pp.61-70.
- (8) Vu-Duc Canh, Ikuro Kasuga, Hiroaki Furumai, and Hiroyuki Katayama (2018) Impact of various humic acids on EMA-RT-qPCR to selectively detect intact viruses in drinking water, Journal of Water and Environment Technology, Vol.16, No.2, pp.83-93.
- (9) Haramoto, E., Kitajima, M., Hata, A., Torrey, J.R., Masago, Y., Sano, D., Katayama, H. (2018) A review on recent progress in the detection methods and prevalence of human enteric viruses in water. Water Res. 135, 168–186. doi:<https://doi.org/10.1016/j.watres.2018.02.004>
- (10) CHUTIVISUT, P., ISOBE, K., POWTONGSOOK, S., PUNGRASMI, W. and KURISU, F. (2018) Distinct Microbial Community Performing Dissimilatory Nitrate Reduction to Ammonium (DNRA) in a High C/NO₃- Reactor, Microbes and Environments.

* 和文雑誌

- (1) 鈴木元彬, Chomphunnt Poopipatta, 春日郁朗, 古米弘明(2018)隅田川上流部から台場周辺海域における降雨後の糞便汚染状況と指標微生物の相互関係, 土木学会論文集(G), III_169-III_179.
- (2) 賀須井直規, 中谷隼, 春日郁朗, 古米弘明(2018)数理最適化を用いた広域化水道システムの長期運用・更新計画立案の手法開発, 土木学会論文集(G), III_111-III_122. **【第55回環境工学研究フォーラム論文賞】**
- (3) 李星愛, 古米弘明(2018)管渠が集約化された排水区の流出過程に適用する非線形貯留池モデルパラメータの補正方法, 下水道協会誌, Vol. 55 No. 664, p80-86

- (4) 李星愛、古米弘明(2018) 管渠集約区域の排水能力を考慮した下水道ネットワークモデルの実時間浸水解析への適用、下水道協会誌、Vol. 55 No. 670, p116-123
- (5) 吉川美穂, 張銘, 栗栖太, 豊田剛己(2018) 嫌気・好気連続処理におけるトルエン、ベンゼン及びジクロロメタンの好気分解微生物の安定同位体プローブ法による同定, 土木学会論文集 G(環境)

○ 国際学会発表/Presentations at International Conferences

- (1) J.R. Torrey, N. Kadokawa, Y. Matsui, C.P. Gerba and H. Katayama (2018) Using an indigenous plant virus to evaluate virus removal efficiency of a pilot scale ceramic membrane with coagulation, IWA World Water Congress. (16 - 21 Sep, Tokyo)
- (2) Takashi Hijikata, Hiroyuki Katayama, and Hiroaki Furumai (2018) Occurrence of enteric virus and microbial indicators in Tokyo coastal area after a CSO event, IWA World Water Congress. (16 - 21 Sep, Tokyo)
- (3) Vu Duc Canh, Hiroyuki Katayama, Hiroaki Furumai (2018) Effectiveness of sodium deoxycholate pre-treatment to improve viability RT-qPCR for discrimination of inactivated viruses in drinking water, The 6th Food and Environmental Virology Conference (7 - 10 Oct, Phoenix, US) [Oral]
- (4) Midori Yasui, T. Yonetani, L. Ikner, Hiroaki Furumai, Hiroyuki Katayama (2018) Removal efficiency of indigenous F-specific RNA phages in inline coagulation and micro-filtration system affected by different coagulation characteristics, The 6th Food and Environmental Virology Conference (7 - 10 Oct, Phoenix, US) [Oral]
- (5) Akihiko Hata, Shotaro Torii, and Hiroyuki Katayama (2018) Development of continuous flow incubation system to detect single infective coliphage from a large volume water sample, The 6th Food and Environmental Virology Conference (7 - 10 Oct, Phoenix, US) [Oral]
- (6) Shotaro Torii, Takashi Hashimoto, Do Thuan An, Hiroaki Furumai, Hiroyuki Katayama (2018) Impact of intermittent operation on virus removal by residential RO membrane, The 6th Food and Environmental Virology Conference (7 - 10 Oct, Phoenix, US) [Oral] [Best student oral presentation award]
- (7) Yoshihiro Ishi, Futoshi Kurisu, Ikuro Kasuga, and Hiroaki Furumai (2018) Non-target screening of E. coli's growth substrates in river waters using high resolution mass spectrometry, ISME17, p.. (12-14 August, Leipzig, Germany)
- (8) Thao Nguyen, Kahi Nguyen, Hiroaki Furumai, Hiroyuki Katayama (2018) Different Fates of FRNA Phage Genotypes in a Sequencing Batch Reactor Treating Domestic Wastewater in a Satellite City of Hanoi, WET2018, p.79 (4A-08). (14-15 July, Ehime Univ. Matsuyama)
- (9) Vitharuch Yuthawong, Ikuro Kasuga, Futoshi Kurisu, and Hiroaki Furumai (2018) Molecular-level changes in dissolved organic matter compositions of Lake Inba water by KMnO4 oxidation assessed by Orbitrap mass spectrometry, Water and Environment Technology Conference 2018, 3B-14. (14-15 July, Ehime University, Ehime) [Poster]
- (10) Chomphonut Poopipattana, Misaaki Nakajima, Suzuki Motoaki, Ikuro Kasuga, Hiroaki Furumai (2018) Effects of rainfall characteristics and tidal changes on behavior of CSO-derived sewage markers in Odaiba coastal area, Tokyo, Water and Environment Technology Conference 2018, 3C-14. (14-15 July, Ehime University, Ehime) [Poster] [Excellent Presentation Award]
- (11) Ikuro Kasuga, Miyu Suzuki, Futoshi Kurisu, and Hiroaki Furumai (2018) Evaluation of biodegradable organic matter causing regrowth in drinking water, The 3rd International Forum on Asian Water Environment Technology. P.27 (2-3 March, Singapore) [Oral]
- (12) Vitharuch Yuthawong, Ikuro Kasuga, Futoshi Kurisu, and Hiroaki Furumai (2018) Application of high resolution mass spectrometry to characterize dissolved organic matter in a eutrophic lake, The 3rd International Forum on Asian Water Environment Technology, p.30. (2-3 March, Singapore) [Oral]
- (13) Poopipattana Chomphonut, Misaaki Nakajima, and Hiroaki Furumai (2018) Spatial-temporal distribution of PPCPs as sewage markers and their relationship with microbial fecal indicators following a rainfall event in the Tokyo coastal area, The 3rd International Forum on Asian Water Environment Technology, p.62. (2-3 March, Singapore) [Poster]
- (14) Miaomiao Liu, Yu Zhang, and Min Yang (2018) Tetracycline resistance genes in an oxytetracycline production wastewater treatment system, The 3rd International Forum on Asian Water Environment Technology, p.63. (2-3 March, Singapore) [Poster]

○ 国内学会発表/Presentations at Domestic Conferences

- (1) 鈴木元彬, Chomphunut Poopipatta, 春日郁朗, 古米弘明(2018)隅田川上流部から台場周辺海域における降雨後の糞便汚染状況と指標微生物の相互関係, 第 55 回環境工学研究フォーラム, 土木学会論文集(G), III_111-III_122. (12/17-19, 京都)【口頭】
- (2) 賀須井直規, 中谷隼, 春日郁朗, 古米弘明(2018)数理最適化を用いた広域化水道システムの長期運用・更新計画立案の手法開発, 第 55 回環境工学研究フォーラム, 土木学会論文集(G), III_111-III_122. (12/17-19, 京都)【口頭】
- (3) Shotaro Torii, Akihiko Hata, and Hiroyuki Katayama (2018) Presence of chlorine-resistant virus strain leads to insufficient chlorination in drinking water treatment plant, 第 66 回日本ウイルス学会学術集会
- (4) 鳥居将太郎, 橋本崇史, Do Thuan An, 古米弘明, 片山浩之, 繰り返し圧力が家庭用 RO 膜のウイルス除去性能及び完全性に及ぼす影響, 膜シンポジウム 2018, P-32S. (11/3-4, 神戸)【ポスター】【学生賞】
- (5) 栗栖太, Phanwatt Phungsai, Shwetha Acharya, 春日郁朗, 古米弘明(2018)塩素消毒した下水再生水中で再増殖する微生物と消費される有機物との関係, 第 21 回日本水環境学会シンポジウム (9/4-5, 島根)【ポスター】
- (6) 土方貴史, 端昭彦, 井上健太郎, 片山浩之, 古米弘明(2018)ウイルス感染価指標としての F 特異 RNA フェージ GIII の可能性, 第 21 回日本水環境学会シンポジウム (9/4-5, 島根)
- (7) 李星愛, 洪尾欣弘, 古米弘明(2018)降雨に対する下水管内水位と電気伝導度の変動特性と貯留幹線への越流発生との関係, 第 55 回下水道研究発表会講演集, p. (7/24-26, 北九州)【口頭】
- (8) 洪尾欣弘, 佐貴 宏, 李星愛, 古米弘明, 吉村耕平, 田島芳満, 佐藤慎司(2018)レーダ・数値予測雨量を用いた外水・内水氾濫モデルによる都市浸水予測手法の検討, 第 55 回下水道研究発表会講演集, p. (7/24-26, 北九州)【口頭】
- (9) 濱田 真樹, 田所 秀之, 古米弘明(2018)下水道電気設備におけるアセットマネジメントの動向・課題と提言, 第 55 回下水道研究発表会講演集, p. (7/24-26, 北九州)【口頭】
- (10) 森田健二, 大浦昇, 永山幸江, 古米弘明(2018)「泳げる海、お台場」の実現を目指して～官民連携による都市臨海部での環境教育の実践と体験の機会創出、平成 30 年度 日本沿岸域学会研究討論会、p. (7/18, 横浜)
- (11) 中嶋泰介, 春日郁朗, 栗栖太, 古米弘明(2018)長期生分解実験における湖水の溶存有機物組成と細菌群集構造の変化, 第 32 回日本微生物生態学会大会, P1-015. (7/11-13, 沖縄)【ポスター】
- (12) 中嶋泰介, 春日郁朗, 栗栖太, 古米弘明(2018)全国の指定湖沼を対象とした溶存有機物分子組成と細菌群集構造の関連性評価, 第 52 回日本水環境学会年会, p.521. (3/15-17, 札幌)【ポスター】
- (13) 鈴木美有, 春日郁朗, 栗栖太, 古米弘明(2018)微生物再増殖に関わる生分解性有機物の分子組成の推定と高度浄水処理における動態評価, 第 52 回日本水環境学会年会, p.336. (3/15-17, 札幌)【口頭】【クリタ賞】
- (14) 石井淑大, 栗栖太, 春日郁朗, 古米弘明(2018)大腸菌が利用可能な河川水中溶存有機物の四重極-Orbitrap 質量分析計による構造推定, 第 52 回日本水環境学会年会, p.386. (3/15-17, 札幌)【口頭】
- (15) 木場幸一郎, 栗栖太, 春日郁朗, 古米弘明(2018)メタン生成条件下のベンゼン分解における初発代謝反応への UbiD カルボキシラーゼ遺伝子の関与, 第 52 回日本水環境学会年会, p.168. (3/15-17, 札幌)【口頭】
- (16) 鳥井将太郎, 橋本崇史, 古米弘明, 片山浩之(2018)間欠運転による家庭用 RO 膜のウイルス除去性能の低下, 第 52 回日本水環境学会年会, p.342. (3/15-17, 札幌)【口頭】【クリタ賞】
- (17) 井上健太郎, 片山浩之, 古米弘明(2018)新規ウイルス汚染指標 PMMoV の沿岸海域環境における残存性について, 第 52 回日本水環境学会年会, p.105. (3/15-17, 札幌)【口頭】
- (18) Vitharuch Yuthawong, Ikuro Kasuga, Futoshi Kurisu, Hiroaki Furumai(2017) Insights into the Molecular-Level Composition of CODMn in Lake Inba Assessed by Orbitrap Mass Spectrometry, 第 52 回日本水環境学会年会, p.128. (3/15-17, 札幌)【口頭】
- (19) 安井碧, 片山浩之, 古米弘明(2018)野生の F 特異 RNA フェージの凝集性および下水再生処理における除去特性の評価, 第 52 回日本水環境学会年会, p.696. (3/15-17, 札幌)【ポスター】【ライオン賞】

- (20) 鈴木元彬, Chomphunut Poopipattana, 古米弘明, 春日郁朗(2018)隅田川上流部から台場周辺海域における降雨後の糞便汚染指標の消長とその相互関係, 第 52 回日本水環境学会年会, p.644. (3/15-17, 札幌)【ポスター】【ライオン賞】

○ 受賞/Award

- 平成 30 年度 環境省「環境保全功労者表彰」(古米弘明) 2018 年 6 月 13 日
- 平成 29 年度 日本水環境学会 学会賞 (古米弘明) 2018 年 6 月 12 日