

## 2012 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) Parinda Thayanukul, Futoshi Kurisu, Ikuro Kasuga, and Hiroaki Furumai (2012) Evaluation of Microbial Regrowth Potential by Assimilable Organic Carbon in Various Reclaimed Water and Distribution Systems, *Water Research*, Vol.47, No.1, pp. 225-232. (DOI: <http://dx.doi.org/10.1016/j.watres.2012.09.051>)
- (2) Jinyoung Kim and Hiroaki Furumai (2012) Assessment of rainwater availability by building type and water use through GIS-based scenario analysis, *Water Resource Management*, Vol.26, No.6, pp.1499-1511. (DOI:10.1007/s11269-011-9969-9)
- (3) Tomohiro Tobino, Futoshi Kurisu, Ikuro Kasuga, and Hiroaki Furumai (2012) Specificity of randomly generated genomic DNA fragment probes on a DNA array. *FEMS Microbiology Letters*, 328(1), 86-89.
- (4) Hiroki Masumoto, Futoshi Kurisu, Ikuro Kasuga, Dieter M. Tourlousse, and Hiroaki Furumai (2012) Complete mineralization of benzene by a methanogenic enrichment culture and effect of putative metabolites on the degradation, *Chemosphere*, 86(8), 822-828.

#### \* 和文雑誌

- (1) 舛本弘毅, 栗栖太, 春日郁朗, 古米弘明(2012)メタン生成嫌気ベンゼン分解集積培養系に及ぼす有機酸と温度の影響, *水環境学会誌*, Vol.35, No.12, pp.197-204.
- (2) 小島啓輔, 佐野翔一, 古米弘明(2012)住宅地道路排水由来の重金属および窒素の汚濁負荷に対する路面堆積物および大気降下物の寄与, *水環境学会誌*, Vol.35, No.8, pp.119-126.
- (3) 金 鎮英, 古米 弘明 (2012) 建物用途別の雑用水需要量を考慮した雨水利用ポテンシャルの評価, *用水と廃水*, Vol.54, No.2, pp.127-135.
- (4) 端昭彦, 稲葉愛美, 片山浩之, 古米弘明. 2012. 震災後の石巻沿岸域における腸管系ウイルス及び指標微生物の検出と検出阻害評価. *土木学会論文集 G (環境)*. 68 (7)(環境工学研究論文集. 49): III-285-III-296.

### ○ 国際学会発表/Presentations at International Conferences

- (1) A. Hata, H. Katayama, H. Furumai. 2012. Improvement of virus detection efficiency by removing organic matters in virus concentrate. The 4th Asia-Pacific Young Water Professionals Conference 2012. (7-10 December, Tokyo, Japan) [Oral]
- (2) Rajendra Khanal, Hiroaki Furumai, Fumiyuki Nakajima (2012) Assessment of urban road dust toxicity as a non-point pollution source contaminating water environment, The 4<sup>th</sup> IWA Asia-Pacific Young Water Professionals Conference, pp.97-100. (7-10 December, Tokyo, Japan) [Oral]
- (3) Manami Inaba, Hiroyuki Katayama, Tran Thi Viet Nga, Hiroaki Furumai (2012) Detection of genus Kobuvirus for evaluation as virus indicator for fecal contamination source tracking from Nhue River in Hanoi, Vietnam, The 10<sup>th</sup> International Symposium on Southeast Asian Water Environment, pp.203-209. (8-10 November, Hanoi, Vietnam) [Oral]

- (4) Sengyun Kim, Iwato Amano, Kyoungjin An, Jatuwat Sangsanont (2012) Access to basic human needs in times of emergency: The case of the 2011 Thailand flood, The 10<sup>th</sup> International Symposium on Southeast Asian Water Environment, pp.26-33. (8-10 November, Hanoi, Vietnam) [Poster] [Poster Award]
- (5) A.Hata, M. Inaba, H. Katayama, H. Furumai.2012. Quantitative detection of enteric viruses and effect of organic matter in concentrated coastal water in Ishinomaki, Japan. 3rd Food and Environmental Virology Conference. Lisbon.
- (6) Rajendra Khanal, Hiroaki Furumai, Fumiyuki Nakajima (2012) Evaluation of toxicity change of urban road dust under wet condition using ostracod *Heterocypris incongruens*, SETAC Asia Pacific 2012 Meeting, A\_0449 (1C-1-3). (24-27 September, Kumamoto, Japan) [Oral]
- (7) Yuki Kido, Ikuro Kasuga, Futoshi Kurisu, Hiroaki Furumai (2012) DNA stable isotope probing of activated sludge treating domestic wastewater to identify glucose and acetate degrading bacteria, The 28th Annual Meeting of the Japanese Society of Microbial Ecology (The 4th Japan-Korea International Symposium on Microbial Ecology), PC02. (19-22 September, Toyohashi, Japan) [Poster]
- (8) Parinda Thayanukul, Futoshi Kurisu, Ikuro Kasuga, Hiroaki Furumai (2012) Characterization of biodegradable organic matter in reclaimed organic matter by bacterial isolates, IWA World Water Congress & Exhibition, IWA-8185R1. (16-21 September 2012, Busan, Korea) [Oral]
- (9) Rajendra Khanal, Hiroaki Furumai, Fumiyuki Nakajima (2012) Toxicity assessment of size-fractionated urban road dust using ostracod *Heterocypris incongruens*, IWA World Water Congress & Exhibition, IWA-8258 (Poster No. 143). (16-21 September 2012, Busan, Korea) [Poster]
- (10) Yu Yang, Keisuke Kojima, Hiroaki Furumai, Kyoungjin An (2012) Characterizing behaviours of combined sewer overflows induced by different types of rainfall in an urban drainage by cluster analysis, IWA World Water Congress & Exhibition, IWA-8260 (Poster No.348). (16-21 September 2012, Busan, Korea) [Poster]
- (11) Dieter Turlousse, Futoshi Kurisu, Tomohiro Tobino, Hiroaki Furumai (2012) Community isotope arrays for sensitive resolution of substrate-species linkages in natural microbial communities, 14th International Symposium on Microbial Ecology, 509B. (19-24 Aug, Copenhagen, Denmark)
- (12) Mana Noguchi, Futoshi Kurisu, Ikuro Kasuga, Hiroaki Furumai (2012) The detection of benzene-assimilating bacteria in methanogenic enrichment culture originated from river sediment using Stable Isotope Probing, 14th International Symposium on Microbial Ecology, 171B. (19-24 Aug, Copenhagen, Denmark)
- (13) Niu Jia, Ikuro Kasuga, Futoshi Kurisu, Hiroaki Furumai (2012) Abundances and diversity of ammonia-oxidizing microorganisms associated with granular activated carbon in different full-scale drinking water purification plants in Japan, 14th International Symposium on Microbial Ecology, 035B. (19-24 Aug, Copenhagen, Denmark)
- (14) Ikuro Kasuga, Suwat Soonglerdsongpha, Futoshi Kurisu, Hiroaki Furumai (2012) Role of Hyphomicrobium-like bacteria associated with granular activated carbon filter in drinking water purification plants in the removal of assimilable organic carbon, 14th International Symposium on Microbial Ecology, 423B. (19-24 Aug, Copenhagen, Denmark)
- (15) Parinda Thayanukul, Futoshi Kurisu, Ikuro Kasuga, Hiroaki Furumai (2012), A novel method to characterize biodegradable organic matter in reclaimed water using bacterial growth fingerprint, 14<sup>th</sup> International Symposium on Microbial Ecology, 459B. (19-24 Aug, Copenhagen, Denmark)
- (16) Dieter M. Turlousse, Futoshi Kurisu, and Hiroaki Furumai (2012) A thin polymer film microwell chip for isolation and in situ cultivation of 'difficult-to-culture' environmental microorganisms, Water and Environment Technology Conference 2012, 29-1B-04, p.10. (29-30 June, Tokyo) [Poster]
- (17) Yuichiro Mikami, Tadashi Nittami, and Futoshi Kurisu (2012) Effect of endogenous carbon source on biological denitrification rate, Water and Environment Technology Conference 2012, 29-2A-06, p.20. (29-30 June, Tokyo) [Poster] *Best Paper Award*

- (18) Yang Yu, Keisuke Kojima, and Hiroaki Furumai (2012) Characterization of CSO behaviors and rainfalls affecting them for an urban drainage area in Tokyo by cluster analysis, Water and Environment Technology Conference 2012, 30-1A-12, p.40. (29-30 June, Tokyo) [Poster] *Best Presentation Award*
- (19) G.G. Tushara Chaminda, Fumiyouki Nakajima, Hiroaki Furumai, Ikuro Kasuga, and Futoshi Kurisu (2012) Metal (Zn, Cu, Cd, Ni) complexation by dissolved organic matter (DOM) in wastewater treatment plant effluent, Water and Environment Technology Conference 2012, 29-1A-13, p.7. (29-30 June, Tokyo) [Poster] *Best Presentation Award*
- (20) Yuichi Nagano, Keisuke Kojima, Hiroaki Furumai, Jinyoung Kim, and Ikuro Kasuga (2012) Hydraulic characteristics and water pollution in drainage channels and ponds in the Citadel area of Hue city, Water and Environment Technology Conference 2012, 29-2B-15, p.33. (29-30 June, Tokyo) [Poster]
- (21) Yukihiko Osaka, Ikuro Kasuga, Futoshi Kurisu, and Hiroaki Furumai (2012) The influence of drinking water stagnation on water quality and microbial growth at faucet, Water and Environment Technology Conference 2012, 30-1B-01, p.41. (29-30 June, Tokyo) [Poster]
- (22) Mana Noguchi, Futoshi Kurisu, Ikuro Kasuga, and Hiroaki Furumai (2012) The community analysis of a methanogenic benzene-degrading enrichment culture using stable isotope probing and pyrosequencing, Water and Environment Technology Conference 2012, 29-2A-02, p.18. (29-30 June, Tokyo) [Poster] *Best Presentation Award*
- (23) Hiroaki Furumai (2012) Well-balanced urban water use system adapted for climate change, INSA Lyon-JSPS Workshop "Water and Urban Environment", pp.6-7. (19-20 June, Lyon, France) [Oral]
- (24) Ikuro Kasuga (2012) Functional characterization of microbial community in biological activated carbon process for water purification, INSA Lyon-JSPS Workshop "Water and Urban Environment", pp.22-23. (19-20 June, Lyon, France) [Oral]
- (25) Ikuro Kasuga, Parinda Thayanukul, Futoshi Kurisu, and Hiroaki Furumai (2012) Influence of assimilable organic carbon and residual chlorine on biological stability of reclaimed water in Japan, p.8. (4-5 June 2012, San Diego, CA) [Oral]
- (26) Futoshi Kurisu, Hiroyuki Nakamoto, Ikuro Kasuga, and Hiroaki Furumai (2012) Molecular composition analysis of organic matter in reclaimed wastewater by Fourier Transform Mass Spectrometry, 16<sup>th</sup> Annual Water Reuse & Desalination Research Conference, p.9. (4-5 June 2012, San Diego, CA) [Oral]
- (27) Wei Xiwen, Ikuro Kasuga, and Hiroaki Furumai (2012) Effects of temperature and chlorination on microbial growth in harvested rainwater, The 3<sup>rd</sup> IWA-RWHM Conference & Exhibition. (20-24 May 2012, Goseong, Korea)

## ○ 国内学会発表/Presentations at Domestic Conferences

- (1) 稲葉愛美, 片山浩之, Nga Tran Thi Viet, 古米弘明 (2012) ウイルス指標を用いたハノイ近郊 Nhue 川における糞便起源の推定, 第46回日本水環境学会年会講演集, p.438. (14-16 March, 東京)【口頭】
- (2) 端昭彦, 片山浩之, 古米弘明. 2012. ウイルス濃縮過程における共存有機物の濃縮とウイルス検出阻害. 第15回日本水環境学会シンポジウム. 佐賀【口頭】
- (3) 稲葉愛美, 片山浩之, 植木洋, 端昭彦. 2012. 被災後の沿岸環境における衛生微生物調査. 第15回日本水環境学会シンポジウム. 佐賀【ポスター】
- (4) 端昭彦, 稲葉愛美, 片山浩之, 古米弘明. 2012. 震災後の石巻沿岸域における腸管系ウイルス及び

- 指標微生物の検出と検出阻害評価. 第 49 回環境工学研究フォーラム. 京都【口頭】
- (5) 高橋惇太, 栗栖太, 永井宏征, 春日郁朗, 古米弘明(2012) 岩手・青森県境不法投棄現場地下水における嫌氣的ベンゼン分解の可能性, 第 18 回地下水・土壌汚染とその防止対策に関する研究集会, p.119-122. (6.14-15, さいたま)【口頭】
  - (6) 大坂幸弘, 春日郁朗, 栗栖太, 古米弘明(2012) 給水栓における滞留に伴う水質変化と細菌再増殖との関係, 第 63 回全国水道研究発表会, pp.512-513. (5.16-18, 松江)
  - (7) 中許寛之, 栗栖太, 春日郁朗, 古米弘明(2012) フーリエ変換質量分析計を用いた下水処理工程水中溶存有機物の網羅的解析, 第 46 回日本水環境学会年会講演集, p.180. (14-16 March, 東京)【口頭】
  - (8) 本多了, 飛野智宏, Chaminda Tushara, 渡部徹, 真砂佳史, 大村達夫, 片山浩之, 福士謙介, 古米弘明(2011) タイの大規模洪水における糞便由来汚染, 第 46 回日本水環境学会年会講演集, p.183. (14-16 March, 東京)【口頭】
  - (9) 新宮大地, 齋藤利晃, 小沼晋, 小島啓輔, 端昭彦, 古米弘明. 2012. 神田川における雨天時越流水に伴う大腸菌濃度の変動調査, 第 46 回日本水環境学会年会講演集, p.183. (14-16 March, 東京)【口頭】
  - (10) 端昭彦, 片山浩之, 古米弘明(2012) ウイルス濃縮過程における共存有機物の濃縮と核酸定量阻害, 第 46 回日本水環境学会年会講演集, p.184. (14-16 March, 東京)【口頭】
  - (11) 野口愛, 栗栖太, 春日郁朗, 古米弘明(2012) 河川底泥由来メタン生成集積系におけるベンゼン分解微生物の安定同位体プローブ法による検出, 第 46 回日本水環境学会年会講演集, p.191. (14-16 March, 東京)【口頭】
  - (12) Tran Thi Thu Huong, 稲葉愛美, 片山浩之, 古米弘明(2012) ポリ鉄凝集剤を用いた下水簡易処理法による消毒効果の向上, 第 46 回日本水環境学会年会講演集, p.253. (14-16 March, 東京)【口頭】(ライオン賞)
  - (13) Niu Jia, 春日郁朗, 栗栖太, 古米弘明 (2012) Comparison of ammonia-oxidizing potential and microorganisms at biological activated carbon process in full-scale drinking water purification plants in Tokyo, 第 46 回日本水環境学会年会講演集, p.384. (14-16 March, 東京)【口頭】

## ○ 招待講演/Invited Speech

- (1) Hiroaki Furumai (2012) Significance of rainwater and reclaimed water use with appropriate water quality management, The 3<sup>rd</sup> IWA-RWHM Conference & Exhibition (Goseong, Korea, 22 May)

## ○ マスコミ/Other Media

- ・ 水道産業新聞(2012年7月9日)「第16回水再生・脱塩研究年次大会」における栗栖准教授、春日助教、Pham Ngoc Bao 研究員の成果発表の紹介

## ○ 受賞/Award

- 第 49 回環境工学研究フォーラム 論文奨励賞:端昭彦 (震災後の石巻沿岸域における腸管系ウイルス及び指標微生物の検出と検出阻害評価に対して)(2012年11月)
- 博士研究奨励賞(オルガノ賞):端昭彦(第15回日本水環境学会シンポジウムに際し投稿した論文及び口

頭発表に対して)