Yuki HAGA
The Department of Water Environment
Hyogo Prefectural Institute of Environmental Sciences
Hyogo Environmental Advancement Association
3-1-27, Yukihira-cho, Suma-ku, Kobe, Hyogo, 654-0037, Japan
Fax: +81-78-735-7817
E-mail: haga-y@hies-hyogo.jp

RESEARCH INTERESTS

1. Risk Reduction for PCB Transport Workers using OH-PCBs Monitoring of Urine Samples.
   We are analyzing the concentration of Hydroxylated polychlorinated biphenyls (OH-PCBs) in both PCB transport workers' and PCB researchers' urine. Next we are studying on the specific homologues and isomers of OH-PCBs in human urine. Furthermore, we are proposing strategies to reduce risk from PCB exposure.
2. Development of analytical methods for HBCD in ambient air.
   Sponsored research of Ministry of Environment.
3. Analyzing the environmental concentration of hexachloro-1,3-butadiene (HCBD) and PCN in Hyogo Prefecture.
   Sponsored research of Hyogo Prefecture.
4. Analyzing the environmental concentration of POPs in JAPAN Sea.
   Joint research with National Institute for Environmental Studies and Kanazawa University and so on.

RECENT PUBLICATIONS

Yachiguchi, K., Matsumoto, N., Haga, Y., Suzuki, M., Matsumura, C.,Tsurukawa, M., Okuno, T., Nakano, T., Kawabe, K., Kitamura, K., Toriba, A.,Hayakawa, K., Chowdhury, V.S., Endo, M., Chiba, A., Sekiguchi, T., Nakano,M., Tabuchi, Y., Kondo, T., Wada, S., Mishima, H., Hattori, A. and Suzuki, N.(2012) Polychlorinated biphenyl (118) activates osteoclasts and induces bone. Environmental Science and Pollution Research (in press)

Sato, N., Yonekubo, J., Ezaki, T., Suzuki, M., Matsumura, C., Haga, Y., Nakano, T. (2012) Measurement of accumulation of Hydroxylated Polychlorinated Biphenyl (OH-PCBs) in human urine and blood, Organohalogen Compounds, 74, 76-79

Haga Y., Miwa N., Jahangeer S., Okada T., and Nakamura S.（2009）CtBP1/BARS is an activator of phospholipase D1 necessary for agonist-induced macropinocytosis. EMBO J. , 28, 1197-1207

Okada T., Ding G., Sonoda H., Kajimoto T., Haga Y., Khosrowbeygi A., Gao S., Miwa N., Jahangeer S., Nakamura S.(2005) Involvement of N-terminal-extended form of sphingosine kinase 2 in serum-dependent regulation of cell proliferation and apoptosis. J Biol Chem. , 280(43) , 36318-25

Kino-oka M., Agatahama Y., Haga Y., Inoie M., Taya M.. (2005) Long-term subculture of human keratinocytes under an anoxic condition. J Biosci Bioeng. , 100(1) , 119-22

Takeshi Nakano Ph.D
- Research Professor
Graduate School of Engineering, Osaka University.
- Guest Professor
Graduate School of Maritime Science, Kobe University,

Professional career:

・Hyogo prefectural Institute of Environmental Science (1974.04 - 2003.03)
・Hyogo prefectural Institute of Public Health & Environmental Sciences (2003.04 - 2009.03)
・Kobe University, Graduate School of Maritime Science, Guest Professor (2009.04 – present)
・National Institute for Environmental studies, Guest Researcher (2009.04 – present)
・Hyogo Environmental Advancement Association, Research Councilor (2010.04 – present)
・Osaka University, Graduate School of Engineering, Research Professor (2010.07 – present)
・Center for Environmental Science in Saitama, Guest Researcher (2012.04 – present)

Research topics:

Environmental technology/ Environmental materials, Environmental chemistry, Environmental impact assessment. Expertise lies in the field of PCBs, PFCs, BFRs and dioxins.

Academic Society Memberships:

・Japan Society for Environmental Chemistry / ・Japan Society on Water Environment
・The Mass Spectrometry Society of Japan / ・American Chemical Society

Most recent papers:

・Katsunori Anezaki & Takeshi Nakano(2013), Concentration levels and congener profiles of polychlorinated biphenyls, pentachlorobenzene, and hexachlorobenzene in commercial pigments, *Environ Sci Pollut Res*, DOI 10.1007/s11356-013-1977-2

・ Nobuyasu Hanari, Jerzy Falandysz, Takeshi Nakano, Gert Petrick, Nobuyoshi Yamashita(2013), Separation of closely eluting chloronaphthalene congeners by two-dimensional gas chromatography /quadrupole mass spectrometry: An advanced tool in the study and risk analysis of dioxin-like chloronaphthalenes., *Journal of chromatography. A*, DOI:10.1016/j.chroma.2013.05.070

・ Shintaro Kawano, Toshiyuki Kida, Shusuke Takemine, Chisato Matsumura, Takeshi Nakano, Masaki Kuramitsu, Kenji Adachi, Mitsuru Akashi(2013), Efficient Removal and Recovery of Perfluorinated Compounds from Water by Surface-Tethered beta-Cyclodextrins on Polystyrene Particles, *Chemistry Letters* 42:392. DOI:10.1246/cl.121239

・Vladimir P Beškoski, Shusuke Takemine, Takeshi Nakano, Latinka Slavković Beškoski, Gordana Gojgić-Cvijović, Mila Ilić, Srdjan Miletić, Miroslav M Vrvić(2013), Perfluorinated compounds in sediment samples from the wastewater canal of Pančevo (Serbia) industrial area. *Chemosphere,* 91, (10), 1408–1415

・ Yasushi Okada, Akihiro Nakagoshi, Masahiro Tsurukawa, Chisato Matsumura, Jiro Eiho, Takeshi Nakano(2012), Environmental risk assessment and concentration trend of atmospheric volatile organic compounds. *Environmental Science and Pollution Research*, 19(1), 201-213,

・Takanori Sakiyama and Takeshi Nakano(2012), Determination of a Highly Chlorinated Flame Retardant Dechlorane Plus in Environment Samples by High-resolution GC/MS Mode, *BUNSEKI KAGAKU*, 61(9), 745-754

・Tetsuya Hirai, Hiroaki Kinoshita, Hideo Okamura, Yoshiji Yano, Takeshi Nakano(2012), Development of Simultaneous Determination Method of Hydroxylated Polycyclic Aromatic Hydrocarbons in Urine by LC/MS/MS and Its Application to Assessment of Polycyclic Aromatic Hydrocarbons Exposure, *BUNSEKI KAGAKU*, 61(11), 925-930

・ Sakiyama T, Weber R, Behnisch PA, Nakano T (2012), Formation of the pyridine-analogue of 2,3,7,8-tcdd by thermal treatment of chlorpyrifos, chlorpyrifos-methyl and their major degradation product 3,5,6-trichloro-2-pyridinol, *Organohalogen Compounds*.74,1441-1444

・ Kiyoshi Yamazaki, Motoharu Suzuki, Toshimasa Itoh, Keiko Yamamoto, Miki Kanemitsu, Chisato Matsumura, Takeshi Nakano, Toshiyuki Sakaki, Yasuo Fukami, Hiromasa Imaishi and Hideyuki Inui (2012), Structural basis of species differences between human and experimental animal CYP1A1s in metabolism of 3,3',4,4',5-pentachlorobiphenyl. *The Journal of Biochemistry,* 149(4), 487-494

・ Mitsunobu Toda, Chisato Matsumura, Masahiro Tsurukawa, Toshihiro Okuno, Takeshi Nakano, Yoshihisa Inoue, and Tadashi Mori(2012), Absolute configuration of atropisomeric polychlorinated biphenyl 183 enantiomerically enriched in human samples., *J. Phys. Chem. A*, 116 (37), 9340–9346, DOI: 10.1021/jp306363n

・ Motoharu Suzuki, Chisato Matsumura, Takeshi Nakano, Hiromasa Imaishi(2012), Investigation of environmental contamination of mono-isopropylnaphthalene, di-isopropylnaphthalene and tri-isopropylnaphthalene in Hyogo in Japan. *Environmental Science and Pollution Research,* 19(9), 3959-3968

・ Tetsuya Hirai, Yoshinori Fujimine, Shaw Watanabe, Takeshi Nakano(2012), Distribution of polybrominated diphenyl ethers in Japanese autopsy tissue and body fluid samples. *Environmental Science and Pollution Research*,19(8), 3538-3546

・Koji Yachiguchi, Noriko Matsumoto, Yuki Haga, Motoharu Suzuki, Chisato Matsumura, Masahiro Tsurukawa, Toshihiro Okuno, Takeshi Nakano, .., Nobuo Suzuki(2012), Polychlorinated biphenyl (118) activates osteoclasts and induces bone resorption in goldfish, *Environmental Science and Pollution Research* , DOI:10.1007/s11356-012-1347-5

・ Xianming Zhang, Masahiro Tsurukawa, Takeshi Nakano, Ying D. Lei, and Frank Wania(2011), Sampling medium side resistance to uptake of semivolatile organic compounds in passive air samplers. *Environ. Sci. Technol.*, 45 (24), 10509–10515, DOI: 10.1021/es2032373

Books:

・PCBs Human and Environmental Disposition and Toxicology　・Rare Metal Handbook

Shunji HASHIMOTO, Ph.D.
Senior Researcher
Center for Environmental Measurement and Analysis
National Institute for Environmental Studies
16-2 Onogawa, Tsukuba, Ibaraki 305-8506, JAPAN
phone & fax: +81-29-850-2531
e-mail: shunji@nies.go.jp
homepage: http://www.nies.go.jp/index-e.html

RESEARCH INTERESTS

1. Development of analytical methods for environmental organic pollutants.
   We are studying on development of novel methods and instruments for POPs and the other compounds in order to solve the problems on the analytical methods. *Keywords; direct sample measurement; rapid, accurate and sensitive multicomponent quantification; non-target and identifiable comprehensive analysis; GCxGC; HRTofMS.*
2. Studies on sources and the fate of pollutants..
   We are studying on tracing and finding the sources of pollutants by using several improved chemical mass balance (CMB) methods, are kind of receptor models, following their composition as fingerprints.

RECENT PUBLICATIONS

Zushi Y., Hashimoto S., Fushimi A., Takazawa Y., Tanabe K., Shibata Y.(2013) Rapid automatic identification and quantification of compounds in complex matrices using comprehensive two-dimensional gas chromatography coupled to high resolution time-of-flight mass spectrometry with a peak sentinel tool. Analytica Chimica Acta, 778, 54–62

Hashimoto S., Zushi Y., Fushimi A., Takazawa Y., Tanabe K., Shibata Y.(2013) Selective Extraction of Halogenated Compounds from Data Measured by Comprehensive Multidimensional Gas Chromatography/High Resolution Time-of-flight Mass Spectrometry for Non-Target Analysis of Environmental and Biological Samples. Journal of Chromatography A, 1282, 183– 189

Fushimi A., Hashimoto S., Ieda T., Ochiai N., Takazawa Y., Fujitani Y., Tanabe K. (2012) Thermal desorption;comprehensive two-dimensional gas chromatography coupled with tandem mass spectrometry for trace determination of polycyclic aromatic hydrocarbons and their derivatives. Journal of Chromatography A, 1252, 164-170

Hashimoto S., Takazawa Y., Fushimi A., Tanabe K., Shibata Y., Ieda T., Ochiai N., Kanda H., Ohura T., Tao Q., Reichenbach S.E.(2011) Global and selective detection of organohalogens in environmental samples by comprehensive two-dimensional gas chromatography-tandem mass spectrometry and high-resolution time-of-flight mass spectrometry, Journal of Chromatography A, 1218: 3799–3810

Ochiai N., Ieda T., Sasamoto K., Takazawa Y., Hashimoto S., Fushimi A., Tanabe K.(2011) Stir bar sorptive extraction and comprehensive two-dimensional gas chromatography coupled to high-resolution time-of-flight mass spectrometry for ultra-trace analysis of organochlorine pesticides in river water, Journal of Chromatography A, 1218, 6851-6860

Hashimoto S., Takazawa Y., Fushimi A., Ito H., Tanabe K., Shibata Y., Ubukata M., Kusai A., Tanaka K., Otsuka H., Anezaki K. (2008) Quantification of polychlorinated dibenzo-p-dioxins and dibenzofurans by direct injection of sample extract into the comprehensive multidimensional gas chromatograph/high-resolution time-of-flight mass spectrometer. Journal of Chromatography A, 1178, 187-198

Nose K., Hashimoto S., Takahashi S., Noma Y., Sakai S.-i. (2007) Degradation pathways of decabromodiphenyl ether during hydrothermal treatment. Chemosphere, 68, 120-125

Hashimoto S., Zushi Y. , Fushimi A., Takazawa Y., Tanabe K., Shibata Y. (2012) Selective extraction of organohalogens from GCxGC-HRTofMS data for global analysis of environmental and biological samples. 19th International Mass Spectrometry Conference, Abstracts, 110

Fushimi A., Hashimoto S., Ieda T., Ochiai N., Takazawa Y., Fujitani Y., Tanabe K. (2012) Development of Thermal Desorption; Comprehensive Two-Dimensional Gas Chromatography Coupled with Tandem

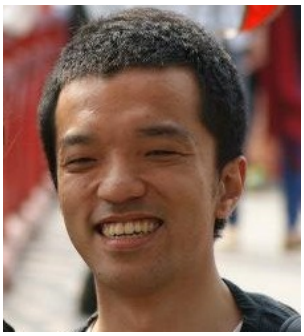
Mass Spectrometry (TD-GC×GC-MS/MS) for Determination of Trace Polycyclic Aromatic Hydrocarbons and Their Derivatives in Diesel Exhaust and Atmosphere. AAAR (American Association for Aerosol Research) 31st Annual Conference, Abstract book, 2IM4

Shibata Y., Yoshikane M., Takagi M., Hashimoto S., Sasaki Y., Ito H., Nitta H., Sato H. (2011) Blood-sampling method for POPs and other chemicals analysis in Japanese birth cohort study, "Japan Environmental and Children's Study". 31st International Symposium on Halogenated Persistent Organic Pollutants Dioxin 2011, Abstracts of 31st International Symposium on Halogenated Persistent Organic Pollutants Dioxin 2011

Hashimoto S, Takazawa Y, Fushimi A, Ito H, Tanabe K, Noma Y, Shibata Y, Ubukata M, Kusai A, Tanaka K, (2007) Preliminary study on direct measurement of PCDD/Fs in extracts from samples by comprehensive multidimensional GC/ high resolution TOFMS. Organohalogen Compounds 69, 1106-1109

Hattori Y, Hashimoto S, Yamashita M, Takasuga T, Ito H,(2007) Quantification of PCB concentrations in indoor air by a static air sampler using yarns as trapping materials. Organohalogen Compounds 69, 2376-2379

Shusuke TAKEMINE
Researcher
Hyogo Prefectural Institute of Environmental Sciences, Hyogo Environmental Advancement Association
Graduate school of engineering, Osaka University
TEL: +81-78-735-6914
FAX: +81-78-735-7817
Mail: takemine-s@hies-hyogo.jp



RESEARCH INTERESTS

1. Behavior of Organic Pollutants in a Closed Sea Area

We are studying behavior of organic pollutants, especially perfluorinated compounds (PFCs), in a closed sea area. PFCs in water, atmosphere, and sediment of Osaka-bay area are investigated by chemical analysis using LC/MS/MS. The behavior simulation of PFCs in Osaka-bay is also carried out by using computer simulation techniques.

2. Removal and Destruction of PFCs in Waste-water.

We are studying techniques for removal and destruction of PFCs in waste-water in order to control emissions to the environment.

RECENT PUBLICATIONS

1. Shusuke TAKEMINE, Mitsuyasu TAKATA, Syuusaku YAMAMOTO3, Nobuhisa WATANABE, Chisato MATSUMURA, Shigeo FUJII, Shuhei TANAKA, and Akira KONDO, 2013. Thermal Behavior of Perfluorooctanoic Acid Adsorbed on Granular Activated Carbon, *Bunsekikagaku*, 62, p 107-114. (Japanese)
2. Shusuke TAKEMINE, Mitsuyasu TAKATA, Katsuya YAMAMOTO, Chisato MATSUMURA, Kazuo FUJIMORI, Nobuhisa WATANABE, Takeshi NAKANO, and Akira KONDO, 2013. Analysis of Perfluorinated Compounds in Granular Activated Carbon, *Journal of Environmental Chemistry,* 23, p55-60. (Japanese)
3. Vladimir P. Beškoski, Shusuke Takemine, Takeshi Nakano , Latinka Slavkovic´ Beškoski, Gordana Gojgic´ - Cvijovic´, Mila Ilic´, Srdjan Miletic´, Miroslav M. Vrvic´, 2013. Perfluorinated compounds in sediment samples from the wastewater canal of Panc˘ evo (Serbia) industrial area, *Chemosphere*, 91, p1408-1415
4. Shintaro Kawano, Toshiyuki Kida, Shusuke Takemine, Chisato Matsumura, Takeshi Nakano, Masaki Kuramitsu, Kenji Adachi, and Mitsuru Akashi, 2013, Efficient Removal and Recovery of Perfluorinated Compounds from Water by Surface-Tethered β-Cyclodextrins on Polystyrene Particles, *Chem.Lett.*, 42, 392-394
5. Shusuke Takemine, Chisato Matsumura, Katsuya Yamamoto, Motoharu Suzuki, Masahiro Tsurukawa, Hiromasa Imaishi, Takeshi Nakano, Akira Kondo, The Flow of Perfluorinated Compounds from Rivers and their Influence on the Coastal Seas of the Hyogo Prefecture, Japan, Environmental Pollution. (Submitted)
6. Mihoko YOSHIDA, Shusuke TAKEMINE, Chisato MATSUMURA, Takeshi NAKANO, Mitsuyasu TAKATA, Akihiro TOKAI, Tohru MORIOKA, 2011. Perfluorinated Compounds (PFCs) Content and Elution of Waste Samples, *Journal of Environmental Chemistry,* 21, p135-140. (Japanese)

Hideo OKAMURA
Laboratory of Marine Environmental Management (LABMEM)
Research Center for Inland Seas, Kobe University
Concurrently, Graduate School of Maritime Sciences,
Kobe University
Fukaeminami 5-1-1 Higashinada, Kobe, 658-0022 Japan
Fax: +81-78-431-6272
E-mail: okamurah@maritime.kobe-u.ac.jp
Home page: http://www.labmem.jp/

RESEARCH INTERESTS

1. Marine environmental management of the antifouling biocides- TBT substitutes.
   Cuprous oxide and other organo-copper compounds are the biocides concerned. Aquatic fate and ecotoxicity of them are assessed by chemical analyses using HPLC and FLAAS and some bioassay using marine bacteria, crustaceans, phytoplankton, and macrophyte.
2. Ecotoxicological evaluation of ship exhaust gas emission on marine environment.
   Particulate matters (PM) in ship diesel gas emission are the materials concerned. The organic extracts of PM are subjected for ecotoxicity and mutagenicity assay and for chemical analyses of some PAHs and nitrated PAHs.

RECENT PUBLICATIONS

Tsuboi,A., Okamura,H., Kaewchuay,N., Fukushi,K., Zhou,X., and Nishida,T. (in press) Degradation of triphenylborane-pyridine (TPBP) antifouling agent in water by copper ions. Environ.Technol.

Asaoka,S., Okamura,H., MorisawaR., Murakami,H., Fukushi,K., Okajima,T., Katayama,M., Inada,Y., Yogi,C., Ohta,T. (2013) Removal of hydrogen sulfide using carbonated steel slag. Chem.Engine.J. 228: 843-849.

Tsunemasa,N., Tsuboi,A., Okamura,H. (2013) Effects of organoboron antifoulants on oyster and sea urchin embryo development. Int.J.Mol.Sci. 14, 421-433.

Kaewchuay,N., Fukushi,K., Tsuboi,A., Okamura,H., Saito,K., Hirokawa,T. (2012) Simultaneous determination of pyridine-triphenylborane anti-fouling agent and its degradation products in paint-waste samples using capillary zone electrophoresis with field-amplified sample injection. Anal.Sci., 28, 1191-1196.

Okamura,H., Yagi,M., Kawachi,M., Hanyuda,T., Kawai,H. and Walker,I. (2012) Application of rotating cylinder method for ecotoxicological evaluation of antifouling paints. Toxicol. Environ.Chem. 94(3): 545-556.

Okamura,H., Togosmaa,L., Sawamoto,T., Fukushi,K., Nishida,T., and Beppu,T. (2012) Effects of metal pyrithione antifoulants on freshwater macrophyte *Lemna gibba* G3 determined by image analysis. Ecotoxicol. 21: 1102-1111.

Suda,T., Hata,T., kawai,S., Okamura,H., and Nishida,T. (2012) Treatment of tetracycline antibiotics by laccase in the presence of 1-hydroxybenzotriazole. Biores.Technol. 103: 498-501.

Tunemasa,N. and Okamura,H (2011) Effects of organotin alternative antifoulants on oyster embryo. Arch.Environ.Contam.Toxicol. 61: 128-134.

Inoue,Y., Hata,T., Kawai,S., Okamura,H., and Nishida,T. (2010) Elimination and detoxification of triclosan by manganese peroxidase from white rot fungus. J.Hazard.Mat. 180: 764-767.

Hata,T., Kawai,S., Okamura,H., and Nishida,T. (2010) Removal of diclofenac and mefenamic acid by white rot fungus Phanerochaete sordida YK-624 and identification of their metabolites after fungal treatment. Biodegradation. 21: 681-689.

Fukushi,K, Yakushiji,Y., Okamura,H., Hashimoto,Y., Saito,K. (2010) Simultaneous determination of a pyridine-triphenylborane anti-fouling agent and its estimated degradation products using capillary zone electrophoresis. J.Chromatogr.A. 1217: 2187-2190.

Okamura,H., Kitano,S., Toyota,S., Harino,H., and Thomas,K.V. (2009) Ecotoxocity of the degradation products of triphenylborane pyridine (TPBP) antifouling agent. Chemosphere 74: 1275-1278.

Hideyuki Inui

Kobe University, Research Center for Environmental Genomics
Plant genetic engineering, Environmental biotechnology

Lecture for training course
1. Crop contamination by persistent organic pollutants
2. Phytoremediation and phytomonitoring of dioxins and dioxin-like compounds
3. Enzyme-linked immunosorbent assay for environmental pollutants

Selected papers for Hideyuki Inui
Uptake of persistent organic pollutants by plants
1. Inui, H., Sawada, M., Goto, J., Yamazaki, K., Kodama, N., Tsuruta, H., Eun, H., A major latex-like protein is a key factor in crop contamination by persistent organic pollutants, *Plant Physiology,* 161(4), 2128-2135, 2013
2. Matsuo, S., Yamazaki, K., Gion, K., Eun, H. and Inui, H., Structure-selective accumulation of polychlorinated biphenyls in *Cucurbita pepo*, *Journal of Pesticide Science*, 36(3), 363-369, 2011
3. Inui, H., Wakai, T., Gion, K., Yamazaki, K., Kim, Y.-S. and Eun, H., Congener specificity in the accumulation of dioxins and dioxin-like compounds in zucchini plants grown hydroponically, *Bioscience, Biotechnology, and Biochemistry*, 75(4), 705-710, 2011
4. Inui, H., Wakai, T., Gion, K., Kim, Y.-S., and Eun, H., Different uptake for dioxin-like compounds by zucchini subspecies, *Chemoshpere*, **73**, 1602-1607, 2008

Phytomonitoring of pollutants
1. Gion, K., Inui, H., Sasaki, H., Utani, Y., Kodama, S. and Ohkawa, H., Assays of PCB congeners and organochlorine insecticides with the transgenic *Arabidopsis* and tobacco plants carrying recombinant guinea pig AhR and GUS reporter genes, *Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants, and Agricultural Wastes,* 47(7), 599-607, 2012
2. Inui, H., Gion, K., Utani, Y., Wakai, T., Kodama, S., Eun, H., Kim, Y.-S. and Ohkawa, H., Assays of dioxins and dioxin-like compounds in actually contaminated soils using transgenic tobacco plants carrying a recombinant mouse aryl hydrocarbon receptor-mediated β-glucuronidase reporter gene expression system, *Journal of Environmental Science and Health, Part B: Pesticides, Food Contaminants, and Agricultural Wastes*, 47(1), 59-65, 2012
3. Shimazu, S., Inui, H. and Ohkawa, H., Phytomonitoring and phytoremediation of agrochemicals and related compounds based on recombinant cytochrome P450s and aryl hydrocarbon receptors (AhRs), *Journal of Agricultural and Food Chemistry*, 59, 2870-2875, 2011
4. Inui, H., Sasaki, H., Chua, N.-H. and Ohkawa, H., Bioassay of estrogenic compounds in transgenic *Arabidopsis* plants carrying a recombinant human estrogen receptor gene and a GFP reporter gene, *Transgenic Research*, 18, 899-909, 2009
5. Kodama, S., Okada, K., Akimoto, K., Inui, H., and Ohkawa, H., Novel recombinant aryl hydrocarbon receptors for bioassay of aryl hydrocarbon receptor ligands in transgenic tobacco plants, *Plant Biotechnology Journal*, **7**, 119-128, 2009

Metabolism of PCBs by cytochrome P450 monooxygenase
1. Yamazaki, K., Suzuki, M., Itoh, T., Yamamoto, K., Kanemitsu, M., Matsumura, C., Nakano, T., Sakaki, T., Fukami, Y., Imaishi, H. and Inui, H., Structural basis of species differences between human and experimental animal CYP1A1s in

metabolism of 3,3',4,4',5-pentachlorobiphenyl, *Journal of Biochemistry*, 149(4), 487-494, 2011

Antibody-based monitoring of pollutants

1. Inui, H., Takeuchi, T., Uesugi, A., Doi, F., Takai, M., Nishi, K., Miyake, S. and Ohkawa, H., Enzyme-linked immunosorbent assay with monoclonal and single-chain variable fragment antibodies selective to coplanar polychlorinated biphenyls, *Journal of Agricultural and Food Chemistry*, 60, 1605-1612, 2012
2. Inui, H., Takehara, A., Doi, F., Nishi, K., Takai, M., Miyake, S. and Ohkawa, H., A scFv antibody–based immunoaffinity chromatography column for clean-up of bisphenol A–contaminated water samples, *Journal of Agricultural and Food Chemistry*, **57(2)**, 353-358, 2009
3. Gion, K., Sakurai, Y., Watari, A. and Inui, H., A designed recombinant transcription factor with antibody variable regions, *Analytical Chemistry*, 81(24), 10162-10166, 2009
4. Nishi, K., Goda, Y., Fujimoto, S., Inui, H., and Ohkawa, H., Molecular analysis of specificity of anti-nonylphenol polyethoxylate single-chain antibody fragments by grafting and designed point mutations, Molecular Immunology, 46(15), 3125-3130, 2009

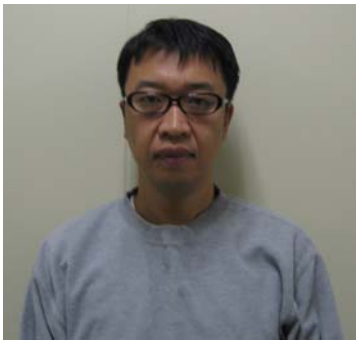
Self-introduction

Name:
Keiichi Fukushi
Institution:
Kobe University Graduate School of Maritime Sciences
Specialities:
Analytical Chemistry
Mainly to develop analytical methods for inorganic ions in seawater using capillary electrophoresis
As other sample, river water, jellyfish, serum, vegetables
As other analytes, organic substances such as PTPB, a kind of anti-fouling agent (suggested by Dr. Okamura)
Title: Capillary zone electrophoresis for inorganic analysis

Research papers:

1. "Highly sensitive capillary zone electrophoresis with artificial seawater as the background electrolyte and transient isotachophoresis as the on-line concentration procedure for simultaneous determination of nitrite and nitrate in seawater", *J. Chromatogr. A*, Vol. 1005, pp. 197-205 (2003).
2. "Simultaneous determination of iodide and iodate in seawater by transient isotachiphoresis-capillary zone electrophoresis with artificial seawater as the background electrolyte", *J. Chromatogr. A*, Vol. 1035, pp. 145-150 (2004).
3. "Determination of ammonium cations and alkali and alkaline earth metal cations in jellyfish by capillary zone electrophoresis", *Anal. Sci.*, Vol. 22, pp. 1129-1133 (2006).
4. "Determination of ammonium in river water and sewage samples by capillary zone electrophoresis with direct UV detection", *J. Chromatogr. A*, Vol. 1106, pp. 61-66 (2006).
5. "Determination of phosphate in seawater by CZE with on-line transient ITP", *Electrophoresis*, Vol. 1035, pp. 3447-3452 (2007).
6. "Simultaneous determination by capillary-zone electrophoresis combined with transient isotachophoresis of nitrate and nitrite ions in the cerebrospinal fluid and serum of patients with neurological disorders", *Trends in Chromatography*, Vol. 4, pp. 37-41 (2008).
7. "Determination of bromate in highly saline samples using CZE with on-line transient ITP", *J. Sep. Sci.*, Vol. 32, pp. 457-461 (2009).
8. "Simultaneous determination of a pyridine-triphenylborane anti-fouling agent and its estimated degradation products using capillary zone electrophoresis", *J. Chromatogr. A*, Vol. 1217, pp. 2186-2190 (2010).
9. "Determination of bromide, nitrite, phosphate, and sulfate in water extract of Wakame (*Undaria pinnatifida*) using ion chromatography", *Bunseki Kagaku*, Vol. 61, pp. 869-875 (2012).
10. "Determination of inorganic anions, organic acids, and amino acids in the common ice plant (*Mesembryanthemum crystallinum* L.) using capillary zone electrophoresis, *Bunseki Kagaku*, in press.

Tetsuya　Hirai



Director
Trace Constituent Analysis Section
Diagnostic Division
Otsuka Pharmaceutical Co., Ltd.
224-18 Hiraishi Ebisuno, Kawauchi-cho
Tokushima 771-0182, Japan
Phone: +81-88-665-1721
Fax: +81-88-666-1328
E-mail: hiraitetsu@otsuka.jp

RESEARCH INTERESTS

I develop of analysis method of environmental pollutants (Dioxins, PCBs, OH-PCBs, PBDEs, OH-PAHs etc.) in biological samples (blood, urine, breast milk etc.)　by LC/MS/MS and HRGC/HRMS. I apply to assessment of environmental pollutants exposure.

RECENT PUBLICATIONS

1)Tetsuya Hirai, Yoshinori Fujimine, Syunkichi Watanabe, Takeshi Nakano : Congener-specific analysis of polychlorinated biphenyl in human blood fromJapanese. Environmental Geochemistry and Health, 27, 65-73, 2005

2) Shaw Watanabe, Masahiro Morioka, Tetsuya Hirai and Shoichi Mizuno:Dioxin exposure and type 2 diabetes mellitus : Case control study; Anti-aging Medicine, 4, 51-56, 2007

3)Takeshi Saito,Toshihide Ihara,Masayoshi Koike,Shinichi,Kinugasa,Yoshinori Fujimine,Kazutoshi Nose and Tetsuya Hirai: A new traceability scheme for the development of international system-traceable persistent organic pollutant reference materials by quantitative nuclear magnetic resonance : Accred Qual Assur, 14,79-86, 2009

4) Takahisa Tanaka, Akemi Morita, Masayuki Kato, Tetsuya Hirai, Tetsuya Mizoue, Yasuo Terauchi, Shaw Watanabe and Mitsuhiko Noda for theSCOP Study Group: Congener-specific polychlorinated biphenyls and the prevalence of diabetes in the Saku Control Obesity Program (SCOP):Endocrine Jounal, 58(7), 589-596, 2011

5)Tetsuya Hirai, Yoshinori Fujimine, Shaw Watanabe, Takeshi Nakano : Distribution of polybrominated diphenyl ethers in Japanese autopsy tissueand body fluid samples. Environmental Science and Pollution Research, 19, 3538-3546, 2012

6)Tetsuya HIRAI, Hiroaki KINOSHITA, Hideo OKAMURA, Yoshiji YANO and Takeshi NAKANO: Development of Simultaneous Determination Method of Hydroxylated Polycyclic Aromatic Hydrocarbons in Urine by LC/MS/MS and Its Application to Assessment of Polycyclic Aromatic Hydrocarbons Exposure: bunseki kagaku, 61(11), 925-931, 2012 (Japanese)

CURRICULUM VITAE

Dr. Vladimir P. BEŠKOSKI, grad. biochem.
Assistant Professor
Faculty of Chemistry, University of Belgrade

Born in Belgrade, Serbia, January 26th, 1975. He graduated Biochemistry on the Faculty of Chemistry, University of Belgrade in 2002. Since November 2002 he was employed as Researcher at Department of Chemistry of the Institute of Chemistry, Technology and Metallurgy, University of Belgrade. From 2012 as docent (assistant professor) he is employed at the Faculty of Chemistry, University of Belgrade.

In 2006 he finished his postgraduate studies (Magister of Science degree) at the University of Belgrade, Faculty of Chemistry - Department of Biochemistry, research subject microbiological desulfurization of fossil fuels. Title of Magister thesis was "Removal of dibenzothiophene from fossil fuels by the action of iron(III)-ion generated by *Acidithiobacillus ferrooxidans*- research on a model system". In 2011 he finished his doctoral studies (Doctor of Science degree) at the University of Belgrade, Faculty of Chemistry - Department of Biochemistry, research subject: bioremediation of soil polluted with crude oil. Title of doctoral dissertation was "Study of the activities of a consortium of zymogenous microorganisms in the soil contaminated by crude oil and oil derivatives and their application in bioremediation".

The areas of interest and scientific research are environmental biotechnology; microbial ecology; microbial activities and their applications in biogeotechnology and biohydrometallurgy; application of the principles of green chemistry in the work with "biological agents"; microbial consortium and changes in microbial diversity during bioremediation; elucidation of the genetic and biochemical basis of bacterial degradation of Perfluorinated Compounds (PFCs) and other Persistent Organic Pollutants (POPs).

Author and coauthor of scientific papers published in reputable journals and dozens of reports on scientific conferences at home and abroad printed as full papers or short abstracts.

In 2005 he finished the course Principles and Practice of Biohydrometallurgy Company CM Solutions (Cape Town, South Africa), lecturer Frank Crundwell. In the same year he participated in International study tour that visited facilities for biohydrometallurgical gold winning on biopile (Geocoat plant, Agnes mine) and in bioreactors (BIOX plant, Fairview, Barberton) and plants for biohydrometallurgical processing of acid mine drainage waters in South Africa.

In 2007 he participated in International study tour that visited facilities of Wismut company (Thuringia and Saxony) for remediation of surface and underground uranium mines and processing of waste mine waters contaminated with radium and arsenic (Shlema-Alberoda and Pöhla) in Germany.

From February to August 2011 he followed JICA course "*Risk Management and Residue Analysis of Chemicals for Environmental Safety*" held in Kobe, Japan.

In 2012 he visited the incinerator plant operating by Wien Energie (Vienna) "Thermische Abfallbehandlungsantage Simmering Haide"- incinerator for the treatment of industrial (hazardous and non-hazardous) medical, and municipal wastes in Austria.

In 2013 he was on the short term scientific mission at the institute VTT, Espoo in Finland. Using MALDI-TOF-MS he has analyzed the whole (intact) bacterial cells of microbial cultures isolated from polluted environment.

He is recipient of the award of the Belgrade Chamber of Economy for best graduate thesis in 2003 year.

He is recipient of the award of the Belgrade Chamber of Economy for the best doctoral dissertation in 2011 year.

On competition for the Best Technological Innovation organized by the Ministry of Science of the Republic of Serbia in 2009 he has led the team Bioreaktor2009 (V. Beškoski, G. Gojgić-Cvijović, M. Ilić, J. Milić, M.M. Vrvić) who won first place in category the Potentials, with innovation "Mobile bioreactor for obtaining biomass of microorganisms for bioremediation".

On competition for the Best Technological Innovation organized by the Ministry of Science of the Republic of Serbia in 2010 he has led the team Bioreaktor2010 (V. Beškoski, G. Gojgić-Cvijović, M. Ilić, J. Milić, M.M. Vrvić) who won second place in category the Implemented innovations, with innovation "Mobile bioreactor for obtaining immobilized biomass of microorganisms for bioremediation".

Member of the Serbian Chemical Society.

Member of the Serbian Society for Microbiology.

Member of the Serbian Biochemical Society.

Member of the JICA Alumni organization.

Selected Publications:

1. **V.P. Beškoski**, S.Takemine, T.Nakano, L.Slavković Beškoski, G.Gojgić-Cvijović, M.Ilić, S. Miletić, M.M. Vrvić, Perfluorinated compounds in sediment samples from the wastewater canal of Pančevo (Serbia) industrial area, *Chemosphere* 91 (2013) 1408–1415
2. M.M.A. Ramadan, T. Šolević Knudsen, M. Antić, **V.P. Beškoski**, M. M. Vrvić, J. Schwarzbauer, B. Jovančićević, Degradability of *n*-alkanes during *ex situ* natural bioremediation of soil contaminated by heavy residual fuel oil (mazut), *J. Serb. Chem. Soc.* (2012), doi: 10.2298/JSC120829106A
3. J.S. Milić, **V.P.Beškoski**, D.V. Randjelović, J. Stojanović, M.M. Vrvić, Visualisation of the interaction between *Acidithiobacillus ferrooxidans* and oil shale by atomic force microscopy, *Journal of Mining and Metallurgy, Section B: Metallurgy,* 48 (2), (2012) 207-217.
4. J. Avdalović, **V.Beškoski**, D.Ranđelović, M.Stojanović, S.Zildžović, M.Vrvić, Examination of phosphate ores bioleaching from lisina deposit, *Materials Protection*, 53 (3), (2012) 225-230 (in Serbian).
5. M. Novaković, M.M. Ali Ramadan, T. Šolević- Knudsen, M. Antić, **V. Beškoski**, G. Gojgić-Cvijović, M.M. Vrvić, B. Jovančićević, Degradation of methyl-phenanthrene isomers during bioremediation of soil contaminated by residual fuel oil, *Environmental Chemistry Letters*, (2012), 1-8.
6. **V.P. Beškoski**, G. Gojgić-Cvijović, B. Jovančićević, M. M. Vrvić, Gas Chromatography in Environmental Sciences and Evaluation of Bioremediation, in *Gas Chromatography - Biochemicals, Narcotics and Essential Oils* Ed. B. Salih, ISBN: 978-953-51-0295-3, InTech, (2012) pp. 3-28.
7. **V.P. Beškoski**, G.Đ. Gojgić-Cvijović, J. S. Milić, M.V. Ilić, S. B. Miletić, B.S. Jovančićević, M.M. Vrvić, Bioremedijacija zemljišta kontaminiranog naftom i naftnim derivatima: mikroorganizmi, putanje razgradnje, tehnologije, *Hem. Ind.,* 66 (2), (2012), 275–289 (in Serbian)
8. **V.P. Beškoski**, G. Gojgić-Cvijović, J. Milić, M. Ilić, S. Miletić, T. Šolević, M.M. Vrvić, *Ex situ* bioremediation of a soil contaminated by mazut (heavy residual fuel oil) – A field experiment, *Chemosphere*, 83, (2011) p. 34-40.

9. G.D. Gojgic-Cvijovic, J. S. Milic, T. M. Solevic, **V. P. Beskoski**, M. V. Ilic, L. S. Djokic, T. M. Narancic, M. M. Vrvic, Biodegradation of petroleum sludge and petroleum polluted soil by a bacterial consortium: a laboratory study, *Biodegradation*, (2012) 23:1–14.
10. **V.P. Beškoski**, M.Takić, J.Milić, M.Ilić, G.Gojgić-Cvijović, B. Jovančićević and M. M. Vrvić, Change of isoprenoids, steranes and terpanes during *ex situ* bioremediation of mazut on industrial level, J. Serb. Chem. Soc. 75 (11), (2010) 1605–1616.
11. J.S. Milic, **V.P. Beskoski**, M.V. Ilic, S.A. M. Ali, G.Dj. Gojgic-Cvijovic and M.M. Vrvic, Bioremediation of soil heavily contaminated with crude oil and its products: composition of the microbial consortium, *J. Serb. Chem. Soc.* 74 (4), (2009), p. 455-460.
12. B.M. Mandić, D.N. Gođevac, **V.P. Beškoski**, M.R. Simić, S.S. Trifunović, V.V. Tešević, V.V. Vajs and S.M. Milosavljević, Pyrrolizidine alkaloids from seven wild-growing *Senecio* species in Serbia and Montenegro, *J. Serb. Chem. Soc.* 74 (1) (2009), p.27–34.
13. **V.P. Beškoski**, J. Milić, B. Mandić, M. Takić, M.M. Vrvić, Removal of organically bound sulfur from oil shale by iron(III)-ion generated–regenerated from pyrite by the action of Acidithiobacillus ferrooxidans — Research on a model system, *Hydrometallurgy*, 94 (2008) p.8–13
14. B. Jovančićević, M. Antić, I. Pavlović, M. Vrvić, **V. Beškoski**, A. Kronimus, J. Schwarzbauer, Transformation of petroleum saturated hydrocarbons during soil bioremediation experiments, *Water Air and Soil Pollution* 190 (1-4), (2008) p.299-307.
15. **V.P. Beškoski**, V.F. Matić, J.Milić, D.Godjevac, B.Mandić, M.M. Vrvić, Oxidation of dibenzothiophene as model substrate for removal of organic sulphur from fossil fuels by iron(III)-ion generated from pyrite by *Acidithiobacillus ferrooxidans*, *J. Serb. Chem. Soc.* 72 (6) (2007), p.533-537.
16. J.S. Jekić, **V.P. Beškoski**, G.Gojgić-Cvijović, M.Grbavčić, M.M. Vrvić, Bacterially generated $Fe_2(SO_4)_3$ from pyrite, as a leaching agent for heavy metals from lignite ash, *J. Serb. Chem. Soc.* 72 (6) (2007), p.615-619.

FY 2012

Resume

1. Name in Full

FAMILY Harino First Hiroya Middle

2. Date of Birth: 17 / 09 / 1960 (Day / Month / Year)

3. Nationality: Japan

4. Current Appointment and/or Status

Professor Kobe College

5. Academic Degree

Type (PhD, etc): PhD

Field: Environmental Chemistry

Institute: Kobe College (Country) Japan

Date Obtained 31 / 03 / 1998 (Day / Month / Year)

☐ Expected

6. Higher Education (Start from the latest one)

Name of University / Institution	Location	Degree	Field	Completion Date (Month, Year)
Kyoto University	Kyoto, Japan	PhD	Environmental Chemistry	03/1998
Osaka University	Osaka, Japan	MA	Analytical Chemistry	03/1986
Himeji Institute of Technology	Hyogo, Japan	BA	Chemistry	03/1984

7. Previous Employment (Start from the latest one)

Name of Institution	Location	Position	From – To
Kobe College	Hyogo, Japan	Professor	2009 to Present
Osaka City Institute of Public Health and Environmental Sciences	Osaka, Japan	Researcher	1987 to 2009

8. Awards (Please indicate title, organization and year.)