

<査読のある原著論文>

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- 2) Katano T., Fukui M (2003) Molecular inference of dominant picocyanobacterial populations by denaturing gradient gel electrophoresis of PCR amplified 16S rRNA gene fragments. *Phycological Research* 51:71-76
- 3) Katano T., Hirose M., Nakano Shin-ichi (2004) Discrimination between two phycoerythrin-pigment types of *Synechococcus* and their seasonal succession in the Uwa Sea. *Microbes Environments*19: 7-12
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- 7) Katano, T., Nakano, S., Ueno, H., Mitamura, O., Anbutsu, K., Kihira, M., Satoh, Y., Drucker, V. and Sugiyama, M. (2005) Abundance, growth and grazing loss rates of picophytoplankton in Barguzin Bay, Lake Baikal. *Aquatic Ecology* 39:431-438
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- 9) Katano, T. and Nakano, S. (2006) Growth rates of *Synechococcus* types with different phycoerythrin composition estimated by dual-laser flow cytometry in relationship to the light environment in the Uwa Sea. *Journal of Sea Research* 55:182-190
- 10) Katano, T., Lee, B.-K., Kim, B.-H., Lee, H.-O. Han, M.-S. (2006) Population dynamics of *Pseudomonas* sp. HYK0210-SK09 in microbial communities using

the genus specific probe in tyramide signal amplification-fluorescence *in situ* hybridization. *Proceedings of 2nd Japan-Korea Joint Symposium for Limnology* 44-51

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- 12) Lee, H.-O., Lee, N.-L., Katano, T., Han, M.-S. (2006) Growth characteristics for toxic marine dinoflagellate *Alexandrium catenella* isolated from Jinhae Bay, Korea. *Korean Journal of Environmental Biology* 24:147-154 (In Korean)
- 13) Yasuhiro Sato, Toshiya Katano, Takeshi Satoh, Osamu Mitamura, Kaori Ambutsu, Shinichi Nakano, Hiroyuki Ueno, Masaki Kihira, Valentin Drucker, Yuji Tanaka, Teturo Mimura, Yasunori Watanabe, Masahito Sugiyama (2006) Nutrient limitation of the primary production of phytoplankton in Lake Baikal. *Limnology* 7:225-229
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- 16) Lee J-H, Lee H-O, Kim B-H, Katano T, Hwang S-O, Kim D-H, Han M-S. (2007) Effects of nonylphenol on the population growth of algae, heterotrophic nanoflagellate and zooplankton. *Korean Journal of Limnology* 40: 379-386 (In Korean)
- 17) Katano, T., Lee, Juyun, Ki, Jang-Seu, Kang, Sung-Ho, Han, Myung-Soo, (2007) Effects of temperature and salinity on the growth and the optimum nitrogen to phosphorus ratio for the culture of *Diatoma tenue* isolated from a temporary arctic pond in Svalbard, Norway. *Journal of Freshwater Ecology*, 22:629-635
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- Stephanodiscus hantzschii* and *Peridinium bipes* for the control of freshwater winter algal blooms. *Journal of Applied Phycology* 20:375-386. DOI 10.1007/s10811-007-9267-3
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- 23) Hirose, M., Katano, T., Nakano, S. (2008) Growth and grazing mortality rates of *Prochlorococcus*, *Synechococcus* and eukaryotic picophytoplankton in a bay of the Uwa Sea, Japan. *Journal of Plankton Research*. 30:241-250
- 24) Suzuki, T., Sugiyama, Y., Wada, C., Kumagai, T., Nagao, S., Katano, T., Nakano, S., Mitamura, O., Matsuura, Y., Drucker, V.V., Fialkov, V.A., Sugiyama, M. (2008) Role of allochthonous organic matter in Lake Baikal investigated by a three-dimensional fluorescence excitation-emission matrix spectroscopy and high performance liquid chromatography-mass spectrometry. *Vérhandlungen Internationale Vereinigung für theoretische und angewandte Limnologie*30:469-476
- 25) Bo-Kyung Lee, Toshiya Katano, Shin-Ichi Kitamura, Myung-Joo Oh, Myung-Soo Han. (2008) Monitoring of algicidal bacterium, *Alteromonas* sp. strain A14 in its application to natural *Cochlodinium polykrikoides* blooming seawater using fluorescence in situ hybridization. *Journal of Microbiology* 46:274-282
- 26) Toshiya Katano, Shin-ichi Nakano, Hiroyuki Ueno, Osamu Mitamura, Kaori Anbutsu, Masayuki Kihira, Yasuhiro Satoh, Takeshi Satoh, Valentin Drucker, Yuji Tanaka, Yuki Akagashi and Masahito Sugiyama (2008) Abundance and composition of the summer phytoplankton community along a transect from the Barguzin River to the central basin of Lake Baikal. *Limnology*9:243-250
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- effects of nonylphenol on a freshwater phytoplankton community.
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Korean Journal of Limnology 41:519-529
- 29) 杉山裕子、Patrick G. Hatcher、三田村緒佐武、片野俊也、熊谷哲、中野伸一 Valentin V. Drucker、Vladimir A. Fialkov、杉山雅人 (2008) 超高分解能 FT-ICRMS を用いたバイカル湖水中未同定溶存有機物の解明 地球科学 42:165-177
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- 31) Toshiya Katano, Juyun Lee, Yun-Joo Lee, Mi-Kyung Kim, Choul-Gyun Lee, Eon-Seon Jin, Sung-Ho Kang, Myung-Soo Han. (2009) Effect of temperature on inorganic carbon acquisition of *Chlamydomonas reinhardtii*. *Journal of Freshwater Ecology* 24:245-250
- 32) Toshiya Katano, Makoto Yoshida, Juyun Lee, Myung-Soo Han, Yuichi Hayami (in press) Fixation of *Chattonella antiqua*, and *C. marina* (Raphidophyceae) using HEPES-buffered paraformaldehyde and glutaraldehyde for flow cytometry and light microscopy. *Phycologia*

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- 1) Ichinotsuka, D., T. Katano, and S. Nakano. Effects of nutrient supplies on growth rate of planktonic bacteria in a bay of the Uwa Sea
 Microbes and Environments 審査中
- 2) Jung, Seung Won, Kang, Yoon-Ho, Katano Toshiya, Kim, Baik-Ho, Cho, Soo-Yeon, Lee, Jin Hwan, and Han, Myung-Soo. Mesocosm study of the effect of the algicidal bacterium *Pseudomonas fluorescens* HYK0210-SK09 to mitigate freshwater winter *Stephanodiscus hantzschii* diatom blooms
 Microbial Ecology 審査中 2月2日投稿
- 3) Toshiya Katano, Juyun Lee, Myung-Soo Han. Application of tyramide signal amplification-fluorescence *in situ* hybridization to analyze diel cell division

pattern of *Heterosigma akashiwo* in natural environments

Journal of Applied Phycology 審査中2月12日投稿

- 4) Seung Ho Baek, Kai You, Toshiya Katano, Kyoungsoon Shin. Effect of salinity, temperature, prey organisms on growth of three *Pfiesteria*-like heterotrophic dinoflagellates

Algae 審査中 3 月投稿

- 5) Juyun Lee, Toshiya Katano and Myung-Soo Han, Cell cycle analysis of *Heterosigma akashiwo* (raphidophyceae) with special reference to the vertical migration behavior

Journal of Plankton Research 審査中 4 月 1 日投稿

<総説>

なし

<著書>

陸水の事典：自然形質転換、プラスミド、フローサイトメーター

<その他論文>

学位論文

A study on the species diversity and seasonal change of picocyanobacterial community in a freshwater lake using molecular biological analysis

湖沼プランクトンとしてのピコシアノバクテリアの季節変化とその構成種の解析（英文）

東京都立大学 博士（理学）2001年9月

<査読なし学術論文（プロシーディングス）>

- 1) Katano, Toshiya, Kanzaki, Naoto and Nakano, Shin-ichi (2004)
Chaetoceros spp. dominated after occurrence of bottom intrusion in the Uwa Sea. *Proceedings of International Symposium on Long-term Variations in the Coastal Environments and Ecosystems*. 168-172

<国際学会発表>

- 1) 平成14年8月11日-18日、国際生態学会参加・口頭発表、ソウル、韓国
Katano, T., M. Hirose, S. Nakano Pigment types of *Synechococcus* in

- Uwa Sea: Seasonal changes of the two pigment types in relation to environmental factors.
- 2) 平成 15 年 9 月 8 日-12 日、International Baikal Symposium on Microbiology、イルクーツク、ロシア
- Katano, T., Nakano, S., Ueno, H., Anbutsu, K., Mitamura, O., Satoh, Y., Drucker, V., Sugiyama, M., Growth and grazing loss rates of phytoplankton in Barguzin Bay, Lake Baikal.
- Ueno, H., Katano, T., Nakano, S., Anbutsu, K., Mitamura, O., Satoh, Y., Drucker, V., Sugiyama, M., Vertical distributions of microorganisms along a transect from the estuary to the offshore in Barguzin Bay, Lake Baikal,
- Satoh, Y., Satoh, T., Mitamura, O., Anbutsu, K., Watanabe, Y., Tadaki, Y., Nakano, S., Katano, T., Ueno, H., Kihira, M., Drucker, V., Sugiyama M., Distribution, primary production and nutrient limitation of picocyanobacterial plankton in Lake Baikal,
- 3) 平成 16 年 2 月 15 日—20 日、2004 Ocean Research Conference、ホノルル
- Katano, T., Kanzaki, N., Takeoka, H., Nakano, S. Effects of bottom intrusion and kyucho on phytoplankton abundance and composition in the Uwa Sea
- 4) 平成 16 年 8 月 22 日—30 日、10th International Symposium on Microbial Ecology (ISME-10)、カンクン、メキシコ
- Katano, T., Kanzaki, N., Obayashi, Y., Kaneda, A., Morimoto, A., SHIFT IN THE COMPOSITION OF PICOPHYTOPLANKTON FROM COASTAL SEA TO OPEN OCEAN IN THE SOUTHWEST PART OF JAPAN.
- 5) 平成 17 年 9 月 16 日—18 日、The Second Japan-Korea Joint Symposium on Limnology、大阪
- Imai, H., Ando, T., Mizuta, S., Takayama, K., Katano, T., Nakano, S. Changes in abundance, composition and physiological activity of microalgae in a stream-reservoir system.
- Lee, B.K., Katano, T., Han, M.S. Monitoring of algicidal bacterium *Pseudomonas fluorescens* in microcosms using the genus specific probe in tyramide signal amplification-fluorescence in situ hybridization. (学会賞受賞)
- Katano, T., Nakano, S., Tnaka, Y., Mitamura, O., Drucker, V., Han, M.S., Sugiyama, M. Distribution of phycoerythrin- and phycocyanin-rich picocyanobacteria in Barguzin Bay, Lake Baikal.
- 6) 平成 18 年 11 月 17-19 日、International Symposium 2006 on

pioneering studies of young scientists on chemical pollution and environmental changes、愛媛

Toshiya Katano, Juyun Lee, Myung-Soo Han Cell cycle analysis of *Heterosigma akashiwo* using a flow cytometer after tyramide signal amplification-fluorescence *in situ* hybridization

Bo-Kyung Lee, Toshiya Katano, Myung-Soo Han Characterization of an algicidal bacterium, *Alteromonas* sp. strain A14 and its application to a natural bloom of *Cochlodinium polykrikoides*

7) 平成19年8月、International Baikal Symposium on Microbiology、イルクーツク、ロシア

Watanabe Y. Hirano Y. , Katano T. , Satoh Y. , Mimura T. , Sugiyama M. and Drucker, V.V. Nutrient limitation of planktonic and benthic bacteria at the littoral zone of Lake Baikal.

8) 平成19年10月 International Symposium on River and Lake Environments. 韓国ジェジュ島

Toshiya Katano, Sung-Ho Kang, Juyun Lee, Yun-Joo Lee, Myung-Soo Han CO₂ concentrating mechanism in *Chlamydomonas* sp. isolated from an arctic pond in Svalbard, Norway

9) 平成19年12月 4th International symposium on targeted HAB species in the East Asia Waters, 韓国 昌原

Juyun Lee, Toshiya Katano, Myung-Soo Han. Cell cycle of *Heterosigma akashiwo* with special reference to vertical migration behavior.

10) 平成20年10月 PICES 17th Annual Meeting 中国 大連

Juyun Lee, Toshiya Katano, Myung-Soo Han. Cell cycle of *Heterosigma akashiwo* with special reference to vertical migration behavior.

<競争的資金獲得状況>

文部科学省 特別研究促進費（年複数回の試行）（基盤C相当）

細胞周期解析による赤潮原因藻類の野外における増殖速度の見積もり

平成 20-22 年度、2700 千円、研究代表者

愛媛大学 COE 若手研究費 平成 14 年度

片野俊也、「*Synechococcus* の個生態学的研究：個体群変動とそれに与える生物的及び非生物的な環境要因の影響」、500 千円、

愛媛大学 COE 若手研究費 平成 15 年度

片野俊也、「*Synechococcus* の個生態学的研究：個体群変動とそれに与える生物的及び非生物的な環境要因の影響」、1000 千円、

愛媛大学 COE 若手研究費 平成 16 年度

片野俊也、「*Synechococcus* の個生態学的研究：個体群変動とそれに与える生物的及び非生物的な環境要因の影響」、1000 千円、

<参加中のプロジェクト>

科学研究費補助金(基盤研究(A))超長大水系フブスグループバイカルーエニセイ流域における物質動態と生態遷移 京大・杉山雅人代表

<学会活動等>

論文審査

日本陸水学会誌

Limnology

Korean Journal of Limnology

Bulletin of Marine Science

Deep-Sea Research II

Ecological Research