

2019

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# 研究業績 | PUBLICATION LIST 2019

## Climate Science (気候システム科学)

- Dai T., Cheng Y., Suzuki K., Goto D., Kikuchi M., Schutgens N.A.J., Yoshida M., Zhang P., Husi L., Shi G., Nakajima T. (2019) Hourly aerosol assimilation of Himawari-8 AOT using the four-dimensional local ensemble transform Kalman filter. *Journal of Advances in Modeling Earth Systems*, **11**, 680-711.
- Goto D., Kikuchi M., Suzuki K., Hayasaki M., Yoshida M., Nagao T.M., Choi M., Kim J., Sugimoto N., Shimizu A., Oikawa E., Nakajima T. (2019) Aerosol model evaluation using two geostationary satellites over East Asia in May 2016. *Atmospheric Research*, **217**, 93-113.
- Gupta A., Dhaka S.K., Matsumi Y., Imasu R., Hayashida S., Singh V. (2019) Seasonal and annual variation of AIRS retrieved CO<sub>2</sub> over India during 2003-2011. *Journal of Earth System Science*, **128**, doi: 10.1007/s12040-019-1108-7.
- Horinouchi T., Matsumura S., Ose T., Takayabu Y.N. (2019) Jet-precipitation relation and future change of mei-yu-baiu rainband and subtropical jet in CMIP5 coupled GCM simulations. *Journal of Climate*, **32**, 2247-2259.
- Hoshiba Y., Matsumura Y., Hasumi H., Itoh S., Nakada S., Suzuki K.W. (2019) A simulation study on effects of suspended sediment through high riverine discharge on surface river plume and vertical water exchange. *Estuarine, Coastal and Shelf Science*, **228**, doi: 10.1016/j.ecss.2019.106352.
- Inatsu M., Suematsu T., Tamaki Y., Nakano N., Mizushima K., Shinohara M. (2019) Development of a pressure-precipitation transmitter. *Journal of Applied Meteorology and Climatology*, **58**, 2453-2468.
- Iwakiri T., Watanabe M. (2019) Strengthening of the Indian Ocean dipole with increasing seasonal cycle in the mid-Holocene. *Geophysical Research Letters*, **46**, doi: 10.1029/2019GL083088.
- Iwakiri T., Watanabe M. (2019) Mechanisms reducing ENSO amplitude and asymmetry via an enhanced seasonal cycle in the mid-Holocene. *Journal of Climate*, **32**, doi: 10.1175/JCLI-D-19-0110.1.
- Iwasaki C., Imasu R., Bril A., Oshchepkov S., Yoshida Y., Yokota T., Zakharov V., Gribanov K., Rokotyan N. (2019) Optimization of the photon path length probability density function-simultaneous (PPDF-S) method and evaluation of CO<sub>2</sub> retrieval performance under dense aerosol conditions. *Sensors*, **19**, doi: 10.3390/s19051262.
- Jing X., Suzuki K., Michibata T. (2019) The key role of warm rain parameterization in determining the aerosol indirect effect in a global climate model. *Journal of Climate*, **32**, 4409-4430.
- Jinno T., Miyakawa T., Satoh M. (2019) NICAM predictability of the monsoon gyre over the western North Pacific during August 2016. *Journal of the Meteorological Society of Japan*, **97**, 533-540.
- Kataoka T., Kimoto M., Watanabe M., Tatebe H. (2019) Wind-Mixed layer-SST Feedbacks in a tropical air-sea coupled system: Application to the Atlantic. *Journal of Climate*, **32**, doi: 10.1175/JCLI-D-18-0728.1.
- Kang S.M., Hawcroft M., Xiang B., Hwang Y.-T., Kim H., Cazes G., Codron F., Crueger T., Deser C., Hodnebrog O., Kim J., Kosaka Y., Losada T., Mechoso C.R., Myhre G., Seland O., Stevens B., Watanabe M., Yu S. (2019) Extratropical-tropical interaction model intercomparison project (ETIN-MIP): Protocol and initial results. *Bulletin of the American Meteorological Society*, **100**, 2589-2605.
- Kikuchi M., Suzuki K. (2019) Characterizing vertical particle structure of precipitating cloud system from multiplatform measurements of A - Train constellation. *Geophysical Research Letters*, **46**, 1040-1048.
- Kodama T., Genda H., O'ishi R., Abe-Ouchi A., Abe Y. (2019) Inner edge of habitable zones for Earth - sized planets with various surface water distributions. *Journal of Geophysical Research: Planets*, **124**, 2306-2324.
- Kurogi M., Hasumi H. (2019) Tidal control of the flow through long, narrow straits: a modeling study for the Seto Inland Sea. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-47090-y.
- Kusahara K., Williams G.D., Massom R., Reid P., Hasumi H. (2019) Spatiotemporal dependence of Antarctic sea ice variability to dynamic and thermodynamic forcing: a coupled ocean-sea ice model study. *Climate Dynamics*, **52**, 3791-3807.
- Kushnir Y., Scaife A., Arritt R., Balsamo G., Boer G., Doblas-Reyes F., Hawkins E., Kimoto M., Kolli R.K., Kumar A., Matei D., Matthes K., Müller W.A., O'kane T., Perlwitz J., Power S., Raphael M., Shimpo A., Smith D., Tuma M., Wu B. (2019) Towards operational predictions of the near-term climate. *Nature Climate Change*, **9**, 94-101.
- Maloney E.D., Gettelman A., Ming Y., Neelin J.D., Barrie D., Mariotti A., Chen C.-C., Coleman D.R.B., Kuo Y.-H., Singh B., Annamalai H., Berg A., Booth J.F., Camargo S.J., Dai A., Gonzalez A., Hafner J., Jiang X., Jing X., Kim D., Kumar A., Moon Y., Naud C.M., Sobel A.H., Suzuki K., Wang F., Wang J., Wing A.A., Xu X., Zhao M. (2019) Process-oriented evaluation of climate and weather forecasting models. *Bulletin of the American Meteorological Society*, **100**, 1665-1686.
- Mano T., Guo X., Fujii N., Yoshie N., Tsutsumi E., Saito R. (2019) Moon jellyfish aggregations observed by a scientific echo sounder and an underwater video camera and their relation to internal waves. *Journal of Oceanography*, **75**, 359-374.
- Menviel L., Capron E., Govin A., Dutton A., Tarasov L., Abe-Ouchi A., Drysdale R.N., Gibbard P.L., Gregoire L., He F., Ivanovic R.F., Kageyama M., Kawamura K., Landais A., Otto-Bliesner B.L., Oyabu I., Tzedakis P.C., Wolff E., Zhang X. (2019) The penultimate deglaciation: protocol for Paleoclimate Modelling Intercomparison Project (PMIP) phase 4 transient numerical simulations between 140 and 127 ka, version 1.0. *Geoscientific Model Development*, **12**, 3649-3685.
- Michibata T., Suzuki K., Ogura T., Jing X. (2019) Incorporation of inline warm rain diagnostics into the COSP2 satellite simulator for process-oriented model evaluation. *Geoscientific Model Development*, **12**, 4297-4307.
- Michibata T., Suzuki K., Sekiguchi M., Takemura T. (2019) Prognostic precipitation in the MIROC6-SPRINTARS GCM: Description and evaluation against satellite observations. *Journal of Advances in Modeling Earth Systems*, **11**, 839-860.
- Misra P., Imasu R., Takeuchi W. (2019) Impact of urban growth on air quality in Indian cities using hierarchical Bayesian approach. *Atmosphere*, **10**, doi: 10.3390/atmos10090517.
- Miyakawa T., Miura H. (2019) Resolution dependencies of tropical convection in a global cloud/cloud-system resolving model. *Journal of the Meteorological Society of Japan*, **97**, 745-756.
- Mori M., Kosaka Y., Watanabe M., Nakamura H., Kimoto M. (2019) A reconciled estimate of the influence of Arctic sea-ice loss on recent Eurasian cooling. *Nature Climate Change*, **9**, 123-129.
- Mori M., Kosaka Y., Watanabe M., Taguchi B., Nakamura H., Kimoto M. (2019) Reply to: Is sea-ice-driven Eurasian cooling too weak in models? *Nature Climate Change*, **9**, 937-939.

- Niranjan Kumar K., Suzuki K. (2019) Assessment of seasonal cloud properties in the United Arab Emirates and adjoining regions from geostationary satellite data. *Remote Sensing of Environment*, **228**, 90-104.
- Obase T., Abe-Ouchi A. (2019) Abrupt Bölling - Allerød warming simulated under gradual forcing of the last deglaciation. *Geophysical Research Letters*, **46**, 11397-11405.
- Ouchi M., Matsumi Y., Nakayama T., Shimizu K., Sawada T., Machida T., Matsueda H., Sawa Y., Morino I., Uchino O., Tanaka T., Imasu R. (2019) Development of a balloon-borne instrument for CO<sub>2</sub> vertical profile observations in the troposphere. *Atmospheric Measurement Techniques*, **12**, 5639-5653.
- Qin X.-C., Nakayama T., Matsumi Y., Kawasaki M., Imasu R., Morino I., Tanaka Y., Ishidoya S., Sato K., Ohashi M. (2019) Observation of column-averaged molar mixing ratios of carbon dioxide in Tokyo. *Atmospheric Environment: X*, **2**, doi: 10.1016/j.aeaao.2019.100022.
- Roxy M.K., Dasgupta P., McPhaden M.J., Suematsu T., Zhang C., Kim D. (2019) Twofold expansion of the Indo-Pacific warm pool warps the MJO life cycle. *Nature*, **575**, 647-651.
- Rugenstein M., Bloch-Johnson J., Abe-Ouchi A., Andrews T., Beyerle U., Cao L., Chadha T., Danabasoglu G., Dufresne J.-L., Duan L., Foujols M.-A., Froelicher T., Geoffroy O., Gregory J., Knutti R., Li C., Marzocchi A., Mauritzen T., Menary M., Moyer E., Nazarenko L., Paynter D., Saint-Martin D., Schmidt G.A., Yamamoto A., Yang S. (2019) LongRunMIP: motivation and design for a large collection of millennial-length AOGCM simulations. *Bulletin of the American Meteorological Society*, **100**, 2551-2570.
- Sato Y., Suzuki K. (2019) How do aerosols affect cloudiness? *Science*, **363**, 580-581.
- Seroussi H., Nowicki S., Simon E., Abe-Ouchi A., Albrecht T., Brondex J., Cornford S., Dumas C., Gillet-Chaulet F., Goelzer H., Gollledge N.R., Gregory J.M., Greve R., Hoffman M.J., Humbert A., Huybrechts P., Kleiner T., Larouf E., Leguy G., Lipscomb W.H., Lowry D., Mengel M., Morlighem M., Pattyn F., Payne A.J., Pollard D., Price S.F., Quiquet A., Reerink T.J., Reese R., Rodehacke C.B., Schlegel N.-J., Shepherd A., Sun S., Sutter J., Van Breedam J., van de Wal R.S.W., Winkelmann R., Zhang T. (2019) initMIP-Antarctica: an ice sheet model initialization experiment of ISMIP6. *Cryosphere*, **13**, 1441-1471.
- Shimpo A., Takemura K., Wakamatsu S., Togawa H., Mochizuki Y., Takekawa M., Tanaka S., Yamashita K., Maeda S., Kurora R., Murai H., Kitabatake N., Tsuguti H., Mukougawa H., Iwasaki T., Kawamura R., Kimoto M., Takayabu I., Takayabu Y.N., Tanimoto Y., Hirooka T., Masumoto Y., Watanabe M., Tsuboki K., Nakamura H. (2019) Primary factors behind the Heavy Rain Event of July 2018 and the subsequent heat wave in Japan. *Scientific Online Letters on the Atmosphere*, **15A**, 13-18.
- Smith D.M., Eade R., Scaife A.A., Caron L.-P., Danabasoglu G., DelSole T.M., Delworth T., Doblas-Reyes F.J., Dunstone N.J., Hermanson L., Kharin V., Kimoto M., Merryfield W.J., Mochizuki T., Müller W.A., Pohlmann H., Yeager S., Yang X. (2019) Robust skill of decadal climate predictions. *npj Climate and Atmospheric Science*, **2**, doi: 10.1038/s41612-019-0071-y.
- Solanki R., Singh N., Kiran Kumar N.V.P., Rajeev K., Imasu R., Dhaka S.K. (2019) Impact of mountainous topography on surface-layer parameters during weak mean-flow conditions. *Boundary-Layer Meteorology*, **172**, 133-148.
- Someya Y., Imasu R., Shiomi K. (2019) Dust aerosol detection by the modified CO<sub>2</sub> slicing method. *Sensor*, **19**, doi: 10.3390/s19071615.
- Stephens G.L., Christensen M., Andrews T., Haywood J., Malavelle F.F., Suzuki K., Jing X., Lebsock M., Li J.-L.F., Takahashi H., Sy O. (2019) Cloud physics from space. *Quarterly Journal of the Royal Meteorological Society*, **145**, 2854-2875.
- Suzuki K., Takemura T. (2019) Perturbations to global energy budget due to absorbing and scattering aerosols. *Journal of Geophysical Research: Atmospheres*, **124**, 2194-2209.
- Takemura T., Suzuki K. (2019) Weak global warming mitigation by reducing black carbon emissions. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-41181-6.
- Tatebe H., Ogura T., Nitta T., Komuro Y., Ogochi K., Takemura T., Sudo K., Sekiguchi M., Abe M., Saito F., Chikira M., Watanabe S., Mori M., Hirota N., Kawatani Y., Mochizuki T., Yoshimura K., Takata K., O'ishi R., Yamazaki D., Suzuki T., Kurogi M., Kataoka T., Watanabe M., Kimoto M. (2019) Description and basic evaluation of simulated mean state, internal variability, and climate sensitivity in MIROC6. *Geoscientific Model Development*, **12**, 2727-2765.
- Tsuji H., Takayabu Y.N. (2019) Precipitation enhancement via the interplay between atmospheric rivers and cut-off lows. *Monthly Weather Review*, **147**, 2451-2466.
- Watanabe M., Tatebe H. (2019) Reconciling roles of sulphate aerosol forcing and internal variability in Atlantic multidecadal climate changes. *Climate Dynamics*, **53**, 4651-4665.
- Yamamoto A., Abe-Ouchi A., Ohgaito R., Ito A., Oka A. (2019) Glacial CO<sub>2</sub> decrease and deep-water deoxygenation by iron fertilization from glaciogenic dust. *Climate of the Past*, **15**, 981-996.
- Yokohata T., Tanaka K., Nishina K., Takahashi K., Emori S., Kiguchi M., Iseri Y., Honda Y., Okada M., Masaki Y., Yamamoto A., Shigemitsu M., Yoshimori M., Sueyoshi T., Iwase K., Hanasaki N., Ito A., Sakurai G., Iizumi T., Nishimori M., Lim W.H., Miyazaki C., Okamoto A., Kanae S., Oki T. (2019) Visualizing the interconnections among climate risks. *Earth's Future*, **7**, 85-100.
- Yokoyama C., Takayabu Y.N., Arakawa O., Ose T. (2019) A study on future projections of precipitation characteristics around Japan in early summer combining GPM DPR observation and CMIP5 large-scale environments. *Journal of Climate*, **32**, 5251-5274.
- Yoshimori M., Suzuki M. (2019) The relevance of mid-Holocene Arctic warming to the future. *Climate of the Past*, **15**, 1375-1394.
- Zadvornyykha I.V., Gribanova K.G., Zakharova V.I., Imasu R. (2019) Methane vertical profile retrieval from the thermal and near-infrared atmospheric spectra. *Atmospheric and Oceanic Optics*, **32**, 152-157.
- Zhao S., Suzuki K. (2019) Differing impacts of black carbon and sulfate aerosols on global precipitation and the ITCZ location via atmosphere and ocean energy perturbations. *Journal of Climate*, **32**, 5567-5582.
- 今須良一 (2019) GOSAT-2 で期待される科学的成果—サイエンスプランナー—. 日本リモートセンシング学会誌, **39**, 9-13.
- 菊池麻紀, 沖 理子, 久保田拓志, 吉田真由美, 萩原雄一朗, 高橋千賀子, 大野裕一, 西澤智明, 中島 孝, 鈴木健太郎, 佐藤正樹, 岡本 創, 富田英一 (2019) 雲エアロゾル放射ミッショーン「EarthCARE」—雲・エアロゾルとその放射影響の統合的観測—. 日本リモートセンシング学会誌, **39**, 181-196.
- 齋藤尚子, 今須良一 (2019) GOSAT-2 搭載 TANSO-FTS-2 の熱赤外バンドによる温室効果ガス観測. 日本リモートセンシング学会誌, **39**, 29-36.
- 高藪 縁 (2019) 衛星からみた 2018 年 7 月豪雨: 局地豪雨との違い. 科学, **89**, 628-634.

- 吉森正和 (2019) 北極温暖化増幅のメカニズムと将来予測. 天気, **66**, 214-219.  
渡部雅浩 (2019) 地球温暖化は豪雨や猛暑にどう影響するか. 科学, **89**, 641-648.

### Physical Oceanography (海洋物理)

- Brooks H.E., Doswell C.A. III, Zhang X., Chernokulsky A.M.A., Tochimoto E., Hanstrum B., Nascimento E.L., Sills D.M.L., Antonescu B., Barrett B. (2019) A century of progress in severe convective storm research and forecasting. *Meteorological Monograph*, **59**, 18.1-18.41.
- Bui O.T.N., Kameyama S., Kawaguchi Y., Nishino S., Tsunogai U., Yoshikawa-Inoue H. (2019) Influence of warm-core eddy on dissolved methane distribution in the southwestern Canada Basin during late summer/early fall 2015. *Polar Science*, **22**, doi: 10.1016/j.polar.2019.100481.
- Ito J., Nagoshi T., Niino H. (2019) A numerical study of "Hijikawa-Arashi": a thermally-driven gap wind visualized by nocturnal fog. *Journal of Applied Meteorology and Climatology*, **58**, 1293-1307.
- Kawaguchi Y., Itoh M., Fukamachi Y., Moriya E., Onodera J., Kikuchi T., Harada N. (2019) Year-round observations of sea-ice drift and near-inertial internal waves in the Northwind Abyssal Plain, Arctic Ocean. *Polar Science*, **21**, 212-223.
- Kawaguchi Y., Wagawa T., Igeta Y. (2019) Near-inertial internal waves and multiple-inertial oscillations trapped by negative vorticity anomaly in the central Sea of Japan. *Progress in Oceanography*, **181**, doi: 10.1016/j.pocean.2019.102240.
- Kawai Y., Nishikawa H., Oka E. (2019) In situ evidence of low-level atmospheric responses to the Oyashio front in early spring. *Journal of the Meteorological Society of Japan*, **97**, 423-438.
- Kimura S., Onodera J., Itoh M., Kikuchi T., Nishino S., Kawaguchi Y., Watanabe E., Harada N. (2019) The warming of the Chukchi slope through the Barrow Canyon outflow in the 2016-2017 winter. *Journal of Geophysical Research Oceans*, **124**, 7437-7456.
- Knutson T., Camargo S.J., Chan J.C.L., Emanuel K., Ho C.-H., Kossin J., Mohapatra M., Satoh M., Sugi M., Walsh K., Wu L. (2019) Tropical cyclones and climate change assessment. *Bulletin of the American Meteorological Society*, **100**, 1987-2007.
- Kodama C., Stevens B., Mauritsen T., Seiki T., Satoh M. (2019) A new perspective for future precipitation change from intense extratropical cyclones. *Geophysical Research Letters*, **46**, 12435-12444.
- Kotsuki S., Terasaki K., Kanemaru K., Satoh M., Kubota T., Miyoshi T. (2019) Predictability of record-breaking rainfall in Japan in July 2018: Ensemble forecast experiments with the near-real-time global atmospheric data assimilation system NEXRA. *Scientific Online Letters on the Atmosphere*, **15A**, 1-7.
- Ohtake H., Uno F., Oozeki T., Hayashi S., Ito J., Hashimoto A., Yoshimura H., Yamada Y. (2019) Solar irradiance forecasts by mesoscale numerical weather prediction models with different horizontal resolutions. *Energies*, **12**, doi: 10.3390/en12071374.
- Oka E., Yamada K., Sasano D., Enyo K., Nakano T., Ishii M. (2019) Remotely forced decadal physical and biogeochemical variability of North Pacific Subtropical Mode Water over the last 40 years. *Geophysical Research Letters*, **46**, 1555-1561.
- Palmer M.D., Durack P., Chidichimo M.P., Church J., Cravatte S.E., Hill K.L., Johannessen J., Karstensen J., Lee T., Legler D., Mazloff M., Oka E., Purkey S., Rabe B., Sallée J.-B., Sloyan B.M., Speich S., von Schuckmann K., Willis J., Wijffels S.E. (2019) Adequacy of the ocean observation system for quantifying regional heat and freshwater storage and change. *Frontiers in Marine Science*, **6**, doi: 10.3389/fmars.2019.00416.
- Roemmich D., Alford M.H., Claustre H., Johnson K., King B., Moum J., Oke P., Owens W.B., Pouliquen S., Purkey S., Scanderbeg M., Suga T., Wijffels S., Zilberman N., Bakker D., Baringer M., Belbeoch M., Bittig H.C., Boss E., Caili P., Carse F., Carval T., Chai F., Conchubhair D.Ó., d'Ortenzio F., Dall'Olmo G., Desbruyeres D., Fennel K., Fer I., Ferrari R., Forget G., Freeland H., Fujiki T., Gehlen M., Greenan B., Hallberg R., Hibiya T., Hosoda S., Jayne S., Jochum M., Johnson G.C., Kang K., Kolodziejczyk N., Körtzinger A., Le Traon P.-Y., Lenn Y.-D., Maze G., Mork K.A., Morris T., Nagai T., Nash J., Naveira Garabato A., Olsen A., Pattabhi R.R., Prakash S., Riser S., Schmechtig C., Schmid C., Shroyer E., Sterl A., Sutton P., Talley L., Tanhua T., Thierry V., Thomalla S., Toole J., Troisi A., Trull T.W., Turton J., Velez-Belchi P.J., Walczowski W., Wang H., Wanninkhof R., Waterhouse A.F., Waterman S., Watson A., Wilson C., Wong A.P.S., Xu J., Yasuda I. (2019) On the future of Argo: A global, full-depth, multi-disciplinary array. *Frontiers in Marine Science*, **439**, doi: 10.3389/fmars.2019.00439.
- Satoh M., Stevens B., Judt F., Khairoutdinov M., Lin S.-J., Putman W.M., Düben P. (2019) Global cloud-resolving models. *Current Climate Change Reports*, **5**, 172-184.
- Seiki T., Kodama C., Satoh M., Hagihara Y., Okamoto H. (2019) Characteristics of ice clouds over mountain regions detected by CALIPSO and CloudSat satellite observations. *Journal of Geophysical Research Atmospheres*, **124**, 10858-10877.
- Sloyan B.M., Wilkin J., Hill K.L., Chidichimo M.P., Cronin M.F., Johannessen J.A., Karstensen J., Krug M., Lee T., Oka E., Palmer M.D., Rabe B., Speich S., von Schuckmann K., Weller R.A., Yu W. (2019) Evolving the physical global ocean observing system for research and application services through international coordination. *Frontiers in Marine Science*, **6**, doi:10.3389/fmars.2019.00449.
- Stevens B., Satoh M., Auger L., Biercamp J., Bretherton C.S., Chen X., Düben P., Judt F., Khairoutdinov M., Klocke D., Kodama C., Kornbluh L., Lin S.-J., Neumann P., Putman W.M., Röber N., Shibuya R., Vanniere B., Vidale P.L., Wedi N., Zhou L. (2019) DYAMOND: the Dynamics of the Atmospheric general circulation Modeled On Non-hydrostatic Domains. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0304-z.
- Tanaka K., Oka E. (2019) A brief overview of recent activities and approaches for investigating shelf-basin exchange processes and coastal sea circulation around Japan. *Coastal Marine Science*, **42**, 12-15.
- Tanaka T., Hasegawa D., Yasuda I., Tsuji H., Fujio S., Goto Y., Nishioka J. (2019) Enhanced vertical turbulent nitrate flux in the Kuroshio across the Izu Ridge. *Journal of Oceanography*, **75**, 195-203.
- Tochimoto E., Sueki K., Niino H. (2019) Entraining CAPE for better assessment of tornado outbreak potential in the warm sector of extratropical cyclones. *Monthly Weather Review*, **147**, 913-930.

- Tochimoto E., Yokota S., Niino H., Yanase W. (2019) A hierarchy of violent vortices in an extratropical cyclone: A potential risk to maritime traffic. *Monthly Weather Review*, **147**, 1989-2007.
- Wagawa T., Kawaguchi Y., Igeta Y., Honda N., Okunishi T., Yabe I. (2019) Observations of oceanic fronts and water-mass properties in the central Japan Sea: Repeated surveys from a glider. *Journal of Marine Systems*, **201**, doi: 10.1016/j.jmarsys.2019.103242.
- Yamada Y., Kodama C., Satoh M., Nakano M., Nasuno T., Sugi M. (2019) High-resolution ensemble simulations of intense tropical cyclones and their internal variability during the El Niños of 1997 and 2015. *Geophysical Research Letters*, **46**, 7592-7601.
- Yanagimoto D., Tanaka K., Fujio S., Nishigaki H., Ishizu M. (2019) Observation of near-bottom current on the continental shelf off Sanriku. In *Oceanography Challenges to Future Earth: Human and Natural Impacts on our Seas* (eds: Komatsu T., Ceccaldi H.J., Yoshida J., Prouzet P., Henocque Y.), Springer, Switzerland, 171-178.
- Yanase W., Niino H. (2019) Parameter sweep experiments on a spectrum of cyclones with diabatic and baroclinic processes. *Journal of the Atmospheric Science*, **76**, 1917-1935.
- 伊賀啓太 (2019) 円筒水槽内の底面の回転円盤によって作られる渦. 月刊海洋号外, **62**, 12-17.
- 伊藤純至 (2019) ラージ・エディ・シミュレーションを活用した微細気象の研究. 月刊海洋号外, **62**, 147-151.
- 佐藤正樹, 山田洋平, 杉 正人, 小玉知央, 野田暁 (2019) 全球非静力学モデル NICAM による台風研究. 月刊海洋号外, **62**, 62-67.
- 新野 宏 (2019) 大気・海洋の渦・対流・シア流とその相互作用の研究: 回顧と展望. 月刊海洋号外, **62**, 169-190.
- 野田 暁, 中村晃三, 岩崎俊樹, 佐藤正樹 (2019) 下層大気の変動によって起こる下層雲の応答. 月刊海洋号外, **62**, 152-156.
- 長谷川大介, 田中雄大, 松野 健, 千手智晴, 堤 英輔, 中村啓彦, 仁科文子, 小針 統, 吉江直樹, 郭 新宇, 長井健啓, 奥西 武, 安田一郎 (2019) センサによる硝酸塩鉛直乱流拡散フラックスの計測. 沿岸海洋研究, **57**, 59-64.
- 吉崎正憲, 高咲良規, 伊賀晋一, 佐藤正樹, 高野かれん, 小宮山祐矢, 酒井絵梨, 宮田 学, 森田将矢, 森泉慎一 (2019) 理想化された aqua-planet における NICAM の結果と JRA-55 のデータにより解析した対流圏における気温の鉛直分布と気温減率の特徴. 地球環境研究, **21**, 1-12.

### Chemical Oceanography (海洋化学)

- Amakawa H., Yu T.-L., Tazoe H., Obata H., Gamo T., Sano Y., Shen C.-C., Suzuki K. (2019) Neodymium concentration and isotopic composition distributions in the southwestern Indian Ocean and the Indian sector of the Southern Ocean. *Chemical Geology*, **511**, 190-203.
- Chen A.-T., Shen C.-C., Byrne T.B., Sano Y., Takahata N., Yang T.F., Wang Y. (2019) Mantle fluids associated with crustal-scale faulting in a continental subduction setting, Taiwan. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-47070-2.
- Escobar M.T., Takahata N., Kagoshima T., Shirai K., Tanaka K., Park J.-O., Obata H., Sano Y. (2019) Assessment of helium isotopes near the Japan Trench 5 years after the 2011 Tohoku-Oki earthquake. *ACS Earth and Space Chemistry*, **3**, 581-587.
- Fukuda K., Hiyagon H., Fujiya W., Takahata N., Kagoshima T., Sano Yuji (2019) Origin of the short-lived radionuclide <sup>10</sup>Be and its implications for the astronomical setting of CAI formation in the solar protoplanetary disk. *Astrophysical Journal*, **886**, doi: 10.3847/1538-4357/ab479c.
- Grand M.M., Laes-Huon A., Fietz S., Resing J.A., Obata H., Luther G.W.III, Tagliabue A., Achterberg E.P., Middag R., Tovar-Sánchez A., Bowie A.R. (2019) Developing autonomous observing systems for micronutrient trace metals. *Frontiers in Marine Science*, **6**, 1-17.
- Jenkins W.J., Doney S.C., Fendrock M., Fine R., Gamo T., Jean-Baptiste P., Key R., Klein B., Lupton J.E., Rhein M., Roether W., Sano Y., Schlitzer R., Schlosser P., Swift J. (2019) A comprehensive global oceanic dataset of helium isotope and tritium measurements. *Earth System Science Data*, **11**, 441-454.
- Kagoshima T., Sano Y., Takahata N., Lee H., Lan T. and Ohba T. (2019) Secular variations of helium and nitrogen isotopes related to the 2015 volcanic unrest of Mt. Hakone, central Japan. *Geochemistry, Geophysics, Geosystems*, **20**, 4710-4722.
- Kurihara M., Yasutaka T., Aono T., Ashikawa N., Ebina H., Iijima T., Ishimaru K., Kanai R., Karube Z., Konnai Y., Kubota T., Maehara Y., Maeyama T., Okizawa Y., Ota H., Otsuka S., Sakaguchi A., Tagomori H., Taniguchi K., Tomita M., Tsukada H., Hayashi S., Lee S., Miyazu S., Shin M., Nakanishi T., Nishikiori T., Onda Y., Shinano T., Tsuji H. (2019) Repeatability and reproducibility of measurements of low dissolved radiocesium concentrations in freshwater using different pre-concentration methods. *Journal of Radioanalytical and Nuclear Chemistry*, **322**, 477-485.
- Le Q.D., Yin Fui S., Piah R.M., Ishimura T., Sano Y., Tanaka K., Shirai K. (2019) Isotopic evidence of connectivity between an inshore vegetated lagoon (nursery habitat) and coastal artificial reefs (adult habitats) for the reef fish *Lethrinus lentjan* on the Terengganu coast, Malaysia. *Marine and Freshwater Research*, **70**, 1675-1688.
- Lee H., Kim H., Kagoshima T., Park J.-O., Takahata N., Sano Y. (2019) Mantle degassing along strike-slip faults in the Southeastern Korean Peninsula. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-51719-3.
- Mai H.V., Tran L.X., Dinh Q.M., Tran D.D., Murata M., Sagara H., Yamada A., Shirai K., Ishimatsu A. (2019) Land invasion by the mudskipper, *Periophthalmodon septemradiatus*, in fresh and saline waters of the Mekong River. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-50799-5.
- Miyajima T., Hamaguchi M. (2019) Carbon sequestration in sediment as an ecosystem function of seagrass meadows. In *Blue Carbon in Shallow Coastal Ecosystems: Carbon Dynamics, Policy, and Implementation* (eds: Kuwae T., Hori M.), Springer, Singapore, 33-71.
- Morishita Y., Hammond N.Q., Momii K., Konagaya R., Sano Y., Takahata N., Ueno H. (2019) Invisible gold in pyrite from epithermal, banded-iron-formation-hosted, and sedimentary gold deposits: Evidence of hydrothermal influence. *Minerals*, **9**, doi: 10.3390/min9070447.
- Murakami-Sugihara N., Shirai K., Hori M., Amano Y., Fukuda H., Obata H., Tanaka K., Mizukawa K., Sano Y., Takada H., Ogawal H. (2019) Mussel shell geochemical analyses reflect coastal environmental changes following the 2011 Tohoku tsunami. *ACS Earth and Space Chemistry*, **3**, 1346-1352.

- Okada S., Chen C., Watsuji T., Nishizawa M., Suzuki Y., Sano Y., Bissessur D., Deguchi S., Takai K. (2019) The making of natural iron sulfide nanoparticles in a hot vent snail. *Proceedings of the National Academy of Sciences of the United States of America*, **116**, 20376-20381.
- Satoh N., Fukuda H., Miyairi Y., Yokoyama Y., Nagata T. (2019) Position-dependent radiocarbon content of the macroalgae *Undaria pinnatifida* as an indicator of oceanographic conditions during algal growth. *Journal of Oceanography*, **75**, 349-358.
- Seike K., Sassa S., Shirai K., Kubota K. (2019) Fate of benthic invertebrates during seabed liquefaction: Quantitative comparison of living organism body density with liquefied substrate density. *Estuarine, Coastal and Shelf Science*, **223**, 1-5.
- Sieber M., Conway T.M., de Souza G.F., Takano S., Sohryn Y., Obata H., Vance D. (2019) Physical and biogeochemical controls on the distribution of dissolved cadmium and its isotopes in the Southwest Pacific. *Chemical Geology*, **511**, 494-509.
- Tanaka K., Okaniwa N., Miyaji T., Murakami-Sugihara N., Zhao L., Tanabe K., Schoene B.R., Shirai K. (2019) Microscale magnesium distribution in shell of the Mediterranean mussel *Mytilus galloprovincialis*: An example of multiple factors controlling Mg/Ca in biogenic calcite. *Chemical Geology*, **511**, 521-532.
- Tazoe H., Yamagata T., Tsujita K., Nagai H., Obata H., Tsumune D., Kanda J., Yamada M. (2019) Observation of dispersion in the Japanese coastal area of released <sup>90</sup>Sr, <sup>134</sup>Cs, and <sup>137</sup>Cs from the Fukushima Daiichi Nuclear Power Plant to the sea in 2013. *International Journal of Environmental Research and Public Health*, **16**, doi: 10.3390/ijerph16214094.
- Tsuchiya K., Sano T., Tomioka N., Kohzu A., Komatsu K., Shinohara R., Takamura N., Nakagawa M., Sugai Y., Kuwahara V.S., Toda T., Fukuda H., Imai A. (2019) Seasonal variability and regulation of bacterial production in a shallow eutrophic lake. *Limnology and Oceanography*, **64**, 2441-2454.
- Walliser E.O., Tanabe K., Hikida Y., Shirai K., Schöne B.R. (2019) Sclerochronological study of the gigantic inoceramids *Sphenocerasmus schmidtii* and *S. sachalinensis* from Hokkaido, northern Japan. *Lethaia*, **52**, 410-428.
- Wyatt A.S.J., Leichter J.J., Toth L.T., Miyajima T., Aronson R.B., Nagata T. (2019) Heat accumulation on coral reefs mitigated by internal waves. *Nature Geoscience*, **13**, 28-34.
- Wyatt, A.S.J., Matsumoto R., Chikaraishi Y., Miyairi Y., Yokoyama Y., Sato K., Ohkouchi N., Nagata T. (2019) Enhancing insights into foraging specialization in the world's largest fish using a multi-tissue, multi-isotope approach. *Ecological Monographs*, **89**, doi: 10.1002/ecm.1339.
- Zhao L., Shirai K., Murakami-Sugihara N., Higuchi T., Tanaka K. (2019) Mussel periostracum as a high-resolution archive of soft tissue  $\delta^{13}\text{C}$  records in coastal ecosystems. *Geochimica et Cosmochimica Acta*, **260**, 232-243.
- Zhao L., Shirai K., Murakami-Sugihara N., Higuchi T., Sakamoto T.T., Miyajima T., Tanaka K. (2019) Retrospective monitoring of salinity in coastal waters with mussel shells. *Science of the Total Environment*, **671**, 666-675.
- Zhao L., Tanaka K., Tazoe H., Iizuka T., Kubota K., Murakami-Sugihara N., Shirai K. (2019) Determination of the geographical origin of marine mussels (*Mytilus* spp.) using <sup>143</sup>Nd/<sup>144</sup>Nd ratios. *Marine Environmental Research*, **148**, 12-18.
- Zhao L., Zuykov M., Tanaka K., Shirai K., Anderson J., McKindsey C.W., Deng Y., Spiers G., Schindler M. (2019) New insight into light-enhanced calcification in mytilid mussels, *Mytilus* sp., infected with photosynthetic algae *Coccomyxa* sp.:  $\delta^{13}\text{C}$  value and metabolic carbon record in shells. *Journal of Experimental Marine Biology and Ecology*, **520**, doi: 10.1016/j.jembe.2019.151211.
- 高畑直人, 尾上哲治, 佐野有司, 磯崎雄 (2019) 古生代末 (2.5 億年前) 大量絶滅層準の高いヘリウム同位体記録: 一冥王代以来の地球史を通じた地球外物質流入同定方法の探索. 地学雑誌, **128**, 667-679.
- 辻一真, 丸尾雅啓, 小畑元 (2019) イオンクロマトグラフィーによる天然水中極微量メチルホスホン酸の定量. 分析化学, **68**, 275-278.
- 永田 俊 (2019) 海洋の炭素・窒素循環における微生物・ウイルス群集の役割に関する研究. 海の研究, **28**, 1-18.
- 町田 昌彦, 山田 進, 岩田 垂矢子, 乙坂 重豪, 小林 卓也, 渡辺 将久, 船坂 英之, 森田 貴己 (2019) 福島第一原発港湾からの放射性セシウム 137 の推定流出量の変遷—2011 年 4 月～2018 年 6 月までの 7 年間に渡る月間流出量の推定—. 日本原子力学会と文論誌, **18**, 226-236.

### Ocean Floor Geoscience (海洋底科学)

- Akizawa N., Früh-Green G.L., Tamura A., Tamura C., Morishita T. (2019) Compositional heterogeneity and melt transport in mantle beneath Mid-Atlantic Ridge constrained by peridotite, dunite, and wehrlite from Atlantis Massif. *Lithos*, **354-355**, doi: 10.1016/j.lithos.2019.105364.
- Ando A., Kuroda J., Werner R., Hoernle K., Huber B.T. (2019) Post-Eocene intensification of deep-water circulation in the central South Pacific: Micropalaeontological clues from dredged sites along the eastern Manihiki Plateau margin. *Terra Nova*, **31**, 28-38.
- Behrens B., Miyairi Y., Sproson A.D., Yamane M., Yokoyama Y. (2019) Meltwater discharge during the Holocene from the Wilkes subglacial basin revealed by beryllium isotope analysis of marine sediments. *Journal of Quaternary Science*, **34**, 603-608.
- Braga J.C., Puga-Bemabéu A., Heindel K., Patterson M.A., Birgel D., Peckunann J., Sánchez-Almazo I.M., Webster J.M., Yokoyama Y., Riding R. (2019) Microbialites in Last Glacial Maximum and deglacial reefs of the Great Barrier Reef (IODP Expedition 325, NE Australia). *Palaeogeography, Palaeoclimatology, Palaeoecology*, **514**, 1-17.
- Dechnik B., Bastos A.C., Vieira L.S., Webster J.M., Fallon S., Yokoyama Y., Nothdurft L., Sanborn K., Batista J., Moura R., Amado-Filho G. (2019) Holocene reef growth in the tropical southwestern Atlantic: Evidence for sea level and climate instability. *Quaternary Science Reviews*, **218**, 365-377.
- Fukuyo N., Yokoyama Y., Miyairi Y., Igarashi Y. (2019) AMS dating of potentially the oldest wooden sculptures in Japan from a Shinto shrine in Akita. *Radiocarbon*, **61**, 1221-1228.
- Ghazoui Z., Bertrand S., Vanneste K., Yokoyama Y., Nomade J., Gajurel A.P., van der Beek P.A. (2019) Potentially large post-1505 AD earthquakes in western Nepal revealed by a lake sediment record. *Nature Communications*, **10**, doi: 10.1038/s41467-019-10093-4.

- Hasegawa R., Yamaguchi A., Fukuchi R., Hamada Y., Ogawa N., Kitamura K., Kimura G., Ashi J., Ishikawa T. (2019) Postseismic fluid discharge chemically recorded in altered pseudotachylyte discovered from an ancient megasplay fault: an example from the Nobeoka Thrust in the Shimanto accretionary complex, SW Japan. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0281-2.
- Hirabayashi S., Yokoyama Y., Suzuki A., Esat T., Miyairi Y., Aze T., Siringan F., Maeda Y. (2019) Local marine reservoir age variability at Luzon Strait in the South China Sea during the Holocene. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, **455**, 171-177.
- Hirabayashi S., Yokoyama Y., Suzuki A., Miyairi Y., Aze T., Siringan F., Maeda Y. (2019) Insight into Western Pacific Circulation from South China Sea Coral Skeletal Radiocarbon. *Radiocarbon*, **61**, doi: 10.1017/RDC.2019.145.
- Humblet M., Potts D.C., Webster J.M., Braga J.C., Iryu Y., Yokoyama Y., Bourillot R., Séard C., Droxler A., Fujita K., Gischler E., Kan H. (2019) Late glacial to deglacial variation of corallgal assemblages in the Great Barrier Reef, Australia. *Global and Planetary Change*, **174**, 70-91.
- Isaji Y., Kawahata H., Takano Y., Ogawa N.O., Kuroda J., Yoshimura T., Lugli S., Manzi V., Roveri M., Ohkouchi N. (2019) Diazotrophy drives primary production in the organic-rich shales deposited under a stratified environment during the Messinian salinity crisis (Vena del Gesso, Italy). *Frontiers in Earth Science*, **7**, doi: 10.3389/feart.2019.00085.
- Isaji Y., Yoshimura T., Araoka D., Kuroda J., Ogawa Nanako O., Kawahata H., Ohkouchi N. (2019) Magnesium isotope fractionation during synthesis of chlorophyll *a* and bacteriochlorophyll *a* of benthic phototrophs in hypersaline environments. *ACS Earth Space Chemistry*, **3**, 1073-1079.
- Isaji Y., Yoshimura T., Kuroda J., Tamenori Y., Jiménez-Espejo F.J., Lugli S., Manzi V., Roveri M., Kawahata H., Ohkouchi N. (2019) Biomarker records and mineral compositions of the Messinian halite and K-Mg salts from Sicily. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0306-x.
- Ishiwa T., Yokoyama Y., Okuno J., Obrochta S., Uehara K., Ikehara M., Miyairi Y. (2019) A sea-level plateau preceding the Marine Isotope Stage 2 minima revealed by Australian sediments. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-42573-4.
- Ishiwa T., Yokoyama Y., Reuning L., McHugh C.M., De Vleeschouwer D., Gallagher S.J. (2019) Australian Summer Monsoon variability in the past 14,000 years revealed by IODP Expedition 356 sediments. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0262-5.
- Ishizawa T., Goto K., Yokoyama Y., Miyairi Y. (2019) Non-destructive analyses to determine appropriate stratigraphic level for dating of tsunami deposits. *Marine Geology*, **412**, 19-26.
- Kawahata H. (2019) Climatic reconstruction at the Sannai-Maruyama site between Bond events 4 and 3-implication for the collapse of the society at 4.2 ka event. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0308-8.
- Kimura G., Kitamura Y., Yamaguchi A., Kameda J., Hashimoto Y., Hamahashi M. (2019) Origin of the early Cenozoic belt boundary thrust and Izanagi-Pacific ridge subduction in the western Pacific margin. *Island Arc*, **28**, doi: 10.1111/iar.12320.
- Kioka A., Tsuji T., Otsuka H., Ashi J. (2019) Methane concentration in mud conduits of submarine mud volcanoes: A coupled geochemical and geophysical approach. *Geochemistry, Geophysics, Geosystems*, **20**, doi: 10.1029/2018GC007890.
- Kubota K., Yokoyama Y., Ishikawa T., Sagawa T., Ikehara M., and Yamazaki T. (2019) Equatorial Pacific seawater pCO<sub>2</sub> variability since the last glacial period. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-49739-0.
- Kurokawa S., Tada R., Matsuzaki K.M., Irino T., Johanna L. (2019) Cyclostratigraphy of the Late Miocene to Pliocene sediments at IODP sites U<sub>1425</sub> and U<sub>1430</sub> in the Japan Sea and paleoceanographic implications. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-018-0250-1.
- Lamair L., Hubert-Ferrari A., El Ouahabi M., Yamamoto S., Schmidt S., Vander Auwera J., Lepoint G., Boes E., Fujiwara O., Yokoyama Y., De Batist M., Heyvaert V.M.A (2019) Late Holocene changes in erosion patterns in a lacustrine environment: Landscape stabilization by volcanic activity versus human activity. *Geochemistry, Geophysics, Geosystems*, **20**, 1720-1733.
- Lamair L., Hubert-Ferrari A., Yamamoto S., Fujiwara O., Yokoyama Y., Garrett E., De Batist M., Heyvaert V.M.A., Boes E., Nakamura A., Obrochta S., Shishikura M., Miyairi Y., Brückner H., Ono E., Riedesel S., De Rycker K., Sato Y., Walstra J. (2019) Use of high-resolution seismic reflection data for paleogeographical reconstruction of shallow Lake Yamanaka (Fuji Five Lakes, Japan). *Palaeogeography, Palaeoclimatology, Palaeoecology*, **514**, 233-250.
- Matsuzaki K.M., Itaki T. (2019) Late Miocene polycystine radiolarians of the Japan Sea (IODP Exp. 346 Site U1425). *Bulletin of the Geological Survey of Japan*, **70**, 195-209.
- Matsuzaki K.M., Itaki T., Tada R. (2019) Paleoceanographic changes in the Northern East China Sea during the last 400 kyr as inferred from radiolarian assemblages (IODP Site U1429). *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0256-3.
- Nomaki H., Uejima Y., Ogawa N.O., Yamane M., Watanabe H.K., Senokuchi R., Bernhard J.M., Kitahashi T., Miyairi Y., Yokoyama Y., Ohkouchi N., Shimanaga M. (2019) Nutritional sources of meio- and macrofauna at hydrothermal vents and adjacent areas: natural-abundance radiocarbon and stable isotope analyses. *Marine Ecology Progress Series*, **622**, 49-65.
- Ota Y., Kawahata H., Kuroda J., Yamaguchi A., Suzuki A., Araoka D., Abe-Ouchi A., Yamada Y., Ijiri A., Kanamatsu T., Kinoshita M., Moe K.T., Lin W., Saito S., Sanada Y., Hamada Y., Nakamura Y., Shinmoto Y., Wu H.Y., Ahagon N., Aoike K., Iijima K., Machiyama H., Tejada M.L., Umetsu K., Usui Y., Yamamoto Y., Yoshikawa S., Jimenez-Espejo F., Haraguchi S., Komai N., Suga H., Abe N., Gupta L., Hirose T., Masaki Y., Nomura S., Sugihara T., Tanikawa W., Kubo Y., Maeda L., Toczko S. (2019) Indian monsoonal variations during the past 80 kyr recorded in NGHP-02 Hole 19B, western bay of Bengal: Implications from chemical and mineral properties. *Geochemistry, Geophysics, Geosystems*, **20**, 148-165.
- Ota Y., Kuroda J., Yamaguchi A., Suzuki A., Araoka D., Ishimura T., NGHP Expedition 02 JAMSTEC Science Team, Kawahata H., (2019) Monsoon-influenced variations in plankton community structure and upper-water column stratification in the western Bay of Bengal during the past 80 ky. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **521**, 138-150.

- Owensworth E., Selby D., Ottley C.J., Unsworth E., Raab A., Feldmann J., Sproson A.D., Kuroda J., Faidutti C., Bucker P. (2019) Tracing the natural and anthropogenic influence on the trace elemental chemistry of estuarine macroalgae and the implications for human consumption. *Science of The Total Environment*, **685**, 259-272.
- Passos T.U., Webster J.M., Braga J.C., Voelker D., Renema W., Beaman R.J., Nothdurft L.D., Hineostroza G., Clarke S., Yokoyama Y., Barcellos R.L., Kinsela M.A., Nothdurft L.N., Hubble T. (2019) Paleoshorelines and lowstand sedimentation on subtropical shelves: a case study from the Fraser Shelf, Australia. *Australian Journal of Earth Sciences*, **66**, 547-565.
- Patterson M.A., Webster J.M., Hutchings P., Braga J.-C., Humblet M., Yokoyama Y. (2019) Bioerosion traces in the Great Barrier Reef over the past 10 to 30 kyr. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **542**, doi: 10.1016/j.palaeo.2019.109503.
- Raimbourg H., Famin V., Palazzin G., Yamaguchi A., Augier R., Kitamura Y., Sakaguchi A. (2019) Distributed deformation along the subduction plate interface: The role of tectonic melanges. *Lithos*, **334**, 69-87.
- Servettaz A.P.M., Yokoyama Y., Hirabayashi S., Kienast M., Miyairi Y., Mohtadi M. (2019) Dissolved inorganic radiocarbon content of the western Coral Sea: implications for intermediate and deep water circulation. *Radiocarbon*, **61**, 1685-1696.
- Shirahama Y., Miyairi Y., He H., Fu B., Echigo T., Yokoyama Y., Ikeda Y. (2019) Late Quaternary evolution of the Kumkol Basin at the northeastern margin of the Tibetan Plateau revealed by tectonic geomorphology and the analysis of in situ cosmogenic nuclides. *Geomorphology*, **329**, 224-247.
- Tsuru T., Amakasu K., Park J.-O., Sakakibara J., Takanashi M. (2019) A new seismic survey technology using underwater speaker detected a low-velocity zone near the seafloor: an implication of methane gas accumulation in Tokyo Bay. *Earth, Planets and Space*, **71**, doi: 10.1186/s40623-019-1011-0.
- Usui Y., Yamazaki T., Oka T., Kumagai Y. (2019) Inverse magnetic susceptibility fabrics in pelagic sediment: implications for magnetofossil abundance and alignment. *Journal of Geophysical Research: Solid Earth*, **124**, 10672-10686.
- White D.A., Fink D., Post A.L., Simon K., Galton-Fenzi B., Foster S., Fujioka T., Jeromson M.R., Blaxell M., Yokoyama Y. (2019) Beryllium isotope signatures of ice shelves and sub-ice shelf circulation. *Earth and Planetary Science Letters*, **505**, 86-95.
- Yagioka N., Nakada C., Fujita K., Kan H., Yokoyama Y., Webster J.M. (2019) Depositional environments beneath the shelf-edge slopes of the Great Barrier Reef, inferred from foraminiferal assemblages: IODP Expedition 325. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **514**, 386-397.
- Yamane M., Yokoyama Y., Hirabayashi S., Miyairi Y., Ohkouchi N., Aze T. (2019) Small- to ultra-small-scale radiocarbon measurements using newly installed single-stage AMS at the University of Tokyo. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, **455**, 238-243.
- Yamazaki T., Suzuki Y., Kouduka M., Kawamura N. (2019) Dependence of bacterial magnetosome morphology on chemical conditions in deep-sea sediments. *Earth and Planetary Science Letters*, **513**, 135-143.
- Yokoyama Y., Hirabayashi S., Goto K., Okuno J., Sproson A.D., Haraguchi T., Ratnayake N., Miyairi Y. (2019) Holocene Indian Ocean sea level, Antarctic melting history and past Tsunami deposits inferred using sea level reconstructions from the Sri Lankan, Southeastern Indian and Maldivian coasts. *Quaternary Science Reviews*, **206**, 150-161.
- Yokoyama Y., Miyairi Y., Aze T., Yamane M., Sawada C., Ando Y., de Natris M., Hirabayashi S., Ishiwa T., Sato N., Fukuyo N. (2019) A single stage Accelerator Mass Spectrometry at the Atmosphere and Ocean Research Institute, The University of Tokyo. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, **455**, 311-316.
- Yokoyama Y., Purcell A., Ishiwa T. (2019) Gauging quaternary sea level changes through scientific ocean drilling. *Oceanography*, **32**, 64-71.
- Yokoyama Y., Yamane M., Nakamura A., Miyairi Y., Horiuchi K., Aze T., Matsuzaki H., Shirahama Y., Ando Y. (2019) In-situ and meteoric <sup>10</sup>Be and <sup>26</sup>Al measurements: Improved preparation and application at the University of Tokyo. *Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms*, **455**, 260-264.
- 丸山俊明, 本山 功, 粕川 茜, 秋山七海, 石澤翔太, 松崎賢史 (2019) 北海道日高地方波恵川鯨類化石産出地点周辺の中新統の珪藻化石層序. 山形大学紀要. 自然科学, **19**, 15-24.
- 横山祐典 (2019) 高精度年代測定による過去のイベント復元とメカニズム解明: 多点高精度放射性炭素分析・ウラン系列核種分析・宇宙線生成核種分析. 第四紀研究, **58**, 265-286.

### Marine Ecosystems Dynamics (海洋生態系動態)

- Bergmeier F.S., Haszprunar G., Brandt A., Saito H., Kano Y., Jörgen K.M. (2019) Of basins, plains and trenches: Systematics and distribution of Solenogastres (Mollusca, Aplousobranchia) in the Northwest Pacific. *Progress in Oceanography*, **178**, doi: 10.1016/j.pocean.2019.102187.
- Cunha T.J., Lemer S., Bouchet P., Kano Y., Giribet G. (2019) Putting keyhole limpets on the map: phylogeny and biogeography of the globally distributed marine family Fissurellidae (Vetigastropoda, Mollusca). *Molecular Phylogenetics and Evolution*, **135**, 249-269.
- Fukumori H., Takano T., Hasegawa K., Kano Y. (2019) Deepest known gastropod fauna: species composition and distribution in the Kuril-Kamchatka Trench. *Progress in Oceanography*, **178**, doi: 10.1016/j.pocean.2019.102176.
- Fukumori H., Yahagi T., Warén A., Kano Y. (2019) Amended generic classification of the marine gastropod family Phenacolepadidae: transitions from snails to limpets and shallow-water to deep-sea hydrothermal vents and cold seeps. *Zoological Journal of the Linnean Society*, **185**, 636-655.
- Hashihama F., Suwa S., Kanda J., Ehama M., Sakuraba R., Kinouchi S., Sato M., Yamaguchi T., Saito H., Ogura Y., Hayashi T., Mori H., Kurokawa K., Suzuki S., Hamasaki K. (2019) Arsenate and microbial dynamics in different phosphorus regimes of the subtropical Pacific Ocean. *Progress in Oceanography*, **176**, doi: 10.1016/j.pocean.2019.05.007.
- Ijichi M., Itoh H., Hamasaki K. (2019) Vertical distribution of particle-associated and free-living ammonia-oxidizing archaea in Suruga Bay, a deep coastal embayment of Japan. *Archives of microbiology*, **201**, 1141-1146.



- Isada T., Hattori-Saito A., Saito H., Kondo Y., Nishioka J., Kuma K., Hattori H., McKay R.M.L., Suzuki K. (2019) Responses of phytoplankton assemblages to iron availability and mixing water masses during the spring bloom in the Oyashio region, NW Pacific. *Limnology and Oceanography*, **64**, 197-216.
- Kano Y. (2019) Neritiliidae Schepman, 1908. In *Freshwater Mollusks of the World: A Distribution Atlas* (eds: Lydeard C., Cummings K. S.), Johns Hopkins University Press, Baltimore, 27-30.
- Kano Y., Fukumori H. (2019) Neritidae Rafinesque, 1815. In *Freshwater Mollusks of the World: A Distribution Atlas* (eds: Lydeard C., Cummings K. S.), Johns Hopkins University Press, Baltimore, 31-36.
- Marshall J.H., Kim Y.S., Machado T.A., Quirin S., Benson B., Kadmon J., Raja C., Chibukhchyan A., Ramakrishnan C., Inoue M., Shane J.C., McKnight D.J., Yoshizawa S., Kato H.E., Ganguli S., Deisseroth K. (2019) Cortical layer-specific critical dynamics triggering perception. *Science*, **365**, doi: 10.1126/science.aaw5202.
- Miyamoto H., Vijai D., Okazaki Y., Saito H. (2019) Feeding ecology of chaetognath *Flaccisagitta enflata* in Kuroshio region, western North Pacific. In *Kuroshio Current: Physical, Biogeochemical, and Ecosystem Dynamics* (eds: Nagai T., Saito H., Suzuki K., Takahashi M.), American Geophysical Union, Washington, 257-272.
- Needham D.M., Yoshizawa S., Hosaka T., Poirier C., Choi C.J., Hehenberger E., Irwin N.A.T., Wilken S., Yung C.M., Bachy C., Kurihara R., Nakajima Y., Kojima K., Kimura-Someya T., Leonard G., Malmstrom R.R., Mende D.R., Olson D.K., Sudo Y., Sudek S., Richards T.A., DeLong E.F., Keeling P.J., Santoro A.E., Shirouzu M., Iwasaki W., Worden A.Z. (2019) A distinct lineage of giant viruses brings a rhodopsin photosystem to unicellular marine predators. *Proceedings of the National Academy of Sciences of the United States of America*, **116**, 20574-20583.
- Ohnishi T., Hirai J., Shimode S., Tsuda A. (2019) Identification of molecular markers associated with starvation in female *Calanus sinicus* (Copepoda: Calanoida). *Marine Ecology Progress Series*, **614**, 51-65.
- Okazaki Y., Miyaoto H., Suzuki K., Saito H., Hidaka K., Ichikawa T. (2019) Diverse trophic pathways from zooplankton to larval and juvenile fishes in the Kuroshio ecosystem. In *Kuroshio Current: Physical, Biogeochemical, and Ecosystem Dynamics* (eds: Nagai T., Saito H., Suzuki K., Takahashi M.), American Geophysical Union, Washington, 245-256.
- Saito H. (2019) The Kuroshio: its recognition, scientific activities and emerging issues. In *Kuroshio Current: Physical, Biogeochemical, and Ecosystem Dynamics* (eds: Nagai T., Saito H., Suzuki K., Takahashi M.), American Geophysical Union, Washington, 3-11.
- Seo E., Seo Y. (2019) Roles of Keber's valve and foot chamber for foot manipulation in the mussel *Nodularia douglasiae*. *Biology Open*, **8**, doi: 10.1242/bio.039859.
- Shibukawa A., Kojima K., Nakajima Y., Nishimura Y., Yoshizawa S., Sudo Y. (2019) Photochemical characterization of a new heliorhodopsin from the gram-negative eubacterium *Bellilinea caldifistulae* (BcHeR) and comparison with heliorhodopsin-48C12. *Biochemistry*, **58**, 2934-2943.
- Sogawa S., Hidaka K., Kamimura Y., Takahashi M., Saito H., Okazaki Y., Shimizu Y., Setou T. (2019) Environmental characteristics of spawning and nursery grounds of Japanese sardine and mackerels in the Kuroshio and Kuroshio Extension area. *Fisheries Oceanography*, **28**, 454-467.
- Song J., Kang I., Joung Y., Yoshizawa S., Kaneko R., Oshima K., Hattori M., Hamasaki K., Kogure K., Kim S., Lee K., Cho J.C. (2019) Genome analysis of *Rubritalea profunda* SAORIC-165<sup>T</sup>, the first deep-sea verrucomicrobial isolate, from the northwestern Pacific Ocean. *Journal of microbiology* (Seoul, Korea), **57**, 413-422.
- Takagi H., Kimoto K., Fujiki T., Saito H., Schmidt C., Kucera M., Moriya M. (2019) Characterizing photosymbiosis in modern planktonic foraminifera. *Biogeosciences*, **16**, 3377-3396.
- Takano T., Tanaka H., Kano Y. (2019) A new species of *Mucronalia* (Gastropoda: Eulimidae) parasitizing the ophiocomid brittle star *Ophiomastix mixta* in Japan. *Venus, The Japanese Journal of Malacology*, **77**, 45-50.
- Tang K.W., Ivory J.A., Shimode S., Nishibe Y., Takahashi K. (2019) Dead heat: copepod carcass occurrence along the Japanese coasts and implications for a warming ocean. *ICES Journal of Marine Science*, **76**, 1825-1835.
- Yahagi T., Fukumori H., Warén A., Kano Y. (2019) Population connectivity of hydrothermal-vent limpets along the northern Mid-Atlantic Ridge (Gastropoda: Neritimorpha: Phenacolepadidae). *Journal of the Marine Biological Association of the United Kingdom*, **99**, 179-185.
- Zhang H., Yoshizawa S., Iwasaki W., Xian W. (2019) Seasonal fish assemblage structure using environmental DNA in the Yangtze Estuary and its adjacent waters. *Frontiers in Marine Science*, **6**, doi: 10.3389/fmars.2019.00515.
- Zhang H., Yoshizawa S., Sun Y., Huang Y., Chu X., González J.M., Pinhassi J., Luo H. (2019) Repeated evolutionary transitions of flavobacteria from marine to non-marine habitats. *Environmental Microbiology*, **21**, 648-666.
- 小林元樹, 阿部博和, 富岡森理, 伊藤 萌, 小島茂明 (2019) 利尻島の海産環形動物 . 利尻研究, **38**, 29-41.
- 矢萩拓也, Chen Chong, 川口慎介 (2019) 深海の化学合成生態系動物群集の幼生分散過程 . 海の研究, **28**, 97-125.

### Marine Bioscience (海洋生命科学)

- Abe T.K., Kitagawa T., Makiguchi Y., Sato K. (2019) Chum salmon migrating upriver accommodate to environmental temperatures through metabolic compensation. *Journal of Experimental Biology*, **222**, doi: 10.1242/jeb.186189.
- Akiyama Y., Akamatsu T., Rasmussen M.H., Iversen M.R., Iwata T., Goto Y., Aoki K., Sato K. (2019) Leave or stay? Video-loggers revealed foraging efficiency of humpback whales under temporal change in prey density. *PLOS ONE*, **14**, doi: 10.1371/journal.pone.0211138.
- Arimoto A., Nishitsuji K., Higa Y., Arakaki N., Hisata K., Shinzato C., Satoh N., Shoguchi E. (2019) A siphonous macroalgal genome suggests convergent functions of homeobox genes in algae and land plants. *DNA research: an international journal for rapid publication of reports on genes and genomes*, **26**, 183-192.
- Barney E., Dores M.R., McAvoy D., Davis P., Racareanu R.-C., Iki A., Hyodo S., Dores R.M. (2019) Elephant shark melanocortin receptors: Novel interactions with MRAP1 and implication for the HPI axis. *General and Comparative Endocrinology*, **272**, 42-51.
- Doi T., Storto A., Fukuoka T., Sugauma H., Sato K. (2019) Impacts of temperature measurements from sea turtles on seasonal prediction around the Arafura Sea. *Frontiers in Marine Science*, **61**, doi: 10.3389/fmars.2019.00719.

- Domingues R., Kuwano-Yoshida A., Chardon-Maldonado P., Todd R.E., Halliwell G., Kim H.-S., Lin I.-I., Sato K., Narazaki T., Shay L.K., Miles T., Glenn S., Zhang J.A., Jayne S.R., Centurioni L., Le Hénaff M., Foltz G.R., Bringas F., Ali M.M., DiMarco S.F., Hosoda S., Fukuoka T., LaCour B., Mehra A., Sanabia E.R., Gyakun J.R., Dong J., Knaff J.A., Goni G. (2019) Ocean observations in support of studies and forecasts of tropical and extratropical cyclones. *Frontiers in Marine Science*, **61**, doi: 10.3389/fmars.2019.00446.
- Fukuoka T., Kinoshita C., Sato K. (2019) Northernmost bycatch record of an olive ridley turtle (*Lepidochelys olivacea*) in the Pacific coast of Japan. *Marine Turtle Newsletter*, **159**, 17-22.
- Fukuoka T., Narazaki T., Kinoshita C., Sato K. (2019) Diverse foraging habits of juvenile green turtles (*Chelonia mydas*) in a summer-restricted foraging habitat in the northwest Pacific Ocean. *Marine Biology*, **166**, doi: 10.1007/s00227-019-3481-9.
- Fukuoka T., Omuta K., Hidaka T., Sato K. (2019) First record of a known-age juvenile loggerhead turtle (*Caretta caretta*) at the Sanriku Coast in the Northwest Pacific Ocean. *Coastal Marine Science*, **42**, 8-11.
- Guzman C., Atrigenio M., Shinzato C., Aliño P., Conaco C. (2019) Warm seawater temperature promotes substrate colonization by the blue coral, *Heliopora coerulea*. *PeerJ*, **7**, doi: 10.7717/peerj.7785.
- Hanahara N., Higashiji T., Shinzato C., Koyanagi R., Maeda K. (2019) First record of *Larsonella pumilus* (Teleostei: Gobiidae) from Japan, with phylogenetic placement of the genus *Larsonella*. *Zootaxa*, **4695**, doi: 10.11646/zootaxa.4695.4.4.
- Haramura T., Ikegami T., Wong M.K.S., Takei Y. (2019) Preparatory mechanisms for salinity tolerance in two congeneric anuran species inhabiting distinct osmotic habitats. *Zoological Science*, **36**, 215-222.
- Higuchi S., Sugahara F., Pascual-Anaya J., Takagi W., Oisi Y., Kuratani S. (2019) Inner ear development in cyclostomes and evolution of the vertebrate semicircular canals. *Nature*, **565**, 347-350.
- Ikuta T., Tame A., Saito M., Aoki Y., Nagai Y., Sugimura M., Inoue K., Fujikura K., Ohishi K., Maruyama T., Yoshida T. (2019) Identification of cells expressing two peptidoglycan recognition proteins in the gill of the vent mussel, *Bathymodiolus septemdiarium*. *Fish and Shellfish Immunology*, **93**, 815-822.
- Imaseki I., Wakabayashi M., Hara Y., Watanabe T., Takabe S., Kakumura K., Honda Y., Ueda K., Murakumo K., Matsumoto R., Matsumoto Y., Nakamura M., Takagi W., Kuraku S., Hyodo S. (2019) Comprehensive analysis of genes contributing to euryhalinity in the bull shark, *Carcharhinus leucas*; Na<sup>+</sup>-Cl<sup>-</sup> co-transporter is one of the key renal factors upregulated in acclimation to low-salinity environment. *Journal of Experimental Biology*, **222**, doi: 10.1242/jeb.201780.
- Jaspers C., Fraune S., Arnold A.E., Miller D.J., Bosch T.C.G., Voolstra C.R., Consortium of Australian Academy of Science Boden Research Conference Participants (Shinzato Chuya., et al.) (2019) Resolving structure and function of metaorganisms through a holistic framework combining reductionist and integrative approaches. *Zoology*, **133**, 81-87.
- Katsu Y., Kohno S., Oka K., Lin X., Otake S., Pillai N.E., Takagi W., Hyodo S., Venkatesh B., Baker M.E. (2019) Transcriptional activation of elephant shark mineralocorticoid receptor by corticosteroids, progesterone, and spironolactone. *Science Signaling*, **12**, doi: 10.1126/scisignal.aar2668.
- Kayo D., Zempo B., Tomihara S., Oka Y., Kanda S. (2019) Gene knockout analysis reveals essentiality of estrogen receptor  $\beta$ 1 (Esr2a) for female reproduction in medaka. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-45373-y.
- Khalturin K., Shinzato C., Khalturina M., Hamada M., Fujie M., Koyanagi R., Kanda M., Goto H., Anton-Erxleben F., Toyokawa M., Toshino S., Satoh N. (2019) Medusozoan genomes inform the evolution of the jellyfish body plan. *Nature ecology & evolution*, **3**, 811-822.
- Kikuchi Y., Hiraki-Kajiyama T., Nakajo M., Umatani C., Kanda S., Oka Y., Matsumoto K., Ozawa H., Okubo K. (2019) Sexually dimorphic neuropeptide B neurons in medaka exhibit activated cellular phenotypes dependent on estrogen. *Endocrinology*, **160**, 827-839.
- Kinjo A., Mizukawa K., Takada H., Inoue K. (2019) Size-dependent elimination of ingested microplastics in the Mediterranean mussel *Mytilus galloprovincialis*. *Marine Pollution Bulletin*, **149**, doi: 10.1016/j.marpolbul.2019.110512.
- Kinjo A., Sassa M., Koito T., Suzuki M., Inoue K. (2019) Functional characterization of the GABA transporter GAT-1 from the deep-sea mussel *Bathymodiolus septemdiarium*. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, **227**, 1-7.
- Kusakabe M., Nobata S., Saito K., Ikeba K., Ogasawara S., Tanaka K., Takei Y., Hyodo S. (2019) Body condition and reproductive status of chum salmon during homing migration in Otsuchi Bay, Japan, after the 2011 Great East Japan Earthquake and Tsunami. *Fisheries Science*, **85**, 43-51.
- Miller M.J., Wouthuyzen S., Feunteun E., Aoyama J., Watanab S., Syahailatua A., Kuroki M., Robinett T., Hagihara S., Otake T., Tsukamoto K. (2019) Contrasting biodiversity of eel larvae across the central Indian Ocean subtropical gyre. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **161**, 120-131.
- Minegishi Y., Wong M.K.-S., Kanbe T., Araki H., Kashiwabara T., Ijichi M., Kogure K., Hyodo S. (2019) Spatiotemporal distribution of juvenile chum salmon in Otsuchi Bay, Iwate, Japan, inferred from environmental DNA. *PLOS ONE*, **14**, doi: 10.1371/journal.pone.0222052.
- Miura N., Motone K., Takagi T., Aburaya S., Watanabe S., Aoki W., Ueda M. (2019) *Ruegeria* sp. strains isolated from the reef-building coral *Galaxea fascicularis* inhibit growth of the temperature-dependent pathogen *Vibrio coralliilyticus*. *Marine biotechnology* (New York, N.Y.), **21**, 1-8.
- Miyake T., Aihara N., Maeda K., Shinzato C., Koyanagi R., Kobayashi H., Yamahira K. (2019) Bloodmeal host identification with inferences to feeding habits of a fish-fed mosquito, *Aedes baisasi*. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-40509-6.
- Miyazawa Y., Kuwano-Yoshida A., Doi T., Nishikawa H., Narazaki T., Fukuoka T., Sato K. (2019) Temperature profiling measurements by sea turtles improve ocean state estimation in the Kuroshio-Oyashio confluence region. *Ocean Dynamics*, **69**, 267-282.
- Mukhtar A., Mohamat-Yusuff F., Zulkifli S.Z., Harino H., Ismail A., Inoue K. (2019) Concentration of organotin and booster biocides in sediments of seagrass area from Sungai Pulai estuary, south of Johor, Malaysia. *Environments*, **6**, doi: 10.3390/environments6020026.

- Nobata S., Kitagawa T., Tanaka K., Komatsu K., Aoki Y., Sato K., Takei Y., Hyodo S. (2019) Spreading of river water guides migratory behavior of homing chum salmon *Oncorhynchus keta* in Otsuchi Bay, a narrow inlet with multiple river flows. *Zoological Science*, **36**, 449-457.
- Ohji M., Harino H., Hayashizaki K., Inoue K., Yusoff F.M., Nishida S. (2019) Accumulation of organotin compounds on mangroves in coastal ecosystems. *Journal of the Marine Biological Association of the United Kingdom*, **99**, 1247-1252.
- Okada R., Suzuki M., Ito N., Hyodo S., Kikuyama S. (2019) A novel type of prolactin expressed in the bullfrog pituitary specifically during the larval period. *General and Comparative Endocrinology*, **276**, 77-85.
- Sakao M., Takeshima H., Inoue K., Sato K. (2019) Extra-pair paternity in socially monogamous Streaked Shearwaters: forced copulation or female solicitation? *Journal of Ornithology*, **160**, 137-144.
- Shiogama H., Hasegawa T., Fujimori S., Murakami D., Takahashi K., Tanaka K., Emori S., Kubota I., Abe M., Imada Y., Watanabe M., Mitchell D., Schaller N., Sillmann J., Fischer E., Scinocca J.F., Bethke I., Lierhammer L., Takakura J., Trautmann T., Doll P., Ostberg S., Schmied H.M., Saeed F., Schleussner C.-F. (2019) Limiting global warming to 1.5 °C will lower increases in inequalities of four hazard indicators of climate change. *Environmental Research Letters*, **14**, doi: 10.1088/1748-9326/ab5256.
- Shiomi K., Sato K., Katsumata N., Yoda K. (2019) Temporal and spatial determinants of route selection in homing seabirds. *Behaviour*, **156**, 1165-1183.
- Takagi T. (2019) Energy production: Biomass - Marine. In *Yeast Cell Surface Engineering: Biological Mechanisms and Practical Applications* (eds: Ueda M.), Springer, 29-41.
- Takei Y., Wong M.K.S., Ando M. (2019) Molecular mechanisms for intestinal HCO<sub>3</sub><sup>-</sup> secretion and its regulation by guanylin in seawater-acclimated eels. *Journal of Experimental Biology*, **222**, doi: 10.1242/jeb.203539.
- Williams C.L., Sato K., Ponganis P.J. (2019) Activity not submergence explains diving heart rates of captive loggerhead turtles. *Journal of Experimental Biology*, **222**, doi: 10.1242/jeb.200824.
- Wong M.K.-S., Nobata S., Hyodo S. (2019) Enhanced osmoregulatory ability marks the smoltification period in developing chum salmon (*Oncorhynchus keta*). *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, **238A**, doi: 10.1016/j.cbpa.2019.110565.
- Yamazaki S.J., Ohara K., Ito K., Kokubun N., Kitanishi T., Takaichi D., Yamada Y., Ikejiri Y., Hiramatsu F., Fujita K., Tanimoto Y., Yamazoe-Umemoto A., Hashimoto K., Sato K., Yoda K., Takahashi A., Ishikawa Y., Kamikouchi A., Hiryu S., Maekawa T., Kimura K.D. (2019) A hybrid versatile method for state estimation and feature extraction from the trajectory of animal behavior. *Frontiers in Neuroscience*, **13**, doi: 10.3389/fnins.2019.00626.
- Zhang Y., Chiu Y.L., Chen C.J., Ho Y.Y., Shinzato C., Shikina S., Chang C.F. (2019) Discovery of a receptor guanylate cyclase expressed in the sperm flagella of stony corals. *Scientific Reports*, **9**, doi: 10.1038/s41598-019-51224-7.
- 神田真司 (編著) (2019) 「遺伝子から解き明かす「魚」の不思議な世界」, 一色出版, 480pp.
- 佐藤克文, 木下千寿 (2019) バイオロギングで明らかになったウミガメ類の内温性. 化学と生物, **57**, 29-351.
- 高木 互 (2019) サメの不思議と生態 軟骨魚綱は原始的な魚なのか. 「遺伝子から解き明かす魚」の不思議な世界(神田真司 編), 一色出版, 30-65.
- 峰岸有紀 (2019) 集団構造. 「シリーズ水産の科学 2 ウナギの科学」(塚本勝巳 編), 朝倉書店.
- 峰岸有紀, 青山 潤 (2019) 三陸におけるサケ資源像の再構築. 日本生態学会誌, **69**, 201-207.
- 吉村健司, 青山 潤 (2019) 流通の歴史的変遷から見る三陸サケの社会的機能. 地域漁業研究, **59**, 138-145.

### Living Marine Resources (海洋生物資源)

- Abe H., Ebuchi N., Ueno H., Ishiyama H., Matsumura Y. (2019) Aquarius reveals eddy stirring after a heavy precipitation event in the subtropical North Pacific. *Journal of Oceanography*, **75**, 37-50.
- Arai K., Itakura H., Yoneta A., Kaifu K., Shirai K., Miyake Y., Kimura S. (2019) Anthropogenic impacts on the distribution of wild and cultured Japanese eels in the Tone River watershed, Japan, from otolith oxygen and carbon stable isotopic composition. *Environmental Biology of Fishes*, **102**, 1405-1420.
- Fukumori H., Itoh H., Irie T. (2019) The mitochondrial genome of the gold-ringed cowry *Monetaria annulus* (Mollusca: Gastropoda: Cypraeidae) determined by whole-genome sequencing. *Mitochondrial DNA Part B: Resources*, **4**, 2305-2307.
- Han Y.-S., Hsiung K.-M., Zhang H., Chow L.-Y., Tzeng W.-N., Shinoda A., Yoshinaga T., Hur S.-P., Hwang S.-D., Iizuka Y., Kimura S. (2019) Dispersal characteristics and pathways of Japanese glass eel in the East Asian Continental Shelf. *Sustainability*, **11**, doi: 10.3390/su11092572.
- Higuchi T., Ito S., Ishimura T., Kamimura Y., Shirai K., Shindo H., Nishida K., Komatsu K. (2019) Otolith oxygen isotope analysis and temperature history in early life stages of the chub mackerel *Scomber japonicus* in the Kuroshio-Oyashio transition region. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **169-170**, doi: 10.1016/j.dsr2.2019.104660.
- Hino H., Kitagawa T., Matsumoto T., Aoki Y., Kimura S. (2019) Changes to vertical thermoregulatory movements of juvenile bigeye tuna (*Thunnus obesus*) in the northwestern Pacific Ocean with time of day, seasonal ocean vertical thermal structure, and body size. *Fisheries Oceanography*, **28**, 359-371.
- Hollowed A.B., Barange M., Garçon V., Ito S., Link J.S., Aricò S., Batchelder H., Brown R., Griffis R., Wawrzynski W. (2019) Recent advances in understanding the effects of climate change on the world's oceans. *ICES Journal of Marine Science*, **76**, 1215-1220.
- Hsiung K.-M., Kimura S. (2019) Impacts of global warming on larval and juvenile transport of Japanese eels (*Anguilla japonica*). *Deep-Sea Research Part II: Topical Studies in Oceanography*, **169-170**, doi: 10.1016/j.dsr2.2019.104685.
- Iwata Y., Sato N., Hirohashi N., Kasugai T., Watanabe Y., Fujiwara E. (2019) How female squid inseminate their eggs with stored sperm. *Current Biology*, **29**, R48-R49.
- Kaneko H., Okunishi T., Seto T., Kuroda H., Itoh S., Kouketsu S., Hasegawa D. (2019) Dual effects of reversed winter-spring temperatures on year-to-year variation in the recruitment of chub mackerel (*Scomber japonicus*). *Fisheries Oceanography*, **28**, 212-227.
- Kawaida S., Nanjo K., Ohtsuchi N., Kohno H., Sano M. (2019) Cellulose digestion abilities determine the food utilization patterns of mangrove estuarine crabs. *Estuarine, Coastal and Shelf Science*, **222**, 43-52.

- Kitagawa T. (2019) Migrations of Pacific bluefin tuna tagged in the Western Pacific Ocean. In *The Future of Bluefin Tunas: Ecology, Fisheries Management, and Conservation* (eds: Block B. A.), Johns Hopkins University Press, Baltimore, 147-164.
- Kiyofuji H., Aoki Y., Kinoshita J., Okamoto S., Masujima M., Matsumoto T., Fujioka K., Ogata R., Nakao T., Sugimoto N., Kitagawa T. (2019) Northward migration dynamics of skipjack tuna (*Katsuwonus pelamis*) associated with the lower thermal limit in the western Pacific Ocean. *Progress in Oceanography*, **175**, 55-67.
- Kodama M., Kawamura T. (2019) A new species of *Bemlos* Shoemaker, 1925 (Amphipoda: Aoridae) from deep water off Tanabe Bay, Japan, with a review of the deep-sea aorids and their adaptations to the deep sea. *Journal of Crustacean Biology*, **39**, 54-61.
- Kodama M., Kawamura T. (2019) First record of the genus *Ventojassa* Barnard, 1970 (Amphipoda, Ischyroceridae) from Japan. *Crustaceana*, **92**, 1007-1013.
- Komatsu K., Hiroe Y. (2019) Structure and impact of the Kuroshio nutrient stream. In *Kuroshio Current: Physical, Biogeochemical, and Ecosystem Dynamics* (eds: Nagai T., Saito H., Suzuki K., Takahashi M.), American Geophysical Union, Washington, 83-104.
- Lluch-Cota S.E., Woodworth-Jefcoats P.A., Itoh S., Peña A., Kimura S., Colas F. (2019) Understanding changes in transitional areas of the Pacific Ocean. *Deep-Sea Research Part II: Topical Studies in Oceanography*, **169-170**, doi: 10.1016/j.dsr2.2019.104688.
- Marian J.E.A.R., Apostólico L.H., Chiao C.-C., Hanlon R.T., Hirohashi N., Iwata Y., Mather J., Sato N., Shaw P.W. (2019) Male alternative reproductive tactics and associated evolution of anatomical characteristics in loliginid squid. *Frontiers in Physiology*, **10**, doi: 10.3389/fphys.2019.01281.
- Miyake Y., Itakura H., Takeshige A., Onda H., Yamaguchi A., Yoneta A., Arai K., Hane Y.V., Kimura S. (2019) Multiple habitat use of Japanese sea bass *Lateolabrax japonicus* in the estuary region of the Tone River system, implied by stable isotope analysis. *Ichthyological Research*, **66**, 172-176.
- Montenegro J., Mochida K., Matsui K., Mokodongan D.F., Sumarto B.K.A., Lawelle S.A., Nofrianto A.B., Hadiaty R.K., Masengi K.W.A., Yong L., Inomata N., Irie T., Hashiguchi Y., Terai Y., Kitano J., Yamahira K. (2019) Convergent evolution of body color between sympatric freshwater fishes via different visual sensory evolution. *Ecology and Evolution*, **9**, 6389-6398.
- Murase I., Kawakami T., Irie T., Iguchi K. (2019) Counter-directional latitudinal clines of size at upstream migration between two adjacent water bodies in a Japanese amphidromous fish. *Marine Ecology Progress Series*, **624**, 143-154.
- Murase I., Shirafuji N., Yamane K., Kitagawa T., Sasaki K., Matsumoto Y., Watanabe Y. (2019) Migration of adult Pacific herring, *Clupea pallasii*, around spawning ground revealed by an automated ultrasonic telemetry system. *Coastal Marine Science*, **42**, 1-7.
- Nakamoto K., Hayakawa J., Kawamura T., Ohtsuchi N., Yamada H., Kitagawa T., Watanabe Y. (2019) Seasonal fluctuation in food sources of herbivorous gastropods in a subtropical seagrass bed estimated by stable isotope analysis. *Journal of the Marine Biological Association of the United Kingdom*, **99**, 1119-1125.
- Ohtsuchi N., Hayakawa J., Kawamura T. (2019) Northward range extension of *Porcellanopagurus nihonkaiensis* Takeda, 1985 (Decapoda, Anomura, Paguridae) in Japan. *Crustaceana*, **92**, 577-583.
- Ohtsuchi N., Kawamura T. (2019) Redescription of *Pugettia quadridens* (De Haan, 1837) and *P. intermedia* Sakai, 1938 (Crustacea: Brachyura: Epialtidae) with description of a new species. *Zootaxa*, **4672**, 1-68.
- Sakamoto T., Komatsu K., Shirai K., Higuchi T., Ishimura T., Setou T., Kamimura Y., Watanabe C., Kawabata A. (2019) Combining microvolume isotope analysis and numerical simulation to reproduce fish migration history. *Methods in Ecology and Evolution*, **10**, 59-69.
- Sato N., Iwata Y., Shaw P.W., Sauer W.H.H. (2019) Whole spermatangia within the seminal receptacles of female chokka squid (*Loligo reynaudii* d'Orbigny, 1839-1841). *Journal of Molluscan Studies*, **85**, 172-176.
- Shirakihara K., Nakahara F., Shinohara M., Shirakihara M., Hiramatsu K., Irie T. (2019) Abundance decline in the narrow-ridged finless porpoise population off the Pacific coast of eastern Japan. *Population Ecology*, **61**, 325-332.
- Suzuki K.W., Fuji T., Kasai A., Itoh S., Kimura S., Yamashita Y. (2019) Winter monsoon promotes the transport of Japanese temperate bass *Lateolabrax japonicus* eggs and larvae toward the innermost part of Tango Bay, the Sea of Japan. *Fisheries Oceanography*, **29**, 66-83.
- Testor P., de Young B., Rudnick D.L., Glenn S., Hayes D., Lee C.M., Pattiaratchi C., Hill K., Heslop E., Turpin V., Alenius P., Barrera C., Barth J.A., Beaird N., Bécu G., Bosse A., Bourrin F., Brearley J.A., Chao Y., Chen S., Chiggiato J., Coppola L., Crout R., Cummings J., Curry B., Curry R., Davis R., Desai K., DiMarco S., Edwards C., Fielding S., Fer I., Frajka-Williams E., Gildor H., Goni G., Gutierrez D., Haugan P., Hebert D., J.Heiderich, Henson S., Heywood K., Hagan P., Houpert L., Huh S., Inall M.E., Ishii M., Ito S., Itoh S., Jan S., Kaiser J., Karstensen J., Kirkpatrick B., Klymak J., Kohut J., Krahmann G., Krug M., McClatchie S., Marin F., Mauri E., Mehra A., Meredith M.P., Meunier T., Miles T., Morell J.M., Mortier L., Nicholson S., O'Callaghan J., O'Conchubhair D., Oke P., Pallàs-Sanz E., Palmer M., Park J., Perivoliotis L., Poulain P., Perry R., Queste B., Rainville L., Rehm E., Roughan M., Rome N., Ross T., Ruiz S., Saba G., Schaeffer A., Schönau M., Schroeder K., Shimizu Y., Sloyan B.M., Smeed D., Snowden D., Song Y., Swart S., Tenreiro M., Thompson A., Tintore J., Todd R.E., Toro C., Venables H., Wagawa T., Waterman S., Watlington R.A., Wilson D. (2019) OceanGliders: A Component of the Integrated GOOS. *Frontiers in Marine Science*, **61**, doi: 10.3389/fmars.2019.00422.
- Todd R.E., Chavez F.P., Clayton S., Cravatte S.E., Goes M.P., Graco M.I., Lin X., Sprintall J., Zilberman N.V., Archer M., Aristegui J., Balmaseda M., Bane J.M., Baringer M.O., Barth J.A., Beal L.M., Brandt P., Calil P.H.R., Campos E., Centurioni L.R., Chidichimo M.P., Cirano M., Cronin M.F., Curchitser E.N., Davis R.E., Dengler M., deYoung B., Dong S., Escribano R., Fassbender A.J., Fawcett S.E., Feng M., Goni G.J., Gray A.R., Gutiérrez D., Hebert D., Hummels R., Ito S., Krug M., Lacan F., Laurindo L., Lazar A., Lee C.M., Lengaigne M., Levine N.M., Middleton J., Montes I., Muglia M., Nagai T., Palevsky H.I., Palter J.B., Phillips H.E., Piola A.R., Plueddemann A.J., Qiu B., Rodrigues R.R., Rossby T., Roughan M., Rudnick D.L., Rykaczewski R.R., Saraceno M., Seim H., Sen Gupta A., Shannon L., Sloyan B.M., Sutton A.J., Thompson L., van der Plas A.K., Volkov D., Wilkin J., Zhang D., Zhang L. (2019) Global perspectives on observing ocean boundary current systems. *Frontiers in Marine Science*, **6**, doi: 10.3389/fmars.2019.00423.

- Wang K., Yu H., Yu H., Ito S. (2019) Relationship between population dynamics of *Scomberomorus niphonius* and SST in the Bohai and Yellow Sea, *Periodical of Ocean University of China*. *Periodical of Ocean University of China*, **49**, 31-40.
- 浅井咲樹, 内田圭一, 宮本佳則, 宮下和士, 白川北斗, 荒井修亮, 三田村啓理, 北川貴士, 笹倉豊喜 (2019) 超音波バイオテレメトリーシステムを用いた与那国島周辺海域浮魚礁におけるカツオの行動調査. *超音波 techno*, **31**, 11-16.
- 石川和雄, 伊藤幸彦, 中村啓彦, 仁科文子, 齋藤友則, 渡慶次力 (2019) アカアマダイ卵・仔稚魚の東シナ海から宮崎県沿岸域への輸送に関する粒子追跡実験. *水産海洋研究*, **83**, 93-103.
- 大土直哉 (2019) モガニ属をめぐる分類学的・生態学的研究から見えてきた沿岸岩礁域生態系の多様性. *CANCER*, **28**, 57-63.
- 黒田啓行, 北島 聡, 後藤常夫, 佐々千由紀, 田中秀一, 平松一彦, 向草世香, 安田十也, 山田明德, 山田東也, 由上龍嗣, 依田真里 (2019) マサバ対馬暖流系群の生態と資源. *水産海洋研究*, **83**, 237-251.
- 薬師寺雄樹, 小松幸生 (2019) 三陸湾内底質中の有機スズ化合物濃度と津波による底質攪拌の関連性について. *マリンエンジニアリング*, **54**, 875-878.
- 米田彬史, 板倉 光, 荒井考磨, 海部健三, 吉永龍起, 三宅陽一, 白井厚太郎, 木村伸吾 (2019) 耳石安定同位体比分析と文献調査に基づく日本におけるニホンウナギの自然分布域. *日本水産学会誌*, **85**, 150-161.

### Multiple Field Marine Science (複合領域)

- Arifin Z., Saito H. (2019) Bridging coastal research program between Indonesia and Japan. *Marine Research in Indonesia*, **44**, 34-41.
- Bograd S.J., Kang S., Di Lorenzo E., Horii T., Katugin O.N., King J.R., Lobanov V.B., Makino M., Na G., Perry R.I., Qiao F., Rykaczewski R.R., Saito H., Theriault T.W., Yoo S., Batchelder H. (2019) Developing a social-ecological-environmental system framework to address climate change impacts in the North Pacific. *Frontiers in Marine Science*, **18**, doi: 10.3389/fmars.2019.00333.
- Fujiya W., Hoppe P., Ushikubo T., Fukuda K., Lindgren P., Lee M.R., Koike M., Shirai K., Sano Y. (2019) Migration of D-type asteroids from the outer Solar System inferred from carbonate in meteorites. *Nature Astronomy*, **3**, 910-915.
- Harcourt R., Sequeira A.M.M., Zhang X., Roquet F., Komatsu K., Heupel M., McMahon C., Whoriskey F., Meekan M., Carroll G., Brodie S., Simpfendorfer C., Hindell M., Jonsen I., Costa D.P., Block B., Muelbert M., Woodward B., Weise M., Aarestrup K., Biuw M., Boehme L., Bograd S.J., Cazau D., Charrassin J.-B., Cooke S.J., Cowley P., de Bruyn P.J.N., du Dot T.J., Duarte C., Eguiluz V.M., Ferreira L.C., Fernandez-Gracia J., Goetz K., Goto Y., Guinet C., Hammill M., Hays G.C., Hazen E.L., Huckstadt L.A., Huveneres C., Iverson S., Jaaman S.A., Kittiwattanawong K., Kovacs K.M., Lydersen C., Moltmann T., Naruoka M., Phillips L., Picard B., Queiroz N., Reverdin G., Sato K., Sims D.W., Thorstad E.B., Thums M., Treasure A.M., Trites A.W., Williams G.D., Yonehara Y., Fedak M.A. (2019) Animal-borne telemetry: an integral component of the ocean observing toolkit. *Frontiers in Marine Science*, **61**, doi: 10.3389/fmars.2019.00326.
- Iizasa K., Asada A., Mizuno K., Katase F., Lee S., Kojima M., Ogawa N. (2019) Native gold and gold-rich sulfide deposits in a submarine basaltic caldera, Higashi-Aogashima hydrothermal field, Izu-Ogasawara frontal arc, Japan. *Mineralium Deposita*, **54**, 117-132.
- Ilanko T., Fischer T.P., Kyle P., Curtis A., Lee H., Sano Y. (2019) Modification of fumarolic gases by the ice-covered edifice of Erebus volcano, Antarctica. *Journal of Volcanology and Geothermal Research*, **381**, 119-139.
- Isobe A., Buenaventura N.T., Chastain S., Chavanich S., Cózar A., DeLorenzo M., Hagmann P., Hinata H., Kozlovskii N., Lusher A.L., Marti E., Michida Y., Mu J., Ohno M., Potter G., Ross P.S., Sagawa N., Shim W.J., Song Y.K., Takada H., Tokai T., Torii T., Uchida K., Vassillenko K., Viyakarn V., Zhang W. (2019) An interlaboratory comparison exercise for the determination of microplastics in standard sample bottles. *Marine Pollution Bulletin*, **146**, 831-837.
- Kuwahara H., Kagoshima T., Nakada R., Ogawa N., Yamaguchi A., Sano Y., Irifune T. (2019) Fluorine and chlorine fractionation during magma ocean crystallization: Constraints on the origin of the non-chondritic F/Cl ratio of the Earth. *Earth and Planetary Science Letters*, **520**, 241-249.
- Lan Z., Li X.-H., Sano Y., Takahata N., Kagoshima T., Zhang S., Zhang G., Liao X., Tang X., Gu L., Mao Q. (2019) Two kinds of authigenic xenotime overgrowths in response to an Early Paleozoic tectonothermal event in South China. *Journal of Asian Earth Sciences*, **172**, 423-442.
- Nakamura Y., Oka A. (2019) CMIP5 model analysis of future changes in ocean net primary production focusing on differences among individual oceans and models. *Journal of Oceanography*, **75**, 441-462.
- Onoue T., Takahata N., Miura M., Sato H., Ishikawa A., Soda K., Sano Y., Isozaki Y. (2019) Enhanced flux of extraterrestrial <sup>3</sup>He across the Permian-Triassic boundary. *Progress in Earth and Planetary Science*, **6**, doi: 10.1186/s40645-019-0267-0.
- Otake T., Amano Y., Shirai K., Mochioka N., Takahashi T., Chow S., Kurogi H., Dou S., Yamaguchi A., Tsukamoto K. (2019) Evaluation from otolith Sr stable isotope ratios of possible juvenile growth areas of Japanese eels collected from the West Mariana Ridge spawning area. *Fisheries Science*, **85**, 483-493.
- Richard L., Pinti D.L., Hélie J.-F., Hernández A.L., Shibata T., Castro M.C., Sano Y., Shouakar-Stash O., Sandoval-Medina F. (2019) Variability of deep carbon sources in Mexican geothermal fluids. *Journal of Volcanology and Geothermal Research*, **370**, 1-12.
- Zhongwu L., Sano Y., Yahagi T., Tanaka K., Shirai K., Papineau D., Sawaki Y., Ohno T., Abe M., Yang H., Liu H., Jiang T., Wang T. (2019) An integrated chemostratigraphic ( $\delta^{13}\text{C}$ - $\delta^{18}\text{O}$ - $^{87}\text{Sr}/^{86}\text{Sr}$ - $\delta^{15}\text{N}$ ) study of the Doushantuo Formation in western Hubei Province, South China. *Precambrian Research*, **320**, 232-252.