

第22回 海洋深層水利用学会 全国大会 海洋深層水2018韓国大会 プログラム
Program of the 22th Annual Meeting of Deep Ocean Water Applications Society

10月18日(木)

October 18th(Thursday)

I オープニング (Opening Ceremony)

10:00 — 10:05 開会挨拶

海洋深層水利用学会会長

高橋正征 (東京大学名誉教授, 高知大学名誉教授)

President of Deep Ocean Water Applications Society

Masayuki Takahashi

(Emeritus professor of The University of Tokyo and Kochi University)

10:05 — 10:10 韓国海洋深層水利用学会会長

魚再善 (京東大学海洋深層水学科 教授)

President of The Korea Society of Deep Ocean Water Application

Je-Sun Uh

(Professor of Kyungdong University, Department of Deep Ocean Water)

10:10 — 10:15 歓迎挨拶: 高城郡 郡守

李敬一

Welcome greetings: Mayor of Goseong-Gun(County))

Kyung-II Lee

記念挨拶: 京東大学 総長

全成龍

Memorial greetings: President of Kyungdong University

Sung-Yong Jeon

10:15 — 10:25 来賓祝辞(Greeting from guests)

江原道知事

崔文洵

Governor of Gangwon Province

Moon-Soon Choi

国会議員

李亮壽

Member of Parliament

Yang-Soo Lee

国会議政研修院 院長

曹基烈

Director of National Assembly Training Center

Ki-Yul Jo

海洋水産部 海洋産業政策官 (局長)

韓基俊

Ministry of Oceans and Fisheries, Marine Industry Policy Officer(Director-General)

Ki-Jun Han

高城郡議会 議長

咸炯完

10 : 25 — 10 : 30 休憩(Break time)

II 特別シンポジウム(Special Symposium Session)

海洋深層水利活用の将来展望「深層水利活用のあるべき姿」

Future prospect of deep sea water utilization 「Vision for deep sea water conservancy use」

基調講演の部 (Keynote session)

司会

大塚耕司

(大阪府立大学大学院 教授、海洋深層水利用学会 副会長)

Chairman

Kouji Ohtsuka

(Professor of Osaka Prefecture University graduate school,

Vice -president of the Deep Ocean Water Applications Society)

10 : 30 — 10 : 50 S1. 日本における海洋深層水の利活用の過去・現在・未来

○高橋正征 (海洋深層水利用学会会長、東京大学名誉教授)

S1. Past, present and the future of resource applications of deep ocean water (DOW) in Japan

○Masayuki Mac TAKAHASHI

(The president of Deep Ocean Water Applications Society,

Emeritus professor of the Univ. of Tokyo)

10 : 50 — 11 : 10 S2. The Current Development of Deep Ocean Water in Taiwan:

Issues, Themes and Strategy

○Jin-Yuan Liu¹ and Ping-Yi Huang²

(¹President of Taiwan Society of Deep Ocean Water Resource Application;
Chair Professor of Department of Electrical and Computer Engineering,
and Director of Center for Ocean and Undersea Technology Research,
Tamkang University, New Taipei City, Taiwan, R.O.C.

²Secretary General of Taiwan Society of Deep Ocean Water Resource
Application; Director of Stone and Resource Industry R&D Center, Hualian,
Taiwan, R.O.C.)

11 : 10 — 11 : 30 S3. 한국의 이활용의 현황과 장래 전망

○어재선

(경동대학교 해양심층수학과 교수, 한국해양심층수이용학회 회장)

S3. Current State and Future Prospects of Use and Utilization of Deep Ocean
Water in South Korea

○Jesun Uh

(Department of Deep Ocean Water, Kyungdong University, Korea)

11 : 30 — 11 : 50 S4. 赤穂化成株式会社における商品開発の実情と課題

○中川光司 (赤穂化成(株) 取締役)

S4. Actual product development and tasks of Ako Kasei Co., Ltd.

○Koji Nakagawa

(Director of Ako Kasei Co., Ltd.)

11 : 50 — 12 : 10 S5. 台湾深層海水産業拓展経験

～以光隆企業為例～

○曾清琪(光隆生化科技股份有限公司)

S5. Expanding Deep Ocean Water Resource Applications in Taiwan

-In case of Kung-Long Enterprise-

○Yu-Chi Vickey Tseng

(Kung-Long Ocean Biotech Co., LTD., Taiwan)

12 : 10 — 12 : 30 S6. 강원심층수주식회사의 소개 및 비전

○나춘호(강원심층수주식회사 신제품개발부장)

S6. Gangwon Deep Sea Water Company Introduction and Vision

○ChounHo Na

(Director of Gangwon Deep Sea Water Co., Ltd. Korea)

12 : 30 — 12 : 40 休憩(Break time)

12 : 40 — 13 : 00 質疑の部 (Question and answer session)

コーディネータ(Coordinator) :

大塚耕司 様 (大阪府立大学大学院)

Kouji Ohtsuka

(Professor of Osaka Prefecture University graduate school)

パネラー(Panelists) :

高橋正征 様 (海洋深層水利用学会)

Masayuki Takahasi

(President of Deep Ocean Water Applications Society)

劉金源 様 (台湾深層海水資源利用学会)

Jin-Yuan Liu

(President of Taiwan Society of Deep Sea Water Development Resource Application)

魚再善 様 (韓国海洋深層水利用学会)

Jesun Uh

(President of The Korea Society of Deep Ocean Water Application)

中川光司 (赤穂化成株)

Kouji Nakagawa

(Director of Ako Kasei Co., Ltd.)

曾涓琪(光隆海洋バイオテック社)

Yu-Chi Vickey Tseng

(Kung-Long Ocean Biotech Co., LTD., Taiwan)

羅春浩 (江原深層水株 新製品開発部長)

Choun-Ho Na

(Director of Gangwon Deep Sea Water Co., Ltd.)

13 : 00 — 14 : 00 昼食(Lunch time)

III 海洋深層水利用学会式典 i (Ceremony of Deep Ocean Water Applications Society i)

14 : 00 — 14 : 25 「3国学会間協定書」締結式

Concluding ceremony "agreement between three societies"

IV 海洋深層水利用学会式典 ii (Ceremony of Deep Ocean Water Applications Society ii)

14 : 25 — 14 : 50 「学会賞」授与式

"Society Award" ceremony

14 : 50 — 15 : 00 休憩(Break time)

V 一般講演 1 〈海洋・水質／生物・水産／農業・畜産関連〉

座長：川北浩久（高知県海洋深層水研究所 所長）

Chairman：Hirohisa Kawakita

(Kochi Prefectural Ocean deep sea water research institute director)

- 15：00 — 15：15 1. メンブランフィルター法による海洋深層水からの微生物分離と有用物質の探索
○五十嵐康弘、古米保、沖俊一（富山県立大）
1. Isolation of Microorganisms from Deep-sea Water by Membrane Filter Method and Screening of Bioactive Compounds
○Yasuhiro Igarashi, Tamotsu Furumai, Toshikazu Oki
(Toyama Prefectural University)
- 15：15 — 15：30 2. 富山湾海洋深層水からの放線菌分離と有用物質生産能の解析：第二報
○金木紗恵¹、荻野景子¹、春成円十朗¹、竹内啓晃²、梁太熙³、
今田千秋³、五十嵐康弘¹
(¹富山県立大、²国際医療福祉大、³東京海洋大)
2. Isolation and use metabolite analysis of actinomycetes collected from the deep-sea water of Toyama Bay -2nd report-
○Sae Kanaki¹, Keiko Ogino¹, Enjuro Harunari¹, Hiroaki Takeuchi²,
Taehui Yang³, Chiaki Imada³, Yasuhiro Igarashi¹
(¹Toyama Pref. Univ., ²International Univ. of Health and Welfare.,
³Tokyo Univ. of Marine Sci. and Tech.)
- 15：30 — 15：45 3. 大量ろ過法による富山湾海洋深層水からの放線菌分離と新規化合物の探索
○春成円十朗、五十嵐康弘（富山県立大）
3. Isolation of actinomycetes from deep seawater of Toyama Bay using large-scale filtration method and screening of novel compounds
○Enjuro Harunari and Yasuhiro Igarashi (Toyama Prefectural University)
- 15：45 — 16：00 4. 伊豆赤沢海洋深層水由来放線菌からの新規有用物質の探索
○山田将之¹、梁太熙²、山田勝久³、今田千秋²、春成円十朗¹、
五十嵐康弘¹（¹富山県立大、²東京海洋大、³㈱ディーエイチシー）
4. Screening of novel bioactive compounds from actinomycetes in deep-sea water of Izu-Akazawa.
○Masayuki Yamada¹, Taehui Yang², Katsuhisa Yamada³, Chiaki Imada²,
Enjuro Harunari¹, Yasuhiro Igarashi¹.
(¹Toyama Pref. Univ., ²Tokyo Univ. of Marine Sci. and Tech., ³DHC Co.)
- 16：00 — 16：15 5. 伊豆赤沢海洋深層水由来放線菌AKA32株が生産する抗癌物質の諸性状
○梁太熙¹、山田勝久²、周韜³、春成円十朗³、五十嵐康弘³、
寺原猛¹、小林武志¹、今田千秋¹
(¹東京海洋大、²㈱ディーエイチシー、³富山県立大)
5. Characterization of antitumor substance from strain AKA32 derived from deep-sea water in Izu-Akazawa, Japan
○Taehui Yang¹, Katsuhisa Yamada², Tao Zhou³, Enjuro Harunari³,
Yasuhiro Igarashi³, Takeshi Terahara¹, Takeshi Kobayashi¹, Chiaki Imada¹
(¹Tokyo University of Marine Science and Technology, ²DHC Corporation,
³Toyama prefectural University)
- 16：15 — 16：30 6. 伊豆赤沢海洋深層水を用いたカルシウム/マグネシウム比低減フリルレタスの栽培
○河崎俊一郎、中村謙治（エスペックミック㈱）、清水浩（京都大学）、
野村道康、山田勝久（㈱ディーエイチシー）
6. Cultivation of Leaf Lettuce with Reduced Ca/Mg Ration using Izu-Akazawa

Deep Sea Water

- Shun-Ichiro KAWASAKI, Kenji NAKAMURA (ESPEC MIC Corp.),
Hiroshi SHIMIZU (Kyoto Univ.),
Michiyasu NOMURA and Katsuhisa YAMADA (DHC Corporation)
- 16 : 30 — 16 : 45 7. 海洋深層水の微生物群集構造解析と有用微生物の分離
○今田千秋¹、梁太熙¹、山田勝久²、中山二郎³、寺原猛¹、小林武志¹
(¹東京海洋大, ²㈱ディーエイチシー, ³九州大)
7. Microbial community structure analysis of deep-sea water
and isolation of useful microorganisms
○Chiaki Imada¹, Taehui Yang¹, Katsuhisa Yamada², Jiro Nakayama³,
Takeshi Terahara¹, Takeshi Kobayashi¹ (¹Tokyo University of Marine Science
and Technology, ²DHC Corporation, ³Kyushu University)
- 16 : 45 — 17 : 00 8. 海洋深層水によるアワビ養殖～付着珪藻のみでアワビはどこまで育つか～
○深見公雄・齋藤亨矢・田尾光規(高知大農林海洋)、堀田敏弘・
川北浩久(高知県海洋深層水研)、酒井敦巳・溝渕基浩(㈱ヒワサキ)
8. Aquaculture of abalone in DSW: To what size can abalones grow with attached
diatom as a sole dietary source?
○FUKAMI, K., A. Saitou, K. Tao (Kochi Univ.), T. Hotta, H. Kawakita
(DSW Labo of Kochi Pref.), A. Sakai, and M. Mizobuchi (Hiwasaki Ltd.)
- 17 : 00 — 17 : 15 9. 海洋深層水を用いたトサカノリの陸上養殖
○照屋清之介・久保弘文(沖縄県海洋深層水研究所)
9. Land-based tank cultivation of *Meristotheca papulosa* using deep seawater
○Shinnosuke Teruya, Hirofumi Kubo
(Okinawa Prefectural Deep Sea Water Research Center)
- 17 : 15 — 17 : 30 10. 울릉도 해양심층수의 수질특성에 관한 연구
○김용환·송용준·김태영(경북해양바이오산업연구원)
10. A Study on the Water Quality of Deep Sea Water in Ulleung Island
○Yong-Hwan Kim, Yong-Jun Song, Tae-Yeong Kim
(Gyeongbuk Institute for Marine Bioindustry, Korea)
- 17 : 30 — 17 : 45 11. 해양심층수를 활용한 구강세정제에 대한 기초연구
○정유선, 양동철, 김영희, 어재선
(경동대학교 해양심층수학과)
11. Fundamental research on oral cleanser using deep ocean water
○Jung Yousun, Yang Dongcheol, Younghee Kim, Jesun Uh
(Department of Deep Ocean Water, Kyungdong University, Korea)
- 17 : 45 — 18 : 00 12. 해양심층수 소금을 이용한 도루묵액젓의 스타터균주 탐색
¹한대원, ²조순영, ³박주용·이형길·김경수
(¹강릉원주대학교 산학협력단¹, ²강릉원주대학교 식품가공유통학과²,
오씨아드³)
12. Screening of starter strains for sailfin sandfish sauce made from deep sea water salt
○Park Ju-yong¹, Kim Gyeong-su¹, Han Dae-won²,
Cho Sun-yeong², Lee Hyeong-gil²
(¹Ociad Company, ²Gangneung Wonju National University)
- 17 : 45 — 18 : 00 休憩 (Break time)

VI 懇親会

- 18 : 15 — 18 : 30 江原高城民俗文化芸術公演
18 : 30 — 20 : 30 国会研修館(「研究発表」会場隣接)

10月19日(金)

October 19th(Friday)

VII 一般講演2 〈健康・医療関連〉

(Session 2:Health and Medical cares)

座長：孫潤姬(慶北大学病院 教授)

Chairman: Yun-Hee Shon

(Kyungpook National University Hospital, Professor)

- 9:30 — 9:45 13. Dextran sulfate sodium誘発性炎症性腸疾患に対するmagnesium経口投与の予防効果
大堀健史¹、藤原麻紀子¹、大石晃弘¹、西田健太郎¹、魚住嘉伸²、○長澤一樹¹
(¹京都薬科大学・薬・衛生化学、²赤穂化成)
13. Prophylactic oral administration of magnesium ameliorates dextran sulfate sodium-induced colitis in mice
Kenshi Ohbori¹, Makiko Fujiwara¹, Akihiro Ohishi¹, Kentaro Nishida¹, Yoshinobu Uozumi², ○Kazuki Nagasawa¹
(¹Dept. Environ. Biochem., Kyoto Pharm. Univ., ²Ako Kasei Co., Ltd.)
- 9:45 — 10:00 14. 海洋深層水体験施設における健康増進効果の検討
○新村哲夫(富山大学大学院医学薬学研究部疫学・健康政策学講座)
14. Studies of the Health Effects of a Deep Sea Water Bathing Plant
○Tetsuo SHIMMURA (Department of Epidemiology and Health Policy, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama)
- 10:00 — 10:15 15. Biomedical Application of Bioactive Species from Deep-Ocean Water
Ping-Yi HUANG¹ and ○Chiang-Ting CHIEN²
(¹Water Resource Division, Stone and Resource Industry R&D Center, Hualien, Taiwan.
²School of Life Science, National Taiwan Normal University, Taipei.)
- 10:15 — 10:30 16. 자외선노출로 유발되는 피부 DNA손상에 미치는 해양심층수의 효과
이규식, 이민구, ○남경수
(동국대학교 의과대학 및 난치병연구소)
16. Effect of Deep Sea Water on skin DNA damage by Ultraviolet Exposure
Kyu Sik Lee, Min Goo Lee and ○Kyung-Soo Nam
(Department of Pharmacology, School of Medicine and Intractable Disease Research Center, Dongguk University, Gyeongju 38066, Korea)
- 10:30 — 10:45 17. 해양심층수를 이용한 파일럿 타라소 테라피
김영덕, 이한, ○문형석, 김동교
(가톨릭관동대학교)
17. Pilot Thalasso Therapy by Using Deep Sea Water
Young-Duk Kim, Han Lee, ○Hyung-Seok Mun, Dong-Gyo Kim
(Catholic Kwandong University, Korea)

VIII 一般講演3 〈利活用システム関連他〉

(Session 3:Resource Applications)

座長：都亨基(韓東大学生命科学部 教授)

Chairman: Hyunki Do

(Handong Global University Department of Life Science, Professor)

- 10:45 — 11:00 18. Production of Mineral Water at Various High Concentrations
from Deep Sea Water by Flexible Operating Freeze Concentration Apparatus
○Masahiro Teduka, Masaharu Jo, Mituo Kimura (ICE2.0 LLC)
- 11:00 — 11:15 19. 해양심층수 미네랄추출물 한시적 식품원료 등재
○문덕수, 최미연, 지호, 이호생, 김현주
(선박해양플랜트연구소, 해수에너지연구센터)
19. Temporary list of food sources for deep ocean water mineral extraction

- Deok Soo, Moon. Mi Yeon, Choi. Ho Ji. Ho Saeng, Lee. Hyeon Ju, Kim
(KRISO, Seawater Energy Plant Research Center)
- 11 : 15 — 11 : 30 20. 해수온도차발전 배출수를 이용한 지속가능개발목표(SDGs) 달성 모델
- SSUA(Sustainable Seawater Utilization Academy) 운영 -
○김현주¹,문덕수¹, 이호생¹, 이강희¹
(¹선박해양플랜트연구소 해양플랜트에너지연구본부 해수에너지연구센터)
20. SDGs achievement model using effluent from OTEC Power Plant
- Introduction of SSUA (Sustainable Seawater Utilization Academy) -
○Hyeon-Ju Kim^{1,2},Deok-Soo Moon¹,Ho-Saeng Lee¹,Kang-Hee Lee^{1,2}
(¹Seawater Energy Utilization Research Center, 2Offshore Plant and Marine
Energy Research Division, Korea Research Institute of Ships
& Ocean engineering(KRISO), ¹Goseong, ²Daejun, Korea)
- 11 : 30 — 11 : 45 21. 한국의 해양심층수 개발 현황과 향후 방향
○주현희
(한국해양과학기술원 해양정책연구소)
21. The Current State and Future of Development of Deep Sea Water in Korea
○Hyun Hee Ju
(Marine Policy Institute, Korea Institute of Ocean Science & Technology, Korea)
- 11 : 45 — 12 : 00 22. 콜라겐으로 유도된 인간 혈소판 응집반응에 대한 해양심층수의 억제효과
○남기석, 남경수
(동국대학교 의과대학 및 난치병연구소)
22. Inhibitory effects of Deep Sea Water on collagen induced human platelet
aggregation by PI3K/Akt signaling
○Gi Suk Nam and Kyung-Soo Nam
(Department of Pharmacology, School of Medicine and Intractable Disease
Research Center,Dongguk University, Gyeongju 38066, Korea)
- 12 : 00 — 12 : 15 23. 텍스트마이닝 및 감성분석에 의한 해양심층수에 대한 소비자 인식 분석
○김도훈¹, 김태훈², 김현주³
(¹강원대학교 글로벌 비즈니스학과 학부생 (dounykim@naver.com)
²KDI School, 공공개발정책과, 석사과정 및 아카데미 코디네이터
³책임연구원, 선박해양플랜트연구소 해양플랜트에너지연구본부
/해수에너지연구센터)
23. Analysis of customer's awareness on drinkable deep sea water through
text mining and sentimental analysis algorithm
○Do-Hun Kim¹,Tae-HoonKim²and Hyeon-Ju Kim³
(¹Student, Department of Global Business, Gangwon National University.
²Graduate Student & Academic Coordinator, Master of Development
Policy, KDI School.
³Principal Researcher, Seawater Energy Plant Research Center, KRISO.)
- 12 : 15 — 12 : 30 24. 해양심층수를 이용한 크래프트 맥주(Craft beer)의 기초적인 연구
○박찬영, 박용민, 신용철, 박동수, 어재선
(경동대학교 해양심층수학과)
24. Fundamental research of craft beer made using deep ocean water
○Chanyoung Park ,Yongmin Park ,Yongchul Sin,Dongso Park,Jesun Uh
(Department of Deep Ocean Water,Kyungdong University, Korea)

<ポスター発表>

<Poster presentations>

- P1. Apparatus for Producing Unfrozen-temperature and Melt-resistance Ices
for Maintaining Freshness of Fish
○Masahiro Teduka, Masaharu Jo, Mituo Kimura (ICE2.0 LLC)
- P2. Investigating the effect of different mineral compositions of deep ocean water

on the prevention of high fat diet-induced-non-alcoholic fatty liver

Chung-Yu Lee¹, Huang Ping-Yi² and ○Chun-Lin Lee¹

(¹Department of Life Science, National Taitung University,

²Water Resource Division, Stone and Resource Industry R&D Center)

- P3. *Cordyceps Cicadae* -Fermented Product Cultured with Deep Ocean Water Improves Memory Deficit in Amyloid Beta 40 and Streptozotocin-Induced Alzheimer's Disease Rat via Inhibiting Inflammatory Factors Expression

Yen-Chung Wu and ○Chun-Lin Lee

(Department of Life Science, National Taitung University)

- P4. Performance Test of OTEC Cycle Using Ejector-Pump

○Jung-Hyun Moon, Ho-Saeng Lee, Hyun-Ju Kim

(Seawater Energy Plant Research Center, Korea Research Institute of Ships& Ocean Engineering, Korea)

- P5. Effect of Deep Sea Water on Adipogenesis by the Regulation of Lipid Metabolism

Byung Geun Ha, Jung-Eun Park, ○Yun Hee Shon

(Bio-Medical Research Institute, Kyungpook National University Hospital, 50 Samduk-2 ga Jung-gu Daegu 700-721, Korea)

- P6. A Basic Study on Sea Monkey Cultivation Using Deep Ocean Water

○Sang-Won Kim, Jesun Uh

(Department of Deep Ocean Water, Kyungdong University, Korea)

- P7. Fundamental research on the Cultivation and Preservability of Sprout Vegetables Using Deep Ocean Water

○Hyo-ju Kim, Sewon Kwon, Gahyang Lee, Keunhuin Kim, Minji Kim, Dongsuk Sin, Jaesung Choi, Jesun Uh

(Department of Deep Ocean Water, Kyungdong University, Korea)

- P8. Fundamental research on Peanut Cultivation Using Deep Ocean Water

○Donghui Kim, Hyuk Kim, Joonso Kang, DooHyu Baek, Yohan Jung, Jihong Jung, Jesun Uh

(Department of Deep Ocean Water, Kyungdong University, Korea)

- P9. Basic Study of Hot Packs Using Deep Ocean Water

○Chanwook Lee, Younghee Kim, Jesun Uh

(Department of Deep Ocean Water, Kyungdong University, Korea)

- P10. Current situation and future prospects for utilization of deep sea water in the fisheries field

○Hong-gi Kim (Deep Sea water Industry Association, consultant, Korea)

- P11. Cooling and Heating Performance Characteristics using Filtered Seawater

○Ho-Saeng Lee¹, Jung-Hyun Moon¹, Seung-Taek Lim¹, Hyeon-Ju Kim², Deok-Soo Moon¹

(¹Seawater Energy Utilization Research Center, Korea Research Institute of Ships & Ocean engineering, Goseong, Korea.

²Offshore Plant and Marine Energy Research Division, Korea Research Institute of Ships & Ocean engineering, Daejun, Korea)

Ⅸ 閉会挨拶(Closing Remarks)

12 : 30 — 12 : 45 海洋深層水利用学会副会長

深見公雄 (高知大学農林海洋科学部教授・総合科学系長)

Vice -president of the Deep Ocean Water Applications Society

Kimio Fukami

(Professor, Faculty of Agriculture and Marine Science

•Head of Multidisciplinary Science Cluster)

韓国海洋深層水利用学会副会長

金永徳 (カトリック 関東大学未来融合学科 教授)

Vice -president of the Korea Society of Deep Ocean Water Application)

Youngdeok Kim

(Catholic Kwandong University Department of Future Integrated , Professor)

12 : 45 — 13 : 30 昼食(Lunch time)

X 見学会(Excursion tour)

13 : 30 — 19 : 30

13:30-14:00 :	国会研修館発 移動
14:00-15:00 :	深層水取水施設視察
15:00-15:30 :	移動
15:30-16:30 :	深層水工場視察
16:30-19:00:	移動 スケトウダラ祭り
19:00-19:30 :	移動 国会研修館着