

HU-ACE NEWS LETTER

Advanced Core for Energetics, Hiroshima University

Vol. 86
2024.2

Activities of the Core

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|---------------|---|
| Feb. 5, 2024 | The 112th Hiroshima University Biomass Evening Seminar (co-organized by HU-ACE) |
| Feb. 10, 2024 | The 9th Higashihiroshima-Ene/Eco Seminar (co-organized by HU-ACE) |
| Feb. 14, 2024 | The 6th Geo-seminar (organized by HU-ACE) |
| Feb. 26, 2024 | The 88th HU-ACE Steering Committee Meeting |

Plenary Session Held for the Entire Center.

On January 24, 2024, the plenary session of HU-ACE was held. The purpose of this meeting was to review the status of operations, exchange opinions among members of the center, and share about the direction of our activities. In addition, the number of research papers presented in 2023 by core members (22 as of December 2023) was 60. In FY2022, HU-ACE core members published 2.73 research papers per person while 2.16 per person was the average for the Graduate School of Advanced Science and Engineering, Hiroshima University.

Activities in FY2023

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|---------------------------|----|---|
| Seminar | 17 | Mechanical seminar, Geothermal seminar, Biomass evening seminar, etc. |
| Symposium | 1 | Biomass Symposium "Workshop: Biofuels from the Basics" |
| International Conferences | 3 | ISFE2023、JCREN2023、ACBS2023 Kids Energy Symposium 2023, |
| Social Contribution | 5 | Higashi Hiroshima Environmental Fair, Higashihiroshima-Ene/Eco Seminar, etc. |
| Educational Contribution | 9 | Lectures on fuels and combustion and modern society, Biofuel theory, Visiting lectures, etc. |
| Steering Committee | 12 | |
| News Letter Publication | 12 | |
| Award | 7 | Dean's Special Award of the Graduate School of Advanced Science and Engineering, Academic Encouragement Award, Excellent Poster Award, etc. |

Related Events

The 8th International Symposium on Fuels and Energy (ISFE2024) is scheduled on July 1-2, 2024. Details can be found here. <https://symposium2024.isfe.hiroshima-u.ac.jp/>

We have constructed a roadmap for the development of energy utilization technologies leading up to 2050 and an integration scenario called the "Hiroshima Scenario". Please feel free to share your thoughts with us. <https://hu-ace.hiroshima-u.ac.jp/wp/wp-content/uploads/2022/10/220921-brochure.pdf>



Research consultation and joint research are welcome.

Issued by Advanced Core for Energetics, Hiroshima University
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Research Topics

Setouchi Carbon Neutral Research Center

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Professor; Graduate School of Integrated Sciences for Life
Vice-Director; Seto Inland Sea Carbon Neutral Research Center

Research fields : Engineering/Biotechnology/Genetic Engineering

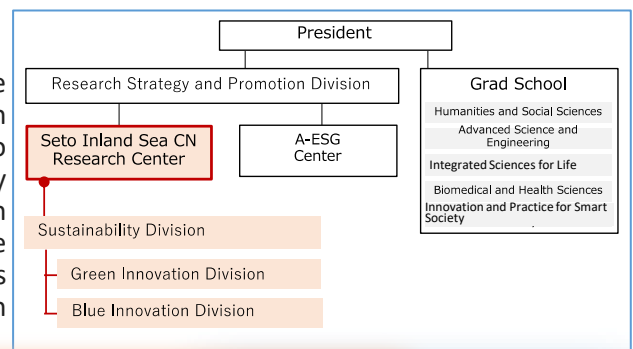
Keywords: Marine Biotechnology, Biomineralization, Synthetic Biology



Abstract

Background

With the aim of realizing a zero-carbon campus at the Higashi-Hiroshima Campus, the Green Transformation (GX) Research Unit is conducting empirical research to contribute to the realization of a decarbonized society at Hiroshima University. The Seto Inland Sea Carbon Neutral Research Center has been established since April 2023 as one of the centers of this research unit as well as the A-ESG Science and Technology Research Center.



Research

Land CO₂ absorption

Improvement of photosynthetic efficiency
Effective use of resources such as phosphorus
Agricultural production
Forest management
Biomass
Terrestrial biodiversity

Green Innovation Division

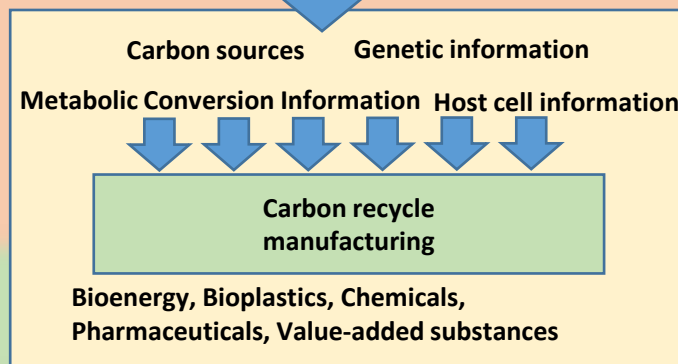
Sustainability Division

Headquarter
Dynamics of overall CO₂
Social implementation
Contribution to local communities

Ocean CO₂ absorption

Seaweed bed implementation
Environmental assessment and conservation
Fishery production
Biomass
Biodiversity of marine areas

Blue Innovation Division



Goals to be achieved through research in three divisions: "Symbiosis of Land and Sea"

The Sustainability Division was newly established to integrate and utilize the research results of the Blue Innovation Division and Green Innovation Division, consisting of existing faculty members of the Graduate School of Integrated Sciences for Life, with the aim of "symbiosis between land and sea," and to build the "GX Setouchi Model" to socially implement low-carbon manufacturing and disseminate GX research from the Setouchi area to the world.

However, we need research results from the areas of advanced sciences and engineering, such as remote sensing technology for dissolved CO₂ in the ocean, and measurement technology and evaluation methods for the atmosphere and rivers, as well as research results from the humanities and social sciences.

We ask for your support in this matter and look forward to your continued cooperation.