

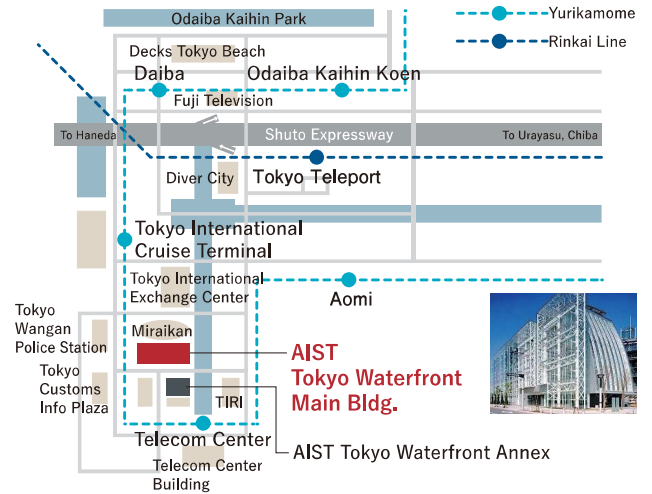
L I F E TECHNOLOGY S T U D I O AIST Tokyo Waterfront

Drug **Discovery**

Zero **Emissions**

IT & Human **Factors**

ACCESS MAP



Visiting our Studio

■ ADDRESS

AIST Tokyo Waterfront Main Bldg.
2-3-26 Aomi, Koto-ku, Tokyo 135-0064, Japan

■ Opening Hours

10:00~16:00 (Last admission 15:20)

■ Closed

Saturdays, Sundays, Japanese National holidays,
and from DEC 29 to JAN 3

■ Admission is Free

※We offer the tour guided in Japanese (no foreign language support).
If your group has an interpreter, you can join the tour.

※The studio may be temporarily closed for events/
maintenance.

※For more details and the latest information, please check
the following website.
<https://www.aist.go.jp/waterfront/en/exhibition/>



Discover, Collaborate, and Innovate

Technology that can be applied to society

The National Institute of Advanced Industrial Science and Technology (AIST) is one of the largest public research organizations in Japan with more than 10 research bases across the country. With “Create the Future, Collaborate Together” as our vision, we are dedicating efforts to the following two missions:

1 Creation and practical realization of technologies useful to Japanese industry and society

2 “Bridging” the gap between innovative technological seeds and commercialization and “social Implementation”

In the LIFE TECHNOLOGY STUDIO at AIST Tokyo Waterfront, we introduce our major research achievements. We hope you will be inspired by seeing, feeling, and experiencing our R&D (research and development) and world-leading technologies that can change society.

We aim to offer an opportunity for you to encounter the most advanced technologies and research achievements, to connect, and to take a new step forward.

We look forward for everyone to come to see our studio, from business experts to general customers.

How to join our Studio Tour

1 Reservation

Please check the following website and contact us at least 3 business days (but no earlier than 1 month) prior to the preferred date of the tour.
<https://www.aist.go.jp/waterfront/en/exhibition/>



2 Reception

Please come to the Information desk. After the admission procedures, we will guide you to the Symbol Tree / Orientation Theater.



3 Symbol Tree / Orientation Theater



We will give you an overview of AIST at the Symbol Tree / Orientation Theater.



4 LIFE TECHNOLOGY STUDIO, AIST Tokyo Waterfront

We will guide you to our studio and explain our research achievements.



LIFE TECHNOLOGY STUDIO

AIST Tokyo Waterfront

Our major research topics in the fields of "Drug Discovery," "IT & Human Factors," and "Zero Emissions" are exhibited at AIST Tokyo Waterfront.

〈Research summary〉



Drug Discovery

- Robots brighten researchers! That takes you to the paradise of the intellectual creation (Mahoroba)
- Blessing from nature, drug development employing natural product library
- Development of advanced platform technologies to support drug discovery through data science
- Development of protein array mounted comprehensively human proteins, for acceleration of the drug discovery research and diagnostic technology!



Actinomycetes isolated from soil and marine sources produce many natural compounds, including pigments

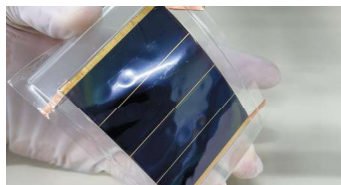


Natural compounds produced by actinomycetes are stocked and utilized for drug discovery

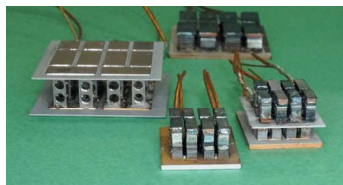


Zero Emissions

- Creating revolutionary innovations to achieve a Zero Emission society



A flexible module of perovskite solar cells

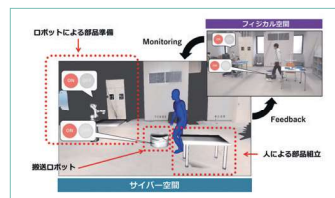


Thermoelectric modules for various applications

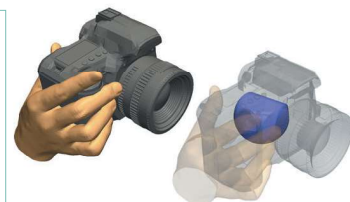


IT & Human Factors

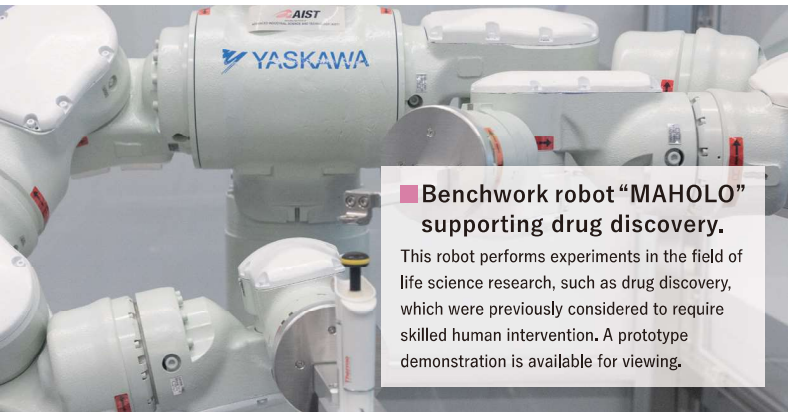
- Our goal is to achieve AI that solves complex problems in society, in cooperation with people in the real world
- Taking individual difference among us into product design, Dhaiba Model and DhaibaWorks
- Technologies for measuring, predicting, and assisting physical functions for the continuous support of your life
- Biomechanics of Lower Limb Prosthetics
- Developing Digital twin for connecting Cyber and Physical worlds based on Geo-information
- Solving social issues through IoT, AI, and Robot technologies based on cyber-physical systems (CPS)
- Device Manufacturing anywhere and anytime as you like
Semiconductor factory without huge utilities
- Advanced Value Chain of Data in Our Daily Life
- Secret Sharing and Secure Computation to facilitate the use of confidential information
- Adult society is full of danger
Protect kids from danger!



Safe cooperation between humans and robots based on CPS



Evaluating ease of grasp using Dhaiba hand model



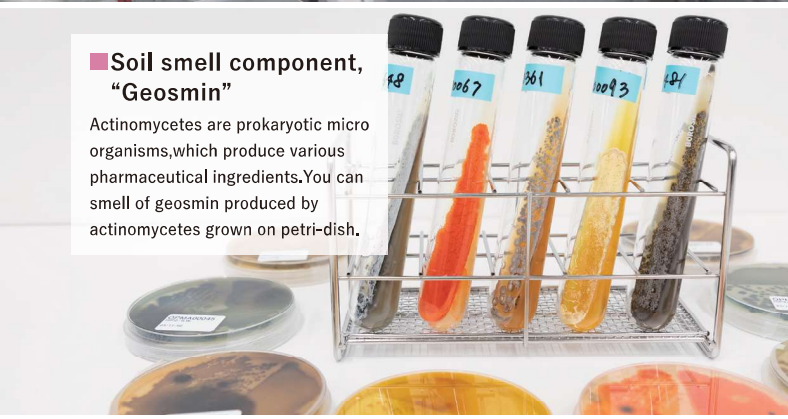
■ **Benchmark robot “MAHOLO” supporting drug discovery.**

This robot performs experiments in the field of life science research, such as drug discovery, which were previously considered to require skilled human intervention. A prototype demonstration is available for viewing.



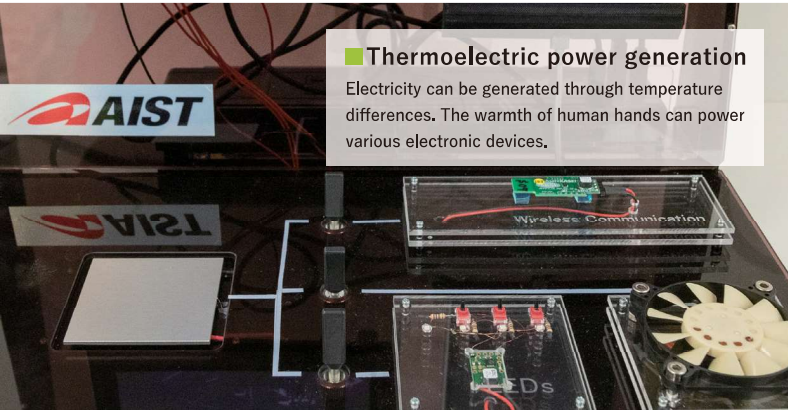
■ **Therapeutic robot “PARO”**

PARO performs "robot therapy," which is animal therapy by a robot in places such as hospitals/nursing homes where animals usually cannot be brought. You can hug PARO.



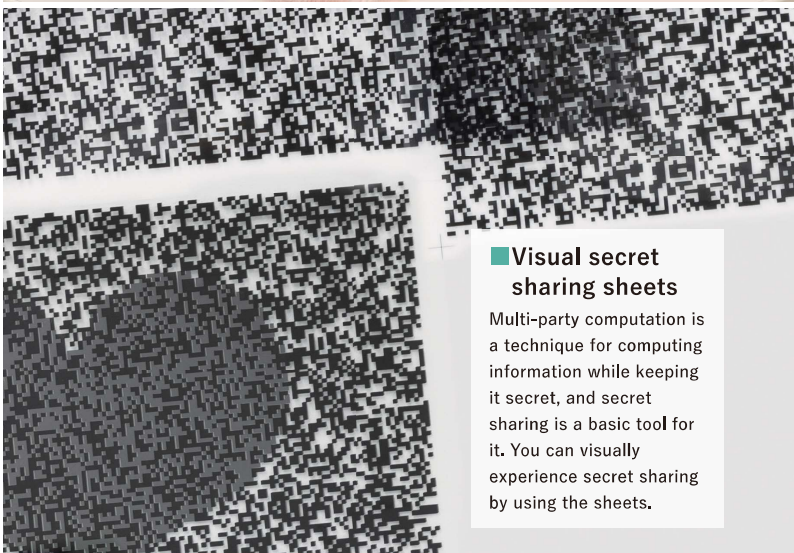
■ **Soil smell component, “Geosmin”**

Actinomycetes are prokaryotic micro organisms, which produce various pharmaceutical ingredients. You can smell of geosmin produced by actinomycetes grown on petri-dish.



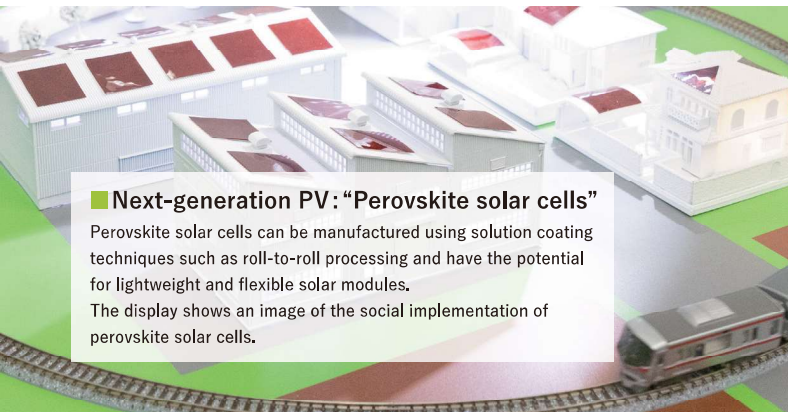
■ **Thermoelectric power generation**

Electricity can be generated through temperature differences. The warmth of human hands can power various electronic devices.



■ **Visual secret sharing sheets**

Multi-party computation is a technique for computing information while keeping it secret, and secret sharing is a basic tool for it. You can visually experience secret sharing by using the sheets.



■ **Next-generation PV: “Perovskite solar cells”**

Perovskite solar cells can be manufactured using solution coating techniques such as roll-to-roll processing and have the potential for lightweight and flexible solar modules. The display shows an image of the social implementation of perovskite solar cells.



■ **Digital signage vending machine equipped with AI “reco!”**

The vending machine gives you recommendation with reason after answering questions. The AI further learns with your choice, which is whether selecting the recommendation or not.