

Announcing the Establishment of The Tokushima International Science Institute (TISI)



Keynote:

Tokushima University and **Nichia Corporation (Nichia)** are to jointly establish the “**Tokushima International Science Institute (TISI)**”. The new institute has a mission to nurture excellent researchers and engineers to become scientific world leaders.

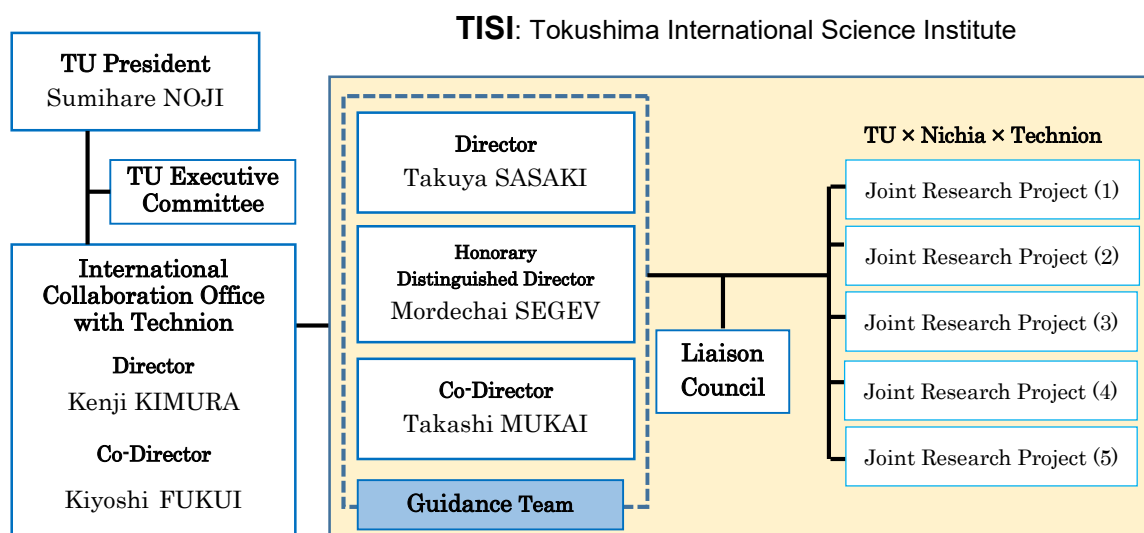
Through the intermediary of Nichia Corporation, TISI will collaborate with the world renowned **Technion – Israel Institute of Technology on international research projects**.

TISI has selected research fields of excellence and innovation which promise high academic value and global impact. Through this, TISI will promote academic research, including depth collaborations between Technion and Tokushima University.

Nichia Corporation is a main source of support for the program, both in funding and personnel.

【Outline of TISI: Tokushima International Science Institute】

- Name of the Institution:
Tokushima International Science Institute (TISI “Taisai”)
- Expected Date of Establishment
Jan. 1st, 2020
- Organization Chart



- Executives of TISI
 Director:
 Prof. Takuya SASAKI
 Tokushima University Executive Director, Vice President for Research Affairs
 Co-Director:
 Mr. Takashi MUKAI, Director, Nichia Corporation
 Honorary Distinguished Director:
 Prof. Mordechai Segev (Moti)
 Distinguished Professor, Technion, Israel Institute of Technology
- Admin. Office of TISI
 2nd Floor, Nichia Kaikan, Tokushima University
 2-24 Shinkura-cho, Tokushima-city, Tokushima-Pref. 770-8501, Japan
- Terms of TISI
 4 years (Renewable due to outcome of the results)
- Number and Duration of the Joint Research Project
 Max. 5 projects at a phase
 Total: 4 years / 1st Phase: 2 years + 2nd Phase: 2 years
 * Evaluation on each the projects will be done in phase-wise for approval of renewing or newly appointing.
- Selection Standard of the Joint Research
 Subject of the Joint Research Projects should hold innovative spirits and excellences to bring impacts to the society.

【Message from the Representatives of the Institutions】

- Takuya SASAKI,
Executive Director, Vice President for Research Affair, Tokushima University
 We are pleased to announce the establishment of the Tokushima International Science Institute (TISI) at Tokushima University. The activities of TISI are based on five Joint Research projects between Tokushima University and Technion. Establishing TISI, I would like to express my sincere gratitude to Nichia Corporation for its assistance and acting as an intermediary between Tokushima University and Technion.
 TISI will be focusing on outstanding ideas that had been difficult for Tokushima University to realize on its own and research that appeals to the innovative potential of new developments by the Joint Research projects. It is an excellent opportunity to open up a bright future for Tokushima University and Tokushima Prefecture. We are determined to achieve the best results.
 TISI's Joint Research activities will be the outcomes of the strengths of Tokushima University in natural sciences, including life science, medical science, and science and technology, and also the advantages of Technion, one of the most innovative universities in the world. TISI aims to establish an international presence that will attract outstanding researchers and engineers from Japan and abroad to Tokushima. At the same time, we head to achieve research results that lead to the next generation. TISI is going to start its operation with such visions on January 1, 2021.

Mordechai SEGEV, Distinguished Professor, Technion

The Technion is delighted to form this collaboration with the Tokushima University and Nichia. The Technion is Israel's first university - the cornerstone was laid in 1912 and the first class started in 1924. It played a major role in the creation of the Israeli industry and in the subsequent formation of the high-tech revolution in Israel. To this day, the majority of the top figures in the Israeli industry are Technion graduates. We are happy to establish collaborations with Tokushima University and Nichia, as we believe that the two cultures complement each other well, and this collaboration will benefit both sides, in many ways. We are especially eager to attract young researchers from Tokushima University and from Nichia to study for a PhD or to spend a Postdoctoral period at the Technion, during which they will work with us for several years, and then return to Tokushima and Nichia to enrich the research there. In the same vein, we will encourage Technion researchers to spend extended periods at Tokushima. This initiation of TISI is the beginning of such an initiative and is intended to create a Collaboration of Excellence between our researchers. We hope to carry out many successful collaborative projects that will enhance the research both at Technion and at Tokushima University. We view this as a bridge of excellence and success between Japan and Israel.

- **Takashi Mukai, Director, Nichia Corporation**

It is our great pleasure and honor to have this valuable opportunity to establish the Tokushima International Science Institute with the cooperation of Tokushima University and Technion – Israel Institute of Technology.

The proportion of the population aged 65 and over (aging ratio against the total population) in Tokushima Prefecture rose from 21.9% in 2000 to 33.1% in 2018. The prefectural population during the same period also decreased by more than 90,000, including an increasing outflow of young people. I am certain I am not the only one who feels a sense of crisis. To reverse this trend, I believe it is crucial to establish an institution at Tokushima University that enhances education and nurtures excellent world-class researchers and engineers.

Technion is an innovative university that is highly regarded internationally with a reputation that rivals that of MIT. Tokushima University is a university that is traditionally strong in manufacturing, with the persistence unique to Japan. We hope to take this opportunity to aggressively propose themes not feasible by each university alone, attractive and interesting topics with unknown results, and other critical themes for the future of humankind, taking on new challenges under the cooperative auspices of both universities.

We will support the Tokushima International Science Institute so that the institute, through advanced scientific research, can provide opportunities for exchanges between young Israeli and Japanese researchers and produce excellent academics and practitioners who can contribute both regionally and globally.

【Outline of the Institutes】

● **Tokushima University**

Tokushima University began as the Tokushima Kisei Normal School in 1874, later developing into several schools. In accordance with the National School Establishment Law, Tokushima University comprising the Faculty of Liberal Arts and Education, the Faculty of Medicine, and the Faculty of Engineering, was instituted in 1949. Currently, the university has eight graduate schools and six undergraduate schools. Furthermore, there are several institutes, such as Institute of Advanced Medical Sciences (conducts the world's most advanced life science research), Institute of Post-LED Photonics (conducts innovative research in the field of next-generation light), University hospital, and Industry-University R&D Startup Leading Institute (which supports industry-university cooperation and start-ups).

Towards the way to globalization, we had exchanged academic agreements with 99 institutions in 30 countries worldwide (as of December 1). Now, the deal with Technion-Israel Institute of Technology brings up to 100 institutions in 31 countries. In addition, we are taking in more than 200 international students. As a national university that has produced a Nobel laureate in 2014 and is a strength in the sciences, we are conducting the world's most advanced research, fostering talented human resources, and strengthening partnerships with local companies.

Basic Information of Tokushima University (as of May 1st, 2020)

- Number of Students: 7,390
(Under-graduate: 5,902 / Graduate-school: 1,488)
- Number of Educational Staff: 941
- Campus
 - Jyosanjima Campus
 - Faculty of Art and Sciences, Faculty of Science and Technology,
 - Faculty of Bioscience and Bio industry
 - Kuramoto Campus
 - Faculty of Medicine, Faculty of Dentistry,
 - Faculty of Pharmaceutical Sciences
- Grant from outside the University (2019) : Total US\$47.62 million
- Academic Ranking of World Universities 2020 :
(Rank 501-600 by Academic Ranking of World Universities)

● **Technion, Israel Institute of Technology**

Technion-Israel Institute of Technology is the premier research university in Israel for science, technology and engineering, and it is ranked among the leading technological universities worldwide. Technion is well known for its spirit of innovation and entrepreneurship; and its alumni and researchers have developed numerous groundbreaking inventions with worldwide impact. The University is proud of its four Nobel laureates – Aaron Ciechanover, Avram Hershko, Dan Shechtman, and Arieh Warshel. Over the years, Technion has played a pivotal role in positioning Israel as the “Start-up Nation.”

Basic Information of Technion (as of May 1st, 2020)

- Cornerstone 1912,
- Teaching began 1924
- President Prof. Uri Sivan
- Number of Students: 14,734
(Under-graduate: 10,703 / Graduate-school: 4,031)
- Number of Educational Staff: 566
- Number of Faculties 18
- Number of Research Centers 60
- Campus
 - Neve Sha'anani (main) campus
 - Ruth and Bruce Rappaport Faculty of Medicine
 - Azrieli Division of Continuing Education and External Studies
- Grants from outside the University (2019)
 - Sponsored Research : US\$101.6 million
 - Donation: US\$ 111.5 million
- Ranked 85th in the 2019 Shanghai Ranking of World Universities.
- Ranked 12th in Pitchbook's 2020 ranking of top universities producing entrepreneurs and startup founders. (602 entrepreneurs who went on to set up 509 companies and raised over \$12 billion)

- **Nichia Corporation**

Nichia Corporation, headquartered in Tokushima Prefecture, Japan, is a research and development enterprise with a two-pronged business base: optical semiconductor devices, such as LEDs and laser diodes (LDs), and functional chemicals, such as cathode materials and phosphors for lithium-ion batteries. Its products have maintained global top-level market shares in their respective fields.

Founded on the manufacture and sale of pharmaceutical raw materials, Nichia has expanded its production range to include phosphors and other products, drawing on its chemical reaction, refinement, and powder control technologies. Through its phosphors business, Nichia entered the optical semiconductor business and established the world's first mass production technology for blue LEDs and blue-violet LDs. White LEDs manufactured applying these technologies are used in mobile phones, televisions, automobiles, lighting, and more.

Nichia has research centers in Anan (Tokushima Prefecture) and Yokohama (Kanagawa Prefecture), and a technology center in Shimosuwa (Nagano Prefecture). In addition to conducting state-of-art research in optics, Nichia also takes on the challenge of exploratory research and development in pursuit of innovation.

【System of the Joint Research Institute】 (Reference)

Tokushima University established the Joint Research Institute System on October 1, 2020. Tokushima International Science Institute (TISI) will be found under the system on January 1, 2021, as the first result.

Joint Research Institute is an independent research organization established within the university. It is characterized by the fact that it conducts research in consultation with the university and companies and flexibly and promptly manages research activities. It is a base for developing multifaceted industry-university collaborative activities to promote efforts to enhance the university's educational and research capabilities through industry-university collaboration that includes funds from companies and human resources. The Joint Research Institute will be a center for multifaceted industry-university collaborative activities. Following Osaka University and Tokyo Institute of Technology, TISI is the third national university in Japan to operate Joint Research Institute System.

TISI has a significant advantage in collaborating with overseas higher education institutions and engaging in international joint research.

【Contacts】

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