2025

ANNUAL REPORT

The Korean Academy of Science and Technology

KAST 한국과학기술한림원
The Korean Academy of Science and Technology

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THE KOREAN ACADEMY OF SCIENCE AND TECHNOLOGY (KAST)

is an independent, non-governmental organization composed of distinguished scholars, dedicated to promoting excellence in science.

KAST serves as a pillar of non-governmental diplomacy in science and technology through collaboration with academies worldwide.

KAST provides independent, evidence-based advice on key societal issues, drawing on the expertise of its members.

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INFORMATION

Symbol Mark

During the Joseon Dynasty, officials in literature and martial arts wore embroidered badges on the chest and back of their official robe to indicate their status and class. These badges symbolized their social rank and status, which were largely influenced by the features of animals or legendary creatures: dragon, phoenix, giraffe, peacock, crane, wild goose, tiger, turtle, and deer. Since the 18th century, literary officials wore badges embroidered with cranes, which symbolized the intellectual spirit of scholars.
KAST's symbol mark adopted the same image of the crane as a symbol of scholars devoted to studies based on the tradition of our ancestors. This is used to express the traditional and modern significance of the status and role that KAST Fellows hold as scholars.

Meaning of Han-lim-won

한림원

"Han-lim-won" is the Korean word for "Academy" At the time when KAST was established, the word "Academy" meant a "private educational institute" in Korea. The committee behind the establishment of KAST looked for an institution that played a role similar to academies in Korean history, and came upon "Han-limwon," which was a royal academic research institute during the Goryeo Dynasty.
It was later succeeded by Jiphyeonjeon, or the Hall of Worthies. The word "Hanlim" refers to "a place where many scholars gather". Today, "Han-lim-won" is generally used in Korea to mean "Academy".

- **Location**
  KAST building, 42(Gumi-dong), Dolma-ro, Bundang-gu, Seongnam-si, Gyeonggi-do 13630, Korea
- **Official Website** www.kast.or.kr

CONTENTS

A Message from the President

A Nexus of Knowledge and Responsibility:
Science and Technology Opening the Future

In 2025, the Korean Academy of Science and Technology (KAST) reexamined its role and responsibilities in science and technology, and translated that commitment into concrete action. Amid profound global transformations, including rapid demographic shifts and the sweeping transition driven by artificial intelligence (AI), KAST has remained firmly aware that science and technology constitute a fundamental pillar sustaining the future of our nation and society. Guided by this recognition, we have sought to fulfill our responsibility with clarity and purpose.

At the heart of this commitment lies the concept of the "Nexus." A nexus signifies more than connection; it is a point of convergence where diverse forms of knowledge and experience, generations and disciplines, science and society intersect to create new meaning and possibility. Drawing upon the accumulated achievements and insights of Korea's leading scientists and engineers, KAST has endeavored to ensure that science and technology do not remain confined within specialized domains, but instead translate into tangible solutions and forward-looking national strategies.

In the area of policy research and advisory activities, KAST published *Recommendations for Korea's Future in Science and Technology* at a pivotal moment when the policy direction of the new government was under active deliberation. This report consolidated the views of the scientific community and called for a fundamental shift in national policy, placing talent development at the forefront of national priorities.

To address the transformative impact of AI, KAST organized the "AI Frontier Series," a series of high-level forums examining the sweeping changes confronting the science and technology ecosystem. Through forward-looking discussions on the pace and direction of technological advancement and the societal responsibilities these changes entail, we explored national strategies for navigating this era of rapid transition.

KAST also strengthened its international collaboration. In partnership with the German National Academy of Sciences Leopoldina, we co-published the joint policy report *Navigating the Energy Transition in Korea and Germany,* drawing on the expertise and insights of 22 leading experts from both countries. This initiative represents a tangible example of a Nexus in action—connecting knowledge and experience across borders to address the shared global challenge of energy transition.

Talent development remains a central mission of KAST. Our flagship youth mentoring program and nationwide high school science lecture series reached approximately 7,100 students this year, introducing them to the frontiers of contemporary science and technology. At the policy level, KAST co-hosted a series of forums with the National Assembly on strategies for strengthening STEM talent development. In collaboration with major media outlets, we also brought national attention to the challenges surrounding the global mobility of scientific talent, highlighting the urgency of systemic responses.

Looking ahead, KAST will continue to serve as a Nexus—connecting knowledge with knowledge, people with people, and science with society. Beyond short-term achievements, we remain committed to shaping the long-term future of our nation through responsible leadership in science and technology. We will ensure that science earns public trust and functions at the core of national strategy in an increasingly complex world. As a Nexus of knowledge and responsibility, KAST will continue to expand its global partnerships, building bridges across borders to advance science for the benefit of humanity.

Thank you.

March 2026
Jin-Ho CHUNG, President of KAST
and Members of the 11th Executive Committee

10 HIGHLIGHTS FROM 2025

1 Publication of Policy Recommendations to the New Administration

KAST issued strategic policy recommendations to the new administration, identifying five priority areas to strengthen Korea's science and technology ecosystem. The report emphasized talent development, foundational research capacity, inclusive policymaking, and the advancement of a resilient scientific culture as pillars of long-term national competitiveness.

2 Strengthened Governance on Women in Science and AI Strategy

To reinforce institutional capacity, KAST elevated the Committee on Women Scientists to standing status and established an ad hoc AI Science and Technology Committee. These measures enhance KAST's leadership in inclusive talent policy and national AI strategy.

3 AI Frontier Series: Shaping the Future of S&T

Through a seven-part national forum series, KAST examined the systemic impact of AI across education, defense, basic science, and industrial innovation. The initiative provided forward-looking guidance on integrating AI into Korea's long-term science and technology strategy.

4 Strategic Dialogue with the Korean National Assembly on STEM Talent

KAST engaged in high-level policy forums with the Korean National Assembly to address the declining STEM enrollment and the accelerating brain drain. The discussions focused on strengthening the national talent pipeline and fostering a societal environment that values scientific expertise.

5 Korea–Germany Energy Transition Partnership

In collaboration with the German National Academy of Sciences Leopoldina, KAST convened leading experts to advance bilateral cooperation on energy transition. The resulting joint policy report outlined shared priorities to promote a sustainable and resilient energy future.

6 Leadership within the InterAcademy Partnership (IAP)

Two KAST Fellows were elected to the IAP Development and Programme Committees (2025–2028), contributing to global strategic planning and reinforcing Korea's voice within the international academy network.

7 Launch of the Public Safety Outreach and Research Support (PSOS) Center

As lead institution for Phase II of the national Rapid Response Research Program, KAST established the PSOS Center to accelerate research mobilization and implementation in response to disaster and public safety challenges.

Psos
국민생활안전 종합지원단
Public Safety Outreach and Research Support Center

8 Advancement of Basic Research Dissemination through BrainLink

Designated as lead institution for Phase II of the BrainLink initiative, KAST continues to strengthen domestic and international research networks through the Basic Science Networking Center, promoting the global visibility of Korea's foundational research.

BASIC SCIENCE NETWORKING CENTER

9 Recognition of Excellence Across Career Stages

Through seven award programs conducted in partnership with government and private-sector partners, KAST recognized 44 scientists and students, reinforcing a culture of excellence across the scientific career lifecycle.

10 National Survey and Policy Engagement on the Outflow of Leading Scientific Talent

Designated as lead institution for Phase II of the BrainLink initiative, KAST continues to strengthen domestic and international research networks through the Basic Science Networking Center, promoting the global visibility of Korea's foundational research.

OVERVIEW

The Korean Academy of Sciences and Technology (KAST) is an authoritative academic organization composed of the nation's most distinguished scholars in science and technology.
The Academy also promotes science education and outreach programs aimed at nurturing future talent and fostering a broader culture of science.
Through active exchange and cooperation with international scientific organizations and academies, KAST plays a key role in scientific diplomacy and remains committed to ensuring that science and technology contribute to the shared prosperity of humanity.

About KAST

At a Glance

Establishment

November 22, 1994

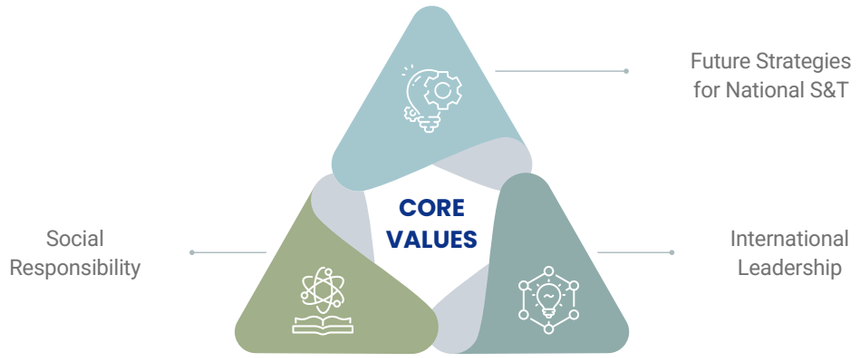
Mission and Role

- KAST advances scientific excellence in Korea through the outstanding expertise of its members, who are elected by their peers in recognition of their distinguished achievements.
- As the nation's leading academy of science and technology, KAST strengthens the foundation of scientific research and innovation while addressing pressing national and global challenges. As an independent, autonomous, and nonprofit academic organization, KAST provides professional and objective analysis and scientific advice to support evidence-based policymaking.
- KAST promotes international academic collaboration, engages with global partners to uphold the highest standards of excellence, and contributes to nongovernmental scientific diplomacy to advance science and technology in Korea.

Vision and Strategy

MISSION

Advancing Science and Technology
Through the Consolidation of a Creative National Foundation



VISION

A dynamic academy

STRATEGIES

Foster Creative Talents and Environment for S&T Advancement

- To foster creative and interdisciplinary talent in S&T
- To build a social framework for basic science-oriented knowledge creation
- To promote science and technology as a driving force for economic growth
- To engage in national S&T policy-making

Establish International Leadership in S&T

- To provide scientific and technological assistance to developing countries
- To produce coordinated international responses to global issues
- To secure global leadership by facilitating international exchange
- To promote strategic international cooperation and joint research activities

Foster a Science Culture Aligned with the Citizens of Korea

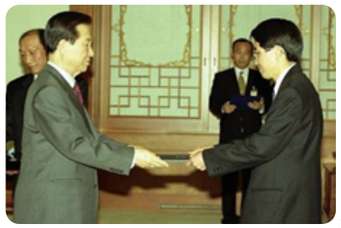
- To build a rational society by advancing scientific trends
- To promote science culture in local communities
- To reinforce the social responsibility of scientists and engineers
- To expand the role of S&T for the socially vulnerable

Historical Highlights

1994 ~

1994 The Korean Academy of Science and Technology was established

1997 Young Scientists Awards established and awarded



2003 ~

2003 New KAST building completed

2005 KAST was promoted to a statutory body by a revision to the Act on Basic Research Promotion and Technology Development Support

2010 Joined the InterAcademy Partnership for Science (IAP for Science)

The National Assembly-KAST Society for Science, Technology and Innovation was initiated

2012~

2012 The Association of Academies and Societies of Sciences in Asia (AASSA) was established and KAST hosted its secretariat

2016 Elected as an Executive Committee member of the IAP for Science

Project for honorable treatment and support for the persons of distinguished service in science & technology was launched

2017 The Young Korean Academy of Science & Technology (YKAST) was launched

2019 ~ 2025

2019 General Assembly of the InterAcademy Partnership (IAP) held

2020 Joined the International Science Council (ISC)

"The National Science Challenges Support & Network" launched

2022 The Science Networking Center was established

2025 The Public Safety Outreach and Research Support Center was launched

Membership

Status of members

KAST members are categorized into Fellow, Foreign Member, Associate Member, Honorary and Patron Member, and Young Korean Academy of Science and Technology(YKAST) Member and Alumni.

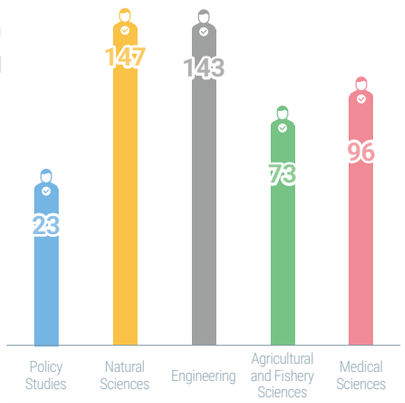
Fellow

Eligibility

A Korean scholar with at least 20 years of experience in a relevant scientific field and a distinguished record of contribution to the advancement of S&T

Term Ages up to 70 years

(Unit: as of December, 2025)



Total **482**

Fellow Emeritus

Eligibility

Honorably appointed from among Fellows who have reached the age of 70, in recognition of their dist inguished service and dedication.

Term Membership is granted for life

Associate Member

Eligibility

Selected from excellent scientists up to 100 persons.

Term 5 years, with re-appointment permitted once

Foreign Member

Eligibility

Appointed from among distinguished international scholars, including Nobel Prize and Fields Medal Laureates

Honorary and Patron Member

Eligibility Individuals, corporations or organizations that provide meaningful support to KAST and its mission

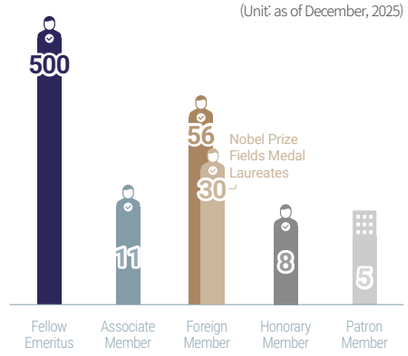
Young Korean Academy of Science and Technology (YKAST) Member and Alumni

Eligibility

Outstanding research outcome & age under 45

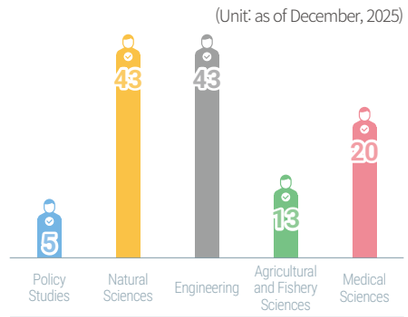
Term Membership is valid for a three-year term and may be renewed until the age of 45

(Unit: as of December, 2025)



Total **575**, **5** co.

(Unit: as of December, 2025)



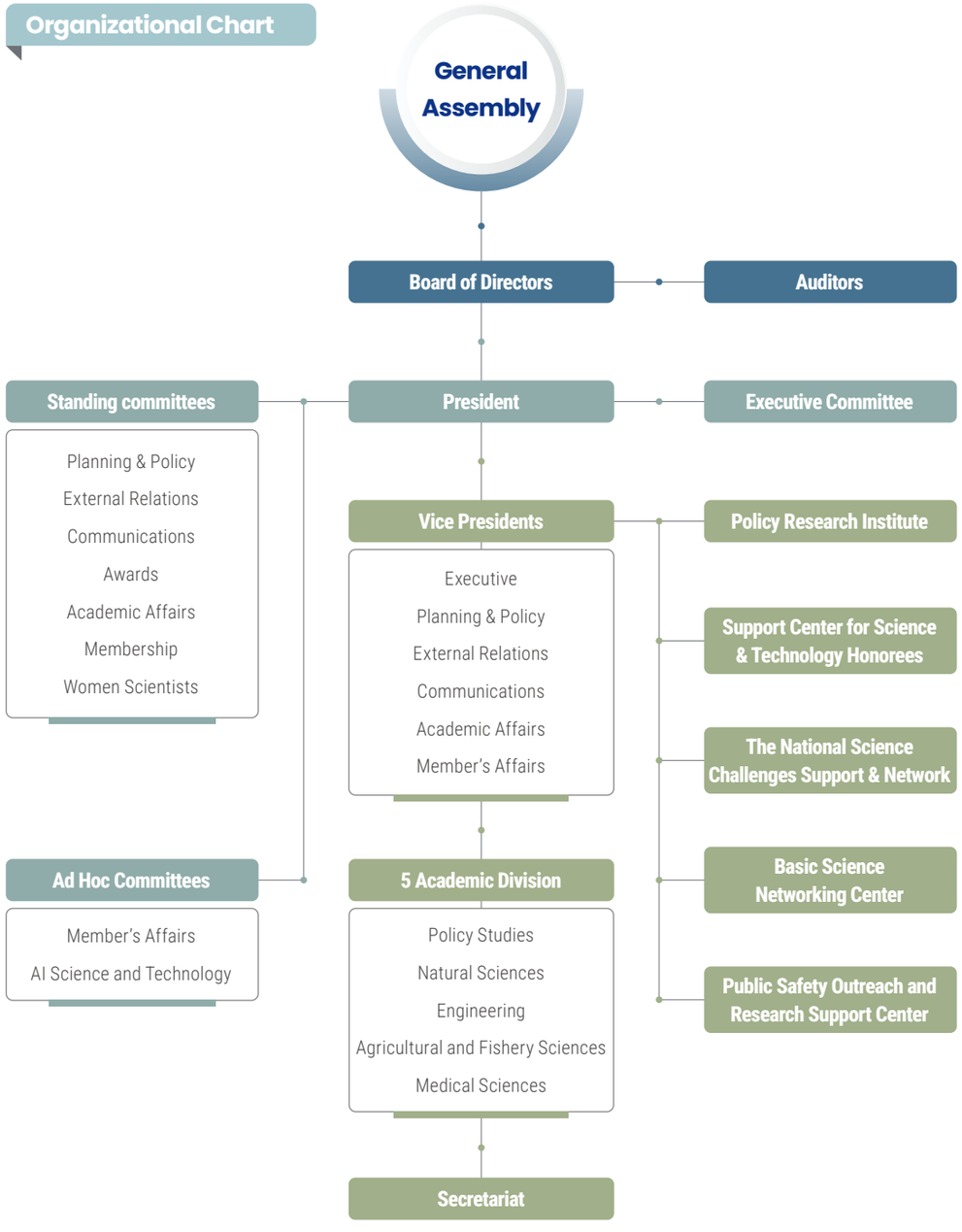
Total **124**

Alumni members* **108**

*** Alumni members**
Alumni members serve through the year they turn 50.

Organization

Organizational Chart



Board of Directors

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Inha Univ

Directors

Dongchun SHIN
Yonsei Univ

Soon Hyung HONG
KAIST

Tae-Eog LEE
KAIST

Jonghae KEUM
KIAS

Yong-Mahn HAN
KAIST

Joonho CHOE
KAIST

Sang Yeol LEE
Gyeongsang Nat'l Univ.

Young Pak LEE
Hanyang Univ

Uhtaek OH
KIST

Jin Kon KIM
POSTECH

Myung-Shik LEE
Soonchunhyang Univ

Youngjo LEE
Dankook Univ

Jin-Ho CHUNG
KAST
(The Current President)

Junbae LEE
Ministry of
Science and ICT

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Cheolmin PARK
Chair of YKAST
Yonsei Univ.

ACTIVITIES

Policy Advisory Activities

KAST promotes sound S&T policymaking by engaging with policymakers in the government and National Assembly, and advances a culture of evidence-based decision-making through a variety of initiatives.

>>> KAST Roundtable Discussions

The 'KAST Roundtable Discussions' have served as the organization's premier forum for policy dialogue since 1996. This forum was established to formulate long-term visions and strategies, as well as to explore solutions to pressing issues in the fields of science and technology.
The distinguished scholars from KAST, along with experts from various fields of science, engage in discussions on topics that directly impact our lives, including science and technology policies.
Last year, KAST hosted the “AI Frontier Series: Shaping the Future of S&T” Roundtable Discussions over seven sessions from September to November. The series explored AI-driven innovation across diverse fields—including STEM education, basic science, and industrial technology—while fostering organic linkages among AI-based education, research, industry, and policy. Through these discussions, KAST presented strategic directions for the future of national science and technology in the era of AI transformation.
The Roundtable Discussion is live-streamed on KAST’s official YouTube channel, offering researchers and the general public an opportunity to ask questions directly to experts in the field.

Exclusive KAST Open Forum

Fourteen open forums were held with the experts in the field on the subject proposed by the KAST Fellows.

Date	Theme
Feb. 25	How Should We Evaluate the Value of Research Outcomes?
Apr. 29	The Future of AI in Korea Series (I): Strategy to Become a Global AI G3 Powerhouse
May. 9	Quantum Information Technology: A Fascinating ±20 Years
May. 15	The Future of AI in Korea Series (II): AI Talent Development Strategy
May. 29	The Future of AI in Korea Series (III): The AI+X Transformation: Innovation, Challenges, and Limitations
Jul. 9	Is a Future Without Animal Testing Truly Possible?
Sept. 10	AI Frontier Series (I): AI × STEM Education
Sept. 18	AI Frontier Series (II): AI × K-Defense
Sept. 29	AI Frontier Series (III): AI × Physics
Oct. 21	AI Frontier Series (IV): AI × Advanced Materials
Nov. 11	Women’s Leadership in Science and Technology in Korea: Challenges and Opportunities
Nov. 13	AI Frontier Series (V): AI × AgriBio
Nov. 18	AI Frontier Series (VI): AI × BCI (Brain Computer Interface)
Nov. 21	AI Frontier Series (VII): AI × Drug Discovery — From Structure Prediction to Clinical Applications

Joint Discussion with relevant organizations

KAST co-hosted seven policy forums with the National Assembly, the Korean Federation of Science and Technology Societies (KOFST) and the National Academy of Medicine of Korea (NAMOK), addressing key issues such as nurturing science and engineering talent, DeepSeek, and digital health.

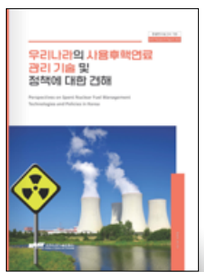
Date	Co-host	Theme
May. 13	National Assembly, KOFST	1st Advanced S&T Talent Policy Forum: Solutions for Talent Development in Times of Crisis
Jun. 19		2nd Advanced S&T Talent Policy Forum: The Global Talent War
Nov. 18	National Assembly	Fostering a Culture that Respects Scientists
Feb. 17	KOFST	DeepSeek: Implications and Future Outlook
Aug. 26		Establishing a Full-Cycle Growth System for Domestic Science and Engineering Talent
Sept. 2		Promoting the Repatriation and Attraction of Outstanding Overseas Talent
Dec. 3	NAMOK	Digital Health and Medical AI

>>> S&T Policy Reports

KAST Fellows conduct research and write reports on mid to long term policies in science and technology, providing recommendations to the government to integrate these research findings into national policies. These recommendations primarily focus on the following areas ▲Creating a foundation to promote research in basic science, ▲Assessing and advising on science & technology policies, ▲Encouraging young talents to pursue careers in science.

In 2025, KAST published four policy reports addressing key national agendas: spent nuclear fuel management, regional revitalization of the Honam super-metropolitan area, strategic development of quantum technology and the potential use of telemedicine in Korea. Each report presented science and technology based policy recommendations aimed at securing future growth engines and addressing pressing societal challenges.

No.	Title
156th	⁘ Perspectives on Spent Nuclear Fuel Management Technologies and Policies in Korea
157th	⁘ Science and Technology Policy Research for Regional Revitalization of Honam Super-metropolitan Area
158th	⁘ Policy Recommendations for the Efficient Development of Quantum Technology
159th	⁘ Study on the Potential Utilization of Telemedicine in Korea



>>> Recommendations for Korea's Future in S&T

In 2025, in alignment with the launch of the new administration, KAST published a policy agenda proposal for the incoming government. The report outlined five strategic directions and corresponding action plans to guide national science and technology policy.

Title
⁘ Connecting the Present to the Next 30 Years through Talent, Ecosystems, and Transformation

>>> ISSUE Reports

ISSUE Reports are policy proposals on scientific and technological matters, offering insights from leading experts in science to address pressing social issues. These reports represent the viewpoints of experts from various research committees. The collective data and expertise serve as crucial resources for policymakers in government, the National Assembly, and relevant agencies, supporting informed decision-making.

No.	Title
Vol. 01	⁘ Strategies for the Future of AI in Korea

>>> Young Academy Reports

"Young Academy Reports" are policy recommendations based on the ideas of young scientists, primarily from the 'Young Korean Academy of Science and Technology (YKAST).' Each report outlines strategies to support promising science and technology research areas and core technologies to strengthen national competitiveness on the global stage.

No.	Title
Vol. 01	⁘ How Should Research Performance Be Evaluated?
Vol. 02	⁘ Policy Strategies for the Development of New Modalities
Vol. 03	⁘ Balanced Support Strategies for Curiosity-Driven and Agenda-Driven Research
Vol. 04	⁘ Directions and Strategies for STEM Education in an AI-Driven World

>>> Scholar Career Decisions: S&T Strategy Report

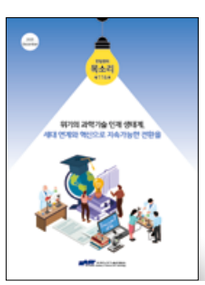
KAST has been implementing the 'Scholar Career Decisions' program by creating diverse content based on the research expertise of prominent scientists. The purpose of 'Scholar Career Decisions' is to document the decision-making process when top scientists faced challenges in their study, and what kind of insights they gained from experiences of success and failure. This valuable resource is shared with fellow researchers and policymakers to shape a better future for all.

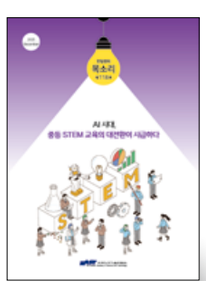
No.	Title
Vol. 01	⁘ Future Directions for the Synthesis of Helical Polymers
Vol. 02	⁘ Human Microbiome Research: From Prevention to Diagnosis, Treatment, and Prognosis

>>> KAST Communique

"Voice of the KAST" aims to provide a long-term vision and development strategy for national science and technology, offering scientific and technological solutions to the challenges in the context of modern society.
Based on expert analysis and scholars' opinions in related fields, proposals for improving policies, laws, and regulations are made and distributed to the Korean government, the National Assembly, and other relevant organizations.
In 2025, five editions were distributed, totaling 118 editions.

No.	Date	Title
114th	Jun. 24	⁘ Toward a Research Evaluation System that Fosters Creativity and Innovation
115th	Oct. 28	⁘ Navigating a Changing Paradigm in Science Diplomacy: Strategic Directions for Korea
116th	Dec. 2	⁘ Revitalizing Korea's Science and Technology Talent Ecosystem: Intergenerational Linkages and Innovation for Sustainable Transformation
117th	Dec. 29	⁘ A Forward-Looking Framework for Spent Nuclear Fuel Management in Korea
118th	Dec. 29	⁘ Reimagining STEM Education in an AI-Driven World





>>> National Science Challenges Support & Network (NSCN)

KAST has been operating the “National Science Challenges Support & Network (NSCN)” for the successful execution of the “National Convergence Research of Scientific Challenges Project” and the “Future Promising Convergence Technology Pioneer (Challenge Track)”. These projects aim to contribute to the value of common prosperity by leading global leadership and solving common human challenges through convergence between basic science and engineering. It aims to transform the Korean R&D paradigm and establish a challenging and innovative first-mover type R&D system by solving the high risk, high reward challenges.

NSCN oversees the full research lifecycle—from identifying and designing high-risk scientific challenges to project selection and post-award research group support.

As of 2025, a total of 23 research teams are pursuing ambitious scientific challenges, including five teams under the "Science Challenges Project" and 18 teams under the "Pioneer Challenge Track" Guided by creativity and innovation, these teams are tackling complex and high-impact research questions.

NSCN has established expert advisory committees to develop strategic roadmaps for the successful advancement of scientific challenges. Serving as an analytical counterpart, NSCN provides strategic guidance and ongoing support to enhance the research teams’ prospects for success.

Major Activities in 2025

Four new research teams were selected under the program.

No.	Project	P.I.
1	**Carbon-Neutral Synthetic Fuels**	**SeCheol OH** Pusan National University
2	**Hydrothermal Synthetic Fuels**	**Hong-shik LEE** KITECH
3	**Next-Generation Secure Semiconductor**	**Gil Ju LEE** Pusan National University
4	**Advanced Physical Security Systems**	**S. Joon Kwon** SungKyunKwan University

>>> The Public Safety Outreach and Research Support Center (PSOS Center)

KAST was designated as the lead institution for the Phase 2 initiative of the government-wide Emergency R&D Program for Public Safety. This program aims to deliver science and technology based rapid responses and on-site implementation to address disaster, public safety, and urgent societal challenges. In 2025, KAST launched the Public Safety Outreach and Research Support Center (PSOS Center) to fulfill this mandate. Jointly administered by the Ministry of Science and ICT and the Ministry of the Interior and Safety, the initiative provides systematic, end-to-end support spanning pre-disaster preparedness, technology development, and field validation.

Through the operation of the PSOS Center, KAST serves as a comprehensive coordination hub, overseeing issue identification, technology needs assessment and matching, multi-stakeholder governance, performance dissemination, and public communication. To this end, expert committees have been established across seven key safety domains, and a collaborative framework linking government ministries, research institutions, and regional stakeholders has been put in place.

The program seeks to enhance both the efficiency and field applicability of rapid response research while strengthening science-based capabilities to safeguard public life and safety. The project runs from 2025 to 2029.

Major Activities in 2025

PSOS Center supported the identification of research demands and the planning of 12 projects under the Rapid Response Public Safety Research Program.

No.	Project
1	Cold-Resistant and Low-Toxicity Disinfectant Additives for Livestock Infectious Disease Control
2	Synthetic Biology-Based Rapid Detection System for Emerging Illicit Drugs
3	Compact and Lightweight Inflatable Life Jackets to Enhance Wearability
4	Integrated eLoran–GNSS Receiver for Vessels to Mitigate Radio Signal Interference
5	Lightweight and Compact Rescue Equipment for Rapid Maritime Search and Rescue Operations
6	Domestic Large-Scale Wildfire Suppression Vehicle for Relay Water Supply to Enhance Ground Firefighting Capacity
7	Wearable Devices and Services to Prevent Manhole Asphyxiation Accidents
8	Acoustic-Based Disaster Prediction Wearable Safety Devices and an Intelligent Safety Management System
9	Seawater Desalination Technologies for Drought Response
10	AI-Based Collision Avoidance System for Small Vessels to Ensure Maritime Safety in Day and Night Conditions

Talent Development and Public Engagement

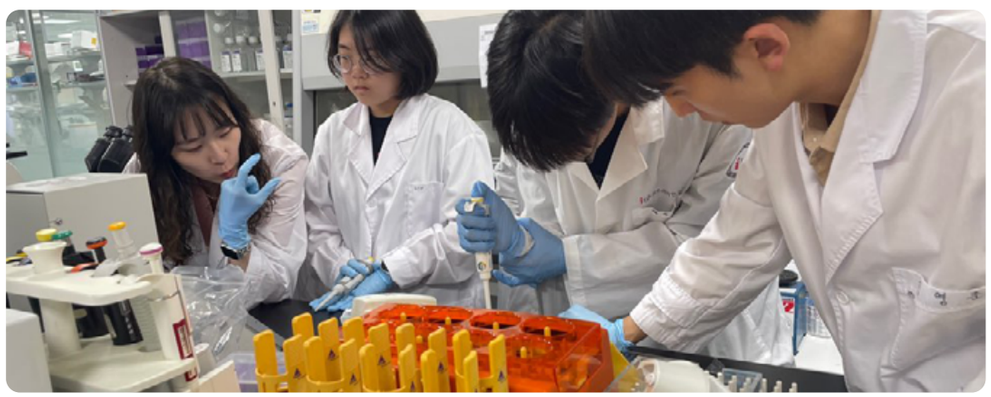
KAST takes the initiative in nurturing talents in science and technology to strengthen the national competitiveness in these fields. All members of KAST are committed to sharing their expertise and knowledge with the public to fulfill its mission.
KAST strives to create a society where everyone can enjoy science. To this end, the academy carries out a variety of activities, factoring in the specific needs of target recipients.

>>> Mentor Program for Outstanding Students

KAST's mentoring program offers one-on-one sessions with science and technology professionals. The program is designed for high school freshmen and sophomores with strong academic performance. Students get to develop their interest and skills in science through a five-month, well-structured mentoring program. The KAST members join the program as mentors, supporting the students in carrying out their projects. KAST prioritizes applicants from rural areas and female students to help reduce inequalities in STEM (Science, Technology, Engineering, and Mathematics) education.

2025 statistics

No. of mentees	20 mentees	Proportion of female students	55% (11 persons)
Proportion of students from rural areas	50% (10 persons)	Proportion of underprivileged groups	5% (1 person)



>>> Meeting with KAST Scholars

"Meeting with KAST Scholars" is a nationwide science lecture program in which KAST members visit schools directly, under the slogan "A meeting between leading Korean scientists and young talents who will lead the future."
Once schools apply for the program, prominent scholars from KAST visit the schools to deliver lectures on the latest developments in science and technology, while providing career consulting services to students. The program has been expanded in 2014 due to its growing popularity and recognition.
KAST has prioritized offering this program to students from rural areas, as they have limited access to high-quality education and career opportunities in science and technology. The program was held at eighty schools last year.

2025 statistics

No. of lectures	Attendees	Lectures in Non-Capital Regions
80 times	Approximately 7,100 students	56 times (70%)

Scholar Career Decisions Lecture Series

Scholar Career Decisions Lecture Series was established to develop strategies for advancing science and technology in Korea by utilizing the knowledge and experience of prominent scientists.
In 2025, ten lectures of the Scholar Career Decisions Lecture Series were held to share exceptional research achievements and decision-making processes of scholars with their colleagues and future scientific talents. These lectures were recorded and uploaded to YouTube.

Digital Science Education and Public Outreach

NoMad Scientist

KAST produced five videos to promote public interest and to provide a deeper understanding of social issues related to science and technology. These videos are available on our YouTube channel.
KAST members openly discuss high public interests, such as Influenza, Nuclear Fusion, Dementia, Heavy Ion Therapy System, Marine Environmental Sustainability.

The 5th Series of the Great Discovery of The Nobel Prize Laureates

KAST has been producing high-quality scientific contents and disseminating it broadly through YouTube to contribute to the cultivation of future science and engineering talents and the popularization of science and technology. KAST produced a series of commentary on the Nobel Prize in Science in 2025. The Series of the Great Discovery of Nobel Prize Laureates has continued to attract high viewership long after its release, remaining a popular educational content in the field of science.

Periodicals

Online Newsletter 'A Close Insight'

An online newsletter, delivered twice a month by email, that shares the results of KAST Projects and the latest news about members. A total of 24 newsletters were published in 2025.

Magazine 'The View of KAST'

"The View of KAST" is quarterly magazine that showcases the philosophy and insights of KAST. In 2025, The View of KAST, focused on "The Role of Science and Technology in an Era of Population Decline" as its annual theme, exploring issues such as the application of AI, the challenges of an aging society and the crisis of regional depopulation.

International Collaboration

The Korean Academy of Science and Technology (KAST) promotes international cooperation by building bilateral and multilateral partnerships with global science academies and organizations, facilitating joint research, exchanges, and policy collaboration. It actively participates in global networks such as the InterAcademy Partnership (IAP), the International Science Council (ISC), and operates the AASSA secretariat, strengthening multilateral collaboration in the Asia-Pacific region. Through these efforts, KAST plays a leading role in science diplomacy and contributes to addressing global scientific challenges. In addition, KAST operates the Basic Science Networking Center (BSNC) to support international networking and collaboration among distinguished scholars in Korea's basic science.

>>> Cooperation with International Academic Organizations

KAST maintains continuous bilateral cooperation with leading academies in major countries, including the United States, the United Kingdom, Germany, Italy, and France, engaging in both regular and ad hoc exchanges. It also actively contributes to the global scientific community by addressing international issues and providing scientific input through its participation in initiatives such as the InterAcademy Partnership (IAP) and the Science 20(S20).

Bilateral Symposia

The 8th KAST-Leopoldina Bilateral Symposium

Date	Jan. 14~15
Location	Seoul, Korea
Theme	Energy Transition
Participant	20 scholars from two academies and experts

Bilateral relations with the German National Academy of Sciences Leopoldina

Since the signing of an MOU in 2012, KAST has maintained cooperation with Leopoldina through annual joint symposia on frontier scientific fields. In recent years, this collaboration has evolved beyond academic exchanges to include policy-oriented discussions, beginning with expert working groups and culminating in joint policy recommendations at bilateral symposia. This marks a shift toward a more structured, multi-year cooperation process that integrates scientific dialogue with policy impact.

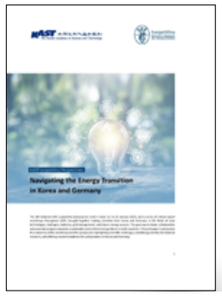
The 3rd KAST-Lincei Bilateral Symposium

Date	Oct. 15~16
Location	Rome, Italy
Theme	⁘ New Frontiers in Algebra and Geometry
Participant	40 scholars from two academies and experts

Bilateral relations with the Accademia Nazionale dei Lincei

Following the signing of an MOU in 2014, KAST and the Accademia dei Lincei have organized joint symposia in 2015, 2016, and 2025, focusing on astronomy and mathematics.

KAST-Leopoldina Bilateral Policy Report



Title	⁘ Navigating the Energy Transition in Korea and Germany
Overview	The report outlines a strategic framework for Korea–Germany collaboration toward a sustainable and resilient energy future, assessing five key domains including solar, hydrogen, batteries, grid management, and future energy sources, while identifying challenges, research priorities, and policy recommendations.

International Conferences and Multilateral Engagement

Science 20 South Africa 2025

Host	The Academy of Science of South Africa (ASSAf)
Theme	⁘ Climate Change and Well-being
Date	Sept. 23
Format	Virtual Meeting
Participation	Representatives from academies and science and technology experts from 19 countries across five continents, as well as delegates from the European Union (EU) and the African Union (AU)
Key Outcomes	Aligned with the G20 Presidency theme of "Solidarity, Equality, and Sustainability," the consultation identified climate change and well-being as a central agenda item. Participants articulated five priority areas—(1) human and environmental systems, (2) energy linkages, (3) Indigenous peoples and vulnerable communities, (4) climate adaptation, and (5) climate mitigation—and contributed to the drafting of a joint statement outlining shared policy recommendations.

2025 IAP Triennial Conference and General Assembly

Host	InterAcademy Partnership for Science (IAP) Academy of Scientific Research and Technology (ASRT)
Date	Dec. 8~11
Location	Cairo, Egypt

KAST Fellows were elected to the IAP Programme and Development Committee (2025–2028)

Prof. Hak-Soo Kim (Emeritus Professor, Sogang University) and Prof. Young-Joon Surh (Emeritus Professor, Seoul National University) have joined the Development and Programme Committees, which serve as IAP's operational governance bodies. In this capacity, they will participate in decision-making related to IAP's overall program planning and activities aimed at advancing its strategic priorities. Prof. Kim will serve on the Communication, Education and Outreach Committee, while Prof. Surh will contribute to the Capacity Building Committee. The newly elected committee members will serve a three-year term, concluding at the 2028 General Assembly.

Hak-Soo KIM
Sogang University

Young-Joon Surh
Seoul National University

>>> The Association of Academies and Societies of Sciences in Asia (AASSA)

The Association of Academies and Societies of Science in Asia (AASSA) is a non-profit international organization dedicated to science, technology, and innovation (STI), comprising academies and scientific societies across Asia and Oceania. As one of the four regional networks of the InterAcademy Partnership (IAP), AASSA serves as the representative platform for the Asian scientific community. Its current membership includes 33 national academies and societies from 30 countries, as well as one regional academy of engineering and technology.

KAST serves as the Secretariat of AASSA, providing administrative support and strengthening its role as a regional hub for science and technology cooperation. In 2025, AASSA supported regional workshops in Pakistan and Malaysia and organized the Women in Science and Engineering (WISE) Symposium in Japan, promoting regional collaboration and advancing the role of women in science and technology.

AASSA Operations

IAP Regional Network Secretariat Meetings

Date	May 14 (1st Session); Dec. 8 (2nd Session)
Format	Virtual Meeting
Participants	Secretariat representatives from the InterAcademy Partnership (IAP) and its regional networks—AASSA (Asia), EASAC (Europe), IANAS (Americas) and NASAC (Africa)
Key Discussions	Coordination related to the IAP General Assembly and governance elections; sharing updates on regional network activities; and exploring avenues for enhanced inter-regional collaboration.

The 1st AASSA Board Meeting of 2025

Date	Feb. 20
Format	Virtual Meeting
Participants	AASSA Board members
Key Discussions	Election of AASSA special committees and deliberation on the 2025 operational plan

The 2nd AASSA Board Meeting of 2025

Date	Oct. 22
Format	Kuala Lumpur, Malaysia
Participants	AASSA Board members
Key Discussions	Review of AASSA activities in 2025 and discussion of the 2026 activity plan.

AASSA Regional Workshop

2025 AASSA-PAS Regional Workshop

Organizers	AASSA, Pakistan Academy of Sciences (PAS)
Date	Aug. 18~20
Location	Islamabad, Pakistan
Theme	⁘ Techniques in Health and Environment
Key Discussions	Sharing case studies on the application of radiation technologies in health and environmental fields, reviewing current research and policy trends, and exploring future directions for regional collaboration.

2025 AASSA–ASM Regional Workshop

Organizers	AASSA, Academy of Sciences Malaysia (ASM)
Date	Oct. 22~23
Location	Kuala Lumpur, Malaysia
Theme	⁘ Addressing Global Challenges in a Postnormal World
Key Discussions	Deliberations on coordinated regional responses and science and technology cooperation in addressing complex, interlinked crises, including pandemics, climate change, and the rapid expansion of AI.

2025 AASSA WISE–SCJ Symposium

Organizers	AASSA Women in Science and Engineering (WISE) Committee, Science Council of Japan (SCJ)
Date	Aug. 4~6
Location	Kashiwa, Japan
Theme	⁘ Women in STEM
Key Discussions	Exchange of national policies and institutional practices to support women in science and technology, with focused discussions on mentoring, career development, leadership pathways, and organizational culture reform.

Award Programs

Prof. Yoo Hang Kim Young Women Scientists Award

Purpose	To support early-career young women scientists in Asia by enabling their participation in international scientific conferences and the presentation of original research findings.
Eligibility for Nomination	Candidates must be nominated by AASSA member academies, excluding those from Highly Developed Countries (HDCs) and G20 member states.
Award Support	Up to USD 2,000 per awardee to cover round-trip airfare, registration fees, per diem, and accommodation
2025 Awardees	Malaysia: Dr. **Polly Yap Soo Xi** Sri Lanka: Dr. **Thilini Wickramatunga;** Dr. **Nadirsha Hermali Silva** Thailand: Dr. **Pattaraporn Suttaphakdee** Nepal: Dr. **Sushma Pandey**

>>> International Symposium

The KAST International Symposium is an open symposium, in which major international science and technology issues are selected as themes, and both domestic and foreign experts participate. Through research exchanges with world-class scholars, the foundation of domestic science and technology research has been broadened, and opportunities have been provided for the next generation of researchers to reach a global level.

The 56th
KAST International Symposium

Date	Aug. 18
Location	Seoul, Korea
Theme	⁘ Advancing Strategies for Effective Response to Next Pandemics
Domestic Speakers	**Ho Jae HAN** Seoul National University (Organizing Committee Chair) Chair **Dae-Geun JEONG** Korea Research Institute of Bioscience and Biotechnology Chair **Dae-Sub SONG** Seoul National University **Baik-Lin SEONG** Vaccine Innovative Technology ALliance Korea
International Speakers	**Diego Diel** Cornell University **Sazaly Bin Abu Bakar** University of Malaya **Hui Ling Yen** The University of Hong Kong **Kiat Ruxrungtham** Chulalongkorn University **Moi Meng Ling** The University of Tokyo **Matae Ahn** Nanyang Technological University
Key Outcomes	Held as an official commemorative event of APEC 2025 KOREA, the symposium convened leading science and technology experts from seven APEC member economies—Republic of Korea, the United States, Malaysia, Hong Kong, Thailand, Japan, and Singapore. Participants engaged in in-depth discussions on early warning signals of potential pandemics, including the transmission of highly pathogenic avian influenza (HPAI), and explored coordinated strategies to prepare for emerging infectious threats such as “Disease X.”

The 57th
KAST International Symposium and In-depth Discussion

Date	Oct. 18
Location	Seoul, Korea
Theme	⁘ GLP-1 Therapeutics
	[Session 1: International Symposium]
Speakers	**Gi-Woo KIM** Yonsei University Chair **Daniel J. Drucker** University of Toronto **Matthias Tschöp** Technical University of Munich **Zach Gerhart-Hines** University of Copenhagen **Hyung Jin CHOI** Seoul National University **Sung Bae SEO** KAIST
	[Session 2: In-depth Discussion]
Speakers	**Yun-Hee LEE** Seoul National University Chair **Zach Gerhart-Hines** University of Copenhagen **Hyung Jin CHOI** Seoul National University **Sung Bae SEO** KAIST **Young Min CHO** Seoul National University **In-Young CHOI** Hanmi Pharmaceutical Co., Ltd. **Kwang-Soo AHN** Ministry of Food and Drug Safety (MFDS) **Jin-Han LEE** The Dong-A Ilbo

>>> Networking with World-leading Scientists

KAST supports Korean scholars in networking with their global peers and expanding their international influence in the field of science and technology by supporting academic exchanges with international organizations and inviting distinguished scholars from overseas.

Frontier Scientists Workshop

No.	Date	Location	Theme
46th	Oct. 18~20	Ischia, Italy	⁘ New Trends in Algebraic and Complex Geometry

Frontier Scientists Workshop

An overseas-based intensive workshop designed to strengthen personal and academic exchange between outstanding Korean scientists and leading international scholars. It aims to foster deeper collaboration and promote the development of international joint research initiatives.

Prestige Workshop

No.	Date	Location	Theme
38th	Apr. 22	Seoul, Korea	⁘ New synthetic Paradigms in Chemistry

Prestige Workshop

A small-group academic workshop held in Korea, providing in-depth scientific dialogue between internationally renowned scholars visiting Korea and leading domestic researchers.

The 74th Lindau Nobel Laureate Meetings

Date	Jun. 29 ~ Jul. 4
Location	Lindau, Germany
Field	Chemistry
Participants	**4 young scientists of Korea**

The Lindau Nobel Laureate Meetings

Each year, Nobel laureates in a selected field—Physics, Chemistry or Physiology/Medicine—and young scientists from around the world are invited to give lectures and engage in discussions. As an Academic Partner of the Lindau Foudation, KAST selects 3 to 4 young scientists every year to participate in the event.

>>> The Basic Science Networking Center (BSNC)

KAST operates the Basic Science Networking Center(BSNC) to support international networking among Korea's distinguished scholars in basic science. In addition to traditional forms of academic dissemination—such as publications and conference presentations—the BSNC provides systematic, national-level support for promoting research excellence and building global networks.

Major Activities in 2025

Selection of a Leading and Rising scientist

In 2025, Selection of seven scientists in three fields, including physics, chemistry, and life science, by forming a specialized field (by stage) committee that guarantees objectivity and expertise.

InterAcademy Workshops with overseas distinguished scholars

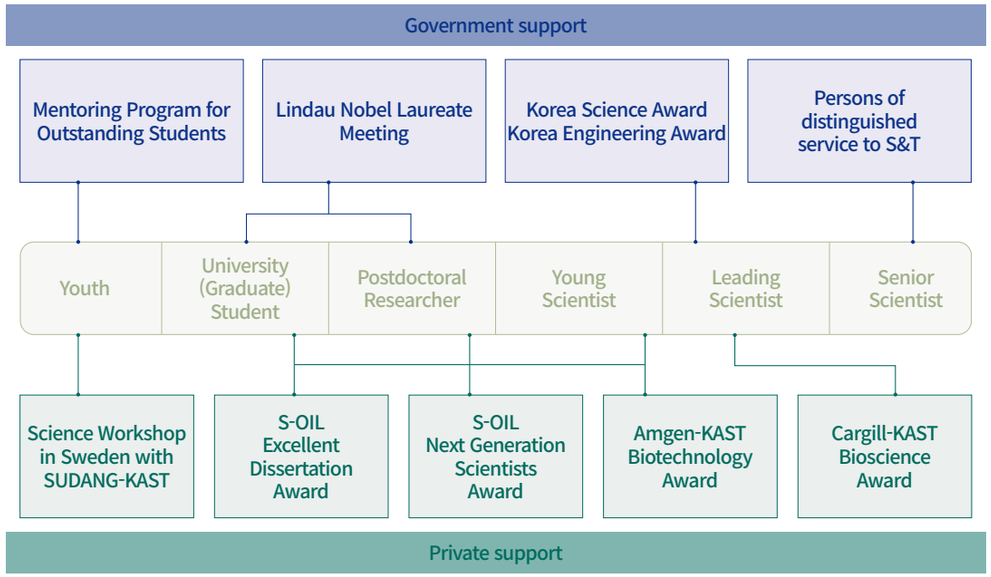
In 2025, three InterAcademy Workshop (closed academic exchange) events were held

No	title
20th	⁘ Photonm Electron and Energy Conversion
21st	⁘ Brain Function and Dysfunction: Mechanisms and Treatments
22nd	⁘ Recent Advances in Human Immunology

Awards

KAST operates award programs in collaboration with government agencies and private organizations, focusing on key stages of career development in S&T.
By providing long-term support for sustained research excellence throughout scientists' careers, these programs aim to motivate the scientific community and contribute to the autonomous advancement of science in Korea. Each award is granted through a transparent and rigorous selection process, recognizing individuals with outstanding achievements in research.

KAST Award Platform for the Scientific Career Life Cycle



>>> The 25th Korea Science Award (Presidential Award)

- **Purpose :** It was established in 1987 to promote Korea's independent and self-sustaining scientific development by recognizing and awarding the scientists and engineers who have achieved outstanding world-class research accomplishments through the identification of the main principles of the natural science field. It was conducted as part of the award program for outstanding scientists by the Ministry of Science and ICT.
- **Number of people awarded :** 2 persons
- **2025 Awardees**

Jae Choon CHA POSTECH

Major Achievements:
A topological approach to Cheeger-Gromov universal bounds for von Neumann ρ-invariants (Communications on Pure and Applied Mathematics, 2016)

Young-Woo SON KIAS

Major Achievements:
Coherent many-body exciton in van der Waals antiferromagnet NiPS3 (Nature, 2020)

>>> The 21st Korea Engineering Award (Presidential Award)

- **Purpose :** It was established in 1994 to increase the research motivation of scientists and engineers, and establish a creative research environment by recognizing and awarding the scientists and engineers who have greatly contributed to the national economy and industrial development through the production of world-class research achievements in the engineering fields. It was conducted as part of the award program for outstanding scientists by the Ministry of Science and ICT.
- **Number of people awarded :** 2 persons
- **2025 Awardees**

Sang Ouk KIM KAIST

Major Achievements:
Human-muscle-inspired single fibre actuator with reversible percolation (Nature Nanotechnology, 2022)

Haeng-Ki LEE KAIST

Major Achievements:
Microstructural densification and CO2 uptake promoted by the carbonation curing of belite-rich Portland cement (Cement and Concrete Research, 2016)

>>> The 10th Cargill-KAST Bioscience Award

- **Purpose :** It is intended to encourage scholars with outstanding achievements in the field of agriculture, fishery or livestock.
- **Number of people awarded :** 2 persons
- **2025 Awardees**

Seungill KIM University of Seoul

Major Achievements:

Haplotype-resolved genome assembly and resequencing analysis provide insights into genome evolution and allelic imbalance in Pinus densiflora (Nature Genetics, 2024)

Sang-Do HA Chung-Ang University

Major Achievements:

Effects of Environmental Conditions (temperature, pH, and glucose) on Biofilm Formation of Salmonella enterica serotype Kentucky and Virulence Gene Expression (Poultry Science, 2021)

>>> The 5th Amgen-KAST Biotechnology Award

- **Purpose :** To contribute to the development of Korean biotechnology by inspiring, motivating, and rewarding young researchers in Korea for their outstanding achievements in life science and bioengineering
- **Number of people awarded :** 1 next-generation scientist, 2 postdoctoral researchers
- **2025 Awardees**

Next generation scientist category

Sangwoo KIM Yonsei University

Major Achievements:

The contribution of de novo coding mutations to meningomyelocele (Nature, 2025)

Post-doctorate study category

Sung Ho BOO KAIST

Major Achievements:

Circular RNAs trigger nonsense-mediated mRNA decay (Molecular Cell, 2024)

Heong-Cheol OH Yonsei University

Major Achievements:

Saturation profiling of durg-resistant genetic variants using prime editing (Nature Biotechnology, 2024)

>>> The 7th S-OIL Next Generation Scientists Awards

- **Purpose :** To encourage scientists who are 45 years of age or under working at domestic universities or research institutes with outstanding research outcomes in 5 areas including physics, chemistry, physiology or medicine, chemical engineering/materials engineering/energy and IT.
- **Number of people awarded :** 5 persons (one for each 5 fields)
- **Sponsorship :** S-OIL Science Culture Foundation, is a public foundation established by S-OIL in 2011 to train talented people through international exchange activity, scholarship business, and research support for social return of the company's profit.
- **2025 Awardees**

Physics

Kab-jin KIM KAIST

Major Achievements:

Signatures of longitudinal spin pumping in a magnetic phase transition (Nature, 2025)

Chemistry

Hyunchul OH UNIST

Major Achievements:

Lattice-Driven Gating in a Cu-Based Zeolitic Imidazolate Framework for Efficient High-Temperature H_2 Isotope Separation (Nature Communications, 2025)

Physiology · Medicine

Hyun Woo PARK Yonsei University

Major Achievements:

Reprogramming anchorage dependency by adherent-to-suspension transition promotes metastatic dissemination (Molecular Cancer, 2023)

Chemical engineering · Material engineering · Energy

Junwoo SON Seoul National University

Major Achievements:

Reversible phase modulation and hydrogen storage in multivalent VO_2 epitaxial thin films (Nature Materials, 2016)

IT

Dongsu HAN KAIST

Major Achievements:

Accelerating Model Training in Multi-cluster Environments with Consumer-grade GPUs (ACM SIGCOMM, 2024)

>>> The 15th S-OIL Excellent Dissertation Awards

- **Purpose :** Purpose To encourage young scientists who are striving for research in the field of the basic science of Korea, contributing to the promotion of the basic science research of Korea, and foster excellent talents that will become the leaders of our society in the next generation.
- **Number of people awarded :** A total of 12 awardees (doctoral graduates) are selected across six fields—Mathematics, Physics, Chemistry, Life Science, Chemical Engineering/Materials Engineering and IT—with two awardees per field. Each awardee is recognized together with their doctoral advisor, bringing the total number of recognized individuals to 24.
- **Sponsorship :** S-OIL Science Culture Foundation
- **2025 Awardees**

Mathematics

Awardee **Seungwoo KANG** Seoul Natl Univ Advisor **Heeseok OH** Seoul Natl Univ

Title of Dissertation

Topics in Non-Euclidean Dimension Reduction

Awardee **Donggyu KIM** KAIST Advisor **Sang-il OUM** IBS

Title of Dissertation

Delta-matroids with coefficients and linear spaces equipped with a bilinear form

Physics

Awardee **Gihyeon KWION** Yonsei University Advisor **Mann-Ho CHO** Yonsei University

Title of Dissertation Ideal van der Waals contacts between three-dimensional metals and two-dimensional semiconductors using Se buffer layer without Fermi-level pinning

Awardee **Chan ROH** KAIST Advisor **Young Sik RA** KAIST

Title of Dissertation

Generation of Multimode Gaussian States and Their Applications in Quantum Computing

Chemistry

Awardee **Joohan NAM** UNIST Advisor **Wonyoung CHOE** UNIST

Title of Dissertation Zeolitic Imidazolate Frameworks as Mechanical Metamaterials and for Hydrogen Isotope Separation

Awardee **Juhyeon PARK** Gyeongsang Natl Univ Advisor **Myong Yong CHOI** Gyeongsang Natl Univ

Title of Dissertation Pulsed Laser and Acoustic Levitation-Processed Electrocatalysts for Energy and Environmental Sustainability

Biology

Awardee **Byung-Sun PARK** Korea University Advisor **Tackhoon KIM** KIST

Title of Dissertation Identification of polyamine and EIF5A hypusination downstream of c-Myc as mechanism underlying targeted therapy resistance in BRAF mutant melanoma

Awardee **Goosang YU** Yonsei University Advisor **Hyongbum Henry KIM** Yonsei University

Title of Dissertation

Evaluation and prediction of the efficiency of prime editor

Chemical engineering/Material engineering

Awardee **Gwangmin KIM** KAIST Advisor **Kyung Min KIM** KAIST

Title of Dissertation Study on entangled electro-thermal dynamics in Mott memristor and its application to future computing

Awardee **Minjun CHOI** GIST Advisor **Jaeyoung LEE** GIST

Title of Dissertation Enhanced Productivity of Multi-carbon Organic Molecules in CO_2 Electrolysis Applying Cu-based Cathode Catalyst

IT

Awardee **Seung Ju KIM** Seoul Natl Univ Advisor **Ho Won JANG** Seoul Natl Univ

Title of Dissertation Memristive Behavior in Two-dimensional Perovskites: From ReRAM to Neuromorphic Computing

Awardee **Jin-Hwi PARK** GIST Advisor **Hae-Gon JEON** Yonsei University

Title of Dissertation

Generalized Depth Perception from Everyday Sensors

Persons of Distinguished Service

KAST plays a major role in creating a social climate where scientists and engineers are respected. KAST will do its best to ensure that people in science & technology, the foundation of Korea's national competitiveness, are well-respected in our society so that they can devote themselves to R&D with high pride and confidence.
KAST is responsible for the implementation of the 'Persons of Distinguished Service to Science and Technology' and carries out activities to select and support persons who greatly contributed to scientific advances in Korea. In this way, KAST is taking the lead in raising the honor and pride of scientists and engineers and building a social and cultural environment where they are respected.

>>> Project Summary and Major Activities in 2025

2025 Persons of Distinguished Service to Science and Technology

Natural Science

The late Nyong D. KWON (1908–1985) — Former Professor, Seoul National University

- Achieved cosmic ray measurements and demonstrated the feasibility of experimental research under challenging conditions.
- Trained the next generation of Korean physicists, including 150 Ph.D holders, who went on to advance physics research in Korea.

Life Science

The late Yung Sun KANG (1917–1999) — Former Professor Emeritus, Seoul National University

- Led international biological research projects, contributing to the globalization of Korean biology.
- Trained outstanding next-generation scientists, advancing biological research in Korea

Engineering

Kyung Suh LEE (1938~) — Chairman, Danam Systems Co., Ltd.

- Led the overall development of South Korea's first surface -to-surface ballistic missile, 'Baekgom', securing key technologies such as solid propellant and guidance-control systems.
- Provided the theoretical foundation for the government's heavy and chemical industry promotion policy through the 'Machinery Industry Development Plan'.

Convergence

The late Min-Hwa LEE (1953–2019) — Former CEO, Medison Co., Ltd.

- Founder of Medison, who pioneered the localization of medical devices in Korea
- Architect of Korea's venture ecosystem and the KOSDAQ system
- Educator who introduced and promoted the concept of 'entrepreneurship' in Korean society

Support for the activities of the Persons of Distinguished Service to Science and Technology

Commemorative Ceremony and Memorial Events

On May 28, the Ministry of Science and ICT held the 2025 Commemorative Ceremony Honoring Persons of Distinguished Service to Science and Technology, during which certificates were formally conferred upon six individuals newly designated in 2024. The ceremony featured a commemorative lecture and a special roundtable discussion reflecting on their outstanding achievements and lasting contributions.
In addition, presidential nameplates are being installed at the residences or former offices. In 2025, a total of 15 distinguished contributors received nameplates, fostering a culture of respect and recognition within local communities.
KAST also organized six memorial events to honor deceased Persons of Distinguished Service to Science and Technology. These ceremonies included commemorative lectures, unveiling ceremonies for memorial monuments, and the dedication of commemorative busts, celebrating their enduring legacy and remarkable contributions to national scientific advancement.

Public Promotion

Publication of a Book on Persons of Distinguished Service to Science and Technology:

The book is a comprehensive biography of distinguished Koreans in the field of science and technology. It includes their history, research achievements, contributions to the media, interviews, and personal writings. It also offers a wide range of supplementary materials, including tributes from the next generation of scholars and special contributions from historians of science. An illustrated book has been released, featuring easy-to-read information cards that highlight major events from the early stages of these remarkable individuals' lives and careers.

Young Korean Academy of Science and Technology (YKAST)

Since 2017, KAST has been selecting outstanding young scientists under the age of 45 as members of YKAST and supporting their exchanges with Young Academies in other countries.
In 2025, KAST elected 29 rising young scientists as YKAST members, recognizing their outstanding achievements as independent researchers. YKAST has been actively engaged in policy recommendations, ensuring that the innovative and creative ideas of young scientists contribute to the promotion of universal values within society.

>>> YKAST Executive Committee (2025. 3.~2026. 2.)

Chair

Cheolmin PARK
Yonsei Univ.
(KAST Fellow)

Division of Policy Studies

Joo Young PARK
Vice Chair
Seoul Natl Univ

Hakyeon LEE
SEOULTECH

Youjung SHIN
Jeonbuk Natl Univ

Division of Natural Sciences

Hyo Jae YOON
Vice Chair
Korea Univ.

Keun Su KIM
Yonsei Univ.

Sangkyu LEE
IBS

Division of Engineering

Hyunjoo Jenny LEE
Vice Chair
KAIST

Sung-Chul BAE
Hanyang Univ.

Seok Su SOHN
Korea Univ.

Division of Agriculture and Fishery Sciences

Soon-Kyeong KWON
Head Vice Chair
Gyeongsang Natl Univ

Kyung-Rok YU
Seoul Natl Univ

Choon-Tak KWON
Kyung Hee Univ.

Division of Medical Sciences

Sangwoo KIM
Vice Chair
Yonsei Univ.

Heejung KIM
Yonsei Univ.

Suckchang HONG
Seoul Natl Univ

>>> Major activities in 2025

Feb.~Nov.

MSIT–YKAST Joint Forums and Policy Roundtables

The Ministry of Science and ICT (MSIT) and YKAST convened a total of five joint forums and policy roundtables. These sessions featured presentations and in-depth discussions by MSIT officials and YKAST members on strategic priorities for strengthening Korea's science and technology ecosystem.

Key topics included:

- Strategies for attracting and retaining early-career scientists in regional research institutes
- University-based initiatives to foster and anchor regional talent
- The role of young scientists in shaping national strategic technologies
- Institutional reforms to expand researcher autonomy
- Government R&D innovation for transitioning toward a mission-oriented and leading-edge research system

Feb. 12~14

YKAST International Conference 2025

The YKAST International Conference is an annual event. This inspiring event provides a platform for young scientists to showcase their achievements, share experiences, and foster face to-face networking among its members and members of global young academies.

Sep. 10~11

Korea-Nordics Next Generation Leader Workshop 2025

In collaboration with the Korea–Nordics Science & Technology Cooperation Center (KNTEC), YKAST hosted an academic exchange workshop in Solna, Sweden, to strengthen scientific collaboration between Korea and the Nordic countries. Held under the theme "Biomedical Sciences, Life Sciences, and Bioengineering," the workshop brought together 13 scientists from Korea and Sweden.

Dec. 15

2025 YKAST Members' Day

During this event, we presented the 2025 YKAST achievements and our business plan for 2026. We also introduced twenty-nine new members of YKAST elected in 2025.

MEMBERS

Fellows of KAST Elected in 2025

In 2025, KAST elected 34 new fellows. KAST selects scientists and engineers, who have been active in the field of science and technology, for more than 20 years, produced leading research results, and contributed significantly to the development of the field through a strict screening.
A total of 124 fellows participated in 23 Membership Committees and evaluated the candidates' 10 representative papers published with the candidate as the corresponding author on the excellence and originality of the research achievements, academic influence, and contribution.

Division of Natural Sciences

Sug Woo SHIN
UC Berkeley/KIAS
- Number theory
- Langlands program
- Shimura varieties

Sanghyuk LEE
Seoul National University
- Harmonic analysis
- Partial Differential Equations

Hyunjung KIM
Sogang University
- Ultrafast Structural Dynamics
- X-ray Imaging and Diffraction
- X-ray Science based on Synchrotrons

Young-Woo SON
KIAS
- Theory of Materials
- Condensed Matter Physics
- First-principles Calculations

Wonho CHOE
KAST
- Magnetic fusion plasmas
- Low temperature plasmas and applications
- ExB plasmas and electric propulsion

So-Jung PARK
Ewha Womans University
- Nanoparticles
- Self-assembly
- Biomaterials

Young Ho RHEE
POSTECH
- Natural product synthesis
- Transition metal catalysis
- Asymmetric synthesis

Min Whan JUNG
IBS/KAIST
- Learning and memory
- Imagination
- Decision making

Ildoo HWANG
POSTECH
- Vasculature development
- Plant hormones
- Signaling network

Saro LEE
Korea Institute of Geoscience and Mineral Resources
- Landslides, ground subsidence, and floods
- Groundwater and mineral resources
- Radon environment

Division of Engineering

Young-Kwon PARK
University of Seoul
- Environmental Catalysis
- Carbon Neutral Process
- Waste to Energy

Taehoon HONG
Yonsei University
- Sustainable construction management
- Smart city
- Low-carbon technology

Inkyu PARK
KAIST
- Design, fabrication, and application of MEMS/NEMS devices
- AI+Sensor/Actuator fusion technology

Ki Tae NAM
Seoul National University
- Bioinspired Nanomaterials
- Chiral Nanomaterials
- Photosystem mimetic CO_2 Utilization

Ho Won JANG
Seoul National University
- Oxide/2D Materials Synthesis and Thin-Film Engineering
- Chemical Sensors, Photo/Electrocatalytic Electrodes

Sung-Yoon CHUNG
KAIST
- Oxide Materials for Energy
- Electron Microscopy
- Water Electrolysis for Green Hydrogen

Unyong JEONG
POSTECH
- Synthesis of Functional Nanomaterials and Thin Films
- Flexible Stretchable Electronic Devices

Inkyu LEE
Korea University
- AI for Communication
- Augmented Cognition Meta-Communications

Bohyung HAN
Seoul National University
- Computer vision
- Machine learning
- Artificial Intelligence

Dong Ha KIM
Ewha Womans University
- Nanofabrication and nano-patterning via supramolecular self-assembly of block copolymers

Joon Hak OH
Seoul National University
- Polymers for information and electronic applications
- Organic electronic materials/devices
- Polymer nanomaterials

Division of Agriculture and Fishery Sciences

Byoung-Cheorl KANG
Seoul National University
- Characterization of gene function
- Genome editing of crops
- Molecular breeding of crops

Deok-Kun OH
Konkuk University
- AI-driven enzyme discovery, enzyme engineering, and recombinant microorganism development

Joon Weon CHOI
Seoul National University
- Thermochemical conversion of lignocellulosic Biomass to Biofuels

Division of Medical Sciences

Hail KIM
KAIST
- Diabetes
- Metabolic dysfunction Associated Steatotic Liver Disease

Seok-Gu KANG
Yonsei University
- Cellular and genetic origins of brain tumors
- Brain tumor–initiating cells and cancer stem cells

Seung Up KIM
Yonsei University
- Liver fibrosis
- Liver cirrhosis
- Noninvasive assessment

In Kyoon LYOO
Ewha Womans University
- Precision Psychiatry and AI Integration
- Neuroimaging-Based Drug Discovery
- Multimodal Neural Mechanisms

Jun Yong CHOI
Yonsei University
- Emerging infectious diseases
- COVID-19
- HIV infection/AIDS

Sang-Uk HAN
Ajou University
- Gastric cancer
- Laparoscopic and robotic surgery
- Tumor microenvironment

Sung Won KWON
Seoul National University
- Mass Spectrometry based Multi-Omics
- Pharmaceutical Analysis
- Pharmaceutical Quality Science

Yong Kee KIM
Sookmyung Women's University
- Epigenetics
- Protein Arginine Methylation
- Cellular Homeostasis

Yu Seok YOUN
Sungkyunkwan University
- Targeted nanomedicines
- Phototherapy-based drug delivery platforms
- Inhalation drug delivery systems

In-Sung YEO
Seoul National University
- Biological tissue–implantable medical device interfaces
- Biomechanics related to dental restoration

Members of YKAST Elected in 2025

In 2025, KAST elected 29 new members to YKAST, selecting outstanding young scientists under the age of 43. A total of 112 KAST fellows and YKAST members participated in the Membership Committees, evaluating candidates based on the excellence and originality of their research achievements, academic influence, and overall contributions.

Division of Policy Studies

Hyo KANG
Seoul National University
- Advanced Technology Strategy
- Inter-Firm and Cross-National Mobility and Collaboration of Knowledge Workers

Dong Gu CHOI
POSTECH
- Management Science
- Engineering Economics
- Energy Technology Policy

Division of Natural Sciences

Kyeongsu CHOI
KIAS
- Geometric analysis
- Partial Differential Equations
- Mean curvature flow

Seung-Joo LEE
Yonsei University
- String Theory
- Quantum Gravity
- Quantum Field Theory

Sarah Sunah PARK
POSTECH
- Metal–Organic Frameworks
- Nanoclusters
- Nanocluster-Based Frameworks

Yunmi LEE
KAIST
- Synthetic Methodology in Organic Chemistry
- Asymmetric Synthesis
- Chiral Compounds

Yoosik KIM
KAIST
- Double-Stranded RNA
- Mitochondrial RNA
- RNA-Mediated Immunity

Joon-Yong AN
Korea University
- Whole-Genome Analysis
- Neurodevelopmental Disorders
- Multi-Omics Approaches

Division of Engineering

Kyung Hoon HYUN
Hanyang University
- AI-Driven Design
- Generative AI
- Design Computing

Gi-Dong SIM
KAIST
- Mechanics of Materials
- Thin-Film Mechanics
- Fatigue and Fracture

Jinah JANG
POSTECH
- 3D Bioprinting
- Functional Bioinks
- Soft Biomaterials

Kibum KANG
KAIST
- 2D Semiconductor Growth
- Precursors
- Post-Growth Processing

Jiheong KANG
Seoul National University
- Soft Materials
- Flexible Electronic Materials
- Dynamic Materials

Joo-Young KIM
KAIST
- AI Accelerators
- Computer Architecture
- Integrated Circuits

Je Min HWANGBO
KAIST
- Legged Robots
- Reinforcement Learning
- Robot Control

Wangyun WON
Korea University
- Process Design
- Process Control
- Optimization

Hyomin LEE
POSTECH
- Soft Matter
- Functional Thin Films
- Microfluidics

Division of Agriculture and Fishery Sciences

Yu-Jin KIM
Pusan National University
- Pollen Tube Development
- Double Fertilization
- Haploid Induction

Sunae KIM
Ewha Womans University
- Food Hygiene
- Food Safety
- Foodborne Pathogens

Division of Medical Sciences

Tae-In KAM
KAIST
- Neurodegenerative Diseases
- Protein Aggregation
- Neuronal Cell Death

Seongjun PARK
Seoul National University
- Neural Interface Devices
- Optogenetics
- Bioelectronic Medicine

Han Sang KIM
Yonsei University
- Pre-Metastatic Niche
- Extracellular Vesicles (EVs)
- Cancer Metastasis

Hye Joo SON
Dankook University
- Neurodegenerative Disorders
- Neuroimaging and Molecular Imaging
- Dementia Resilience

Yongseok KWON
Sungkyunkwan University
- Medicinal Chemistry
- Organic Synthetic Methodology
- Asymmetric Catalysis

Ki-Young LEE
Sungkyunkwan University
- Structure and Function of Membrane Proteins
- Oncogenic Mutations
- Next-Generation Targeted Therapies

Jae-Young LEE
Seoul National University
- Drug Delivery Systems(DDS)
- Biomaterials, Nanocarriers
- Formulation Development

Yong-Hyun HAN
Kangwon National University
- Innate Immunity
- Inflammatory and Fibrotic Diseases
- Systems Physiology

Bada KANG
Yonsei University
- Dementia and Cognitive Impairment
- Behavioral and Psychological Symptoms
- Digital Health, Health Policy

Jin Man KIM
Seoul National University
- Multi-Omics Approaches
- Next-Generation Sequencing (NGS)
- Pulp–Dentin Complex

Foreign Member of KAST Elected in 2025

Foreign Members of KAST are elected from among distinguished international scholars, within a limit not exceeding 20 percent of the total number of Fellows.
As of 2025, KAST has 56 Foreign Members, including Professor Eva Olsson of Chalmers University of Technology, who was elected in 2025. Among them, 30 are Nobel or Fields Medal laureates.

Eva Olsson
Chalmers University of Technology
(Member of the Royal Swedish Academy of Sciences)

Professor Eva Olsson is internationally recognized for her pioneering contributions to nanomaterials and solid-state physics. She has led cutting-edge research in materials characterization using transmission electron microscopy (TEM) and in situ electron microscopy techniques. By enabling real-time observation and atomic-scale analysis of functional materials, Professor Olsson has significantly advanced the fundamental understanding of their physical and chemical behavior.
As of 2025, she has authored more than 600 publications in leading journals—including Nature, Science, and Advanced Materials—with over 20,000 citations, reflecting her substantial global academic impact. Her expertise in advanced nanoscale characterization plays a critical role in the development of next-generation technologies, including electric vehicle batteries, hydrogen energy materials, and high-performance semiconductors.
Professor Olsson has also maintained active research collaborations and academic exchanges with Korean institutions, including Seoul National University, KAIST, and POSTECH. In recognition of her outstanding scholarly excellence, international leadership, and longstanding engagement with the Korean scientific community, she has been elected as a Foreign Member of KAST.