POSTECH, Ushering in a New Era
From University to Metaversity
There is no limit to what we can achieve.
We create new value by bringing down walls between disciplines and converging knowledge.
We are Postechians.

Today, We Break Down Barriers
Our Contribution to Humanity

POSTECH was founded with a unique mission. We answer to a higher calling by raising future leaders through quality education, strengthening our nation through science and technology, and creating a better world for all.
Time and space no longer limit us. Campuses have moved online and our daily life transcends borders and time zones. Our journey toward Metaversity has already begun.
Ideas for a Brighter Tomorrow

We believe there is more than one answer to every problem.
We think in new ways to find answers waiting to be uncovered.
That is why our tomorrow will be brighter than today.
If you want to go fast, go alone. If you want to go far, go together.

We are building together a future that Postechians dream of, a tomorrow that is better than today.
From University to Metaversity

President’s Message

Founded in 1986 as Korea’s first research-oriented university, POSTECH has constantly led change and innovation in the nation’s higher education. Despite its short history and being located far from the capital in a non-English speaking country, POSTECH has risen to become one of the leading universities in Asia.

The driving force behind POSTECH’s rise is the “power of together.” All of POSTECH’s achievements have been possible in just 30 years thanks to the united support from members of the university, POSCO, the Korean government, local governments, corporations, and all those who love POSTECH.

As POSTECH moves into a new era, I believe that our future will be brighter when we recognize and respect the diversity of our members, institutes, and partner organizations and gather our strengths. We will continue to innovate and move forward with you.

Moo Hwan Kim
President of POSTECH

We will build together a global university that contributes to the nation and humanity.

Scan the QR code to watch the president’s message.
Cultivating Innovative Leaders with Wisdom and Knowledge

POSTECH was established to conduct in-depth research on profound theories and applications in science and technology that are necessary for the advancement of nation and humanity, and to cultivate global leaders equipped with knowledge and intellect. Carrying on the late founding chairman Tae-Joon Park’s legacy on educational patriotism, POSTECH is leading the progress on education and science in Korea by taking on great challenges.
Returning to Our Founding Tenets to Meet the Demands of Today

(1KRW = 0.001 USD)

Facts and Figures

- **Percentage of Students who Receive Scholarship (Undergraduate):** 103%
- **Research Grants Awarded:** USD 261.4 million
- **Student to Faculty Ratio (Undergraduate):** 4.4
- **Research Grant per Faculty Member:** USD 870,000
- **Annual Education Expenditure per Student:** USD 100,006
- **Total Number of Start-Ups (including faculty start-ups):** approx. 220
- **SCI (E) Papers per Faculty Member:** 7.3 papers
- **Affiliated Research Institutes:** 101 Institutes
- **Patent and Technology Transfer:** (631 patent applications, 311 patents)
- **Global Partner Institutions:** 127 Institutions in 34 Countries
- **SCI (E) Impact Factor per Paper:** 7.7
Leading the Times, One Step Ahead

The FIRST

- 1980s: Founding of POSTECH, the first research-oriented university in Korea
- 1990s: The first university in Korea to introduce an integrated MS/PhD program
- 2000s: Establishment of Pohang TechnoPark (Pohang City, POSCO, POSTECH joint project)
- 2010s: Opening of the Graduate Institute of Ferrous Technology (GIFT), the only institute of its kind
- 2020s: First Korean university to establish a blockchain campus

The BEST

- 2011: Grand Opening of the Korea Institute for Advanced Study (KIAS)
- 2013: First Korean university to introduce an integrated MS/PhD program
- 2015: Establishment of the Department of Semiconductor Engineering
- 2018: First Korean university to open a Bio Open Innovation Center (BOIC)

QS Asia University Rankings Specialized Universities Category
- 2010: 28th
- 2013: 1st

THE World University Rankings
- 2010: 1st
- 2012 - 2014: 1st

THE Young University Rankings
- 2012 - 2014: 1st

THE World University Rankings for University-Industry Collaboration
- 2017: 1st

THE World’s Best Small Universities Rankings
- 2019 - 2021: 1st

Education Expenditure and Education Investment per Student
- 2010 - 2021: 1st

(more than 3,000 enrolled students)

Scan the QR code for more information.
Science and Technology for a Better World

Computer Vision, the ‘Eye’ of Artificial Intelligence

Computer vision is building autonomous 3D systems to perform tasks using the vision of a computer instead of human vision. By developing digital image processing that extracts information from images, and object and pattern recognition technology, POSTECH has already proven to be a world leader in the field.

Professor Kimoon Kim, the World’s Leading Cucurbituril Researcher

Professor Kimoon Kim is the first researcher in the world to successfully isolate cell membrane proteins from cells using cucurbiturils. He also proved that cucurbiturils, a nanocapsule shaped like a round pumpkin, can hold small molecules and are applicable in diagnosing and treating diseases.

Professor Dong-Woo Cho, a Pioneer of 3D Bioprinters in Korea

By applying 3D printing to the biomedical field, Professor Dong-Woo Cho pioneered 3D bioprinting in Korea. By creating tissues and organs from actual cells, this technology develops artificial organs that have relatively few side effects and can grow inside the patient’s body.

Mussel Adhesive that Even Sticks Underwater

By analyzing mussels that firmly stick to rocks in an underwater environment, researchers at POSTECH have identified the coacervation mechanism - a phase separation phenomenon of surface adhesive proteins - that plays a key role in initial underwater adhesion. This finding has accelerated the development of underwater bioadhesives, which are becoming increasingly important in the medical field.

Professor Young Chul Sung, a Bio-Entrepreneur Who Saves Lives

Professor Young Chul Sung founded Genexine in 1999 as an in-school venture company to develop DNA vaccines. The company has since developed about 10 new pipeline drugs, growth hormone drugs using the hybrid Fc platform, and treatments for anemia among others. As the founder of the First POSTECH Fund, Professor Sung has recently donated more company stocks to raise leaders for the post-COVID-19 era.

Scan the QR code to read more stories.
Science and Technology for a Brighter Future

Battery That Stretches Like a Rubber Band
POSTECH researchers have developed a stretchable battery using the Janus-faced electrode, a single electrode that has both an anode and a cathode. Applying it to wearable devices, the researchers succeeded in producing a stretchable electronic device platform, presenting new possibilities in the global battery market which is currently growing at a rate of 25% annually.

Skin-Mounted Microphone Captures Voices in Extreme Environments
This technology is a flexible microphone that attaches to the neck to precisely recognize the user’s voice in noisy environments or when the user has to wear masks. This technology facilitates communication via voice detection for medical personnel required to wear protective masks during a pandemic like COVID-19 or firefighters wearing gas masks.

Photoacoustic Microscopy Captures Super-Resolution Images 500x Faster
By applying a high-performing galvanometer scanner to a photoacoustic microscope, researchers at POSTECH have developed fast and stable linear scanning with imaging speed 500 times faster than that of commercially available photoacoustic microscopes. Using this fast imaging speed, they have also developed a super-resolution imaging technique that uses red blood cells in the body instead of external contrast agents.

X-Ray In-Line Hologram Explores Live Insects
Using the X-ray In-line holographic microscope, researchers at POSTECH have successfully photographed the insides of a live mosquito, which can only be captured with a third-generation synchrotron radiation accelerator. This technology will be useful for studying the internal physiological mechanisms of microorganisms and insects.

Professor Jae-Yoon Sim, a Scientist Making Quantum Computers
Amidst fierce competition to enhance the performance and efficiency of computers, like microcomputers for sensor networks and quantum computers used in IoT technology, Professor Sim has developed Korea’s first wireless IoT platform on a single chip that runs on mere nanowatts of power, laying down the foundation for various IoT convergence research in areas like healthcare and smart cities. As the current director of Scalable Quantum Computer Technology Platform Center, Professor Sim is also working on Korea’s first fully functioning quantum computer.

Batteries Made from Coffee
Researchers at POSTECH have developed an environmentally friendly lithium organic battery using polyvinyl catechol (P4VC) polymer synthesized from caffeic acids as an anode. It operates at temperatures as high as 90 degrees and can be used in a vacuum like the outer space. It demonstrates consistent capacity even with repetitive charge cycles. This is the first successful case of an all-solid-state lithium organic battery that is long-lasting, eco-friendly, and fast charging.

Professor Jong-Seong Kug & Seung-Ki Min, the World’s Most Influential Climate Scientists
These leading climate scientists of Korea were selected as two of the most influential climate scientists by Reuters.

Harry Potter’s Invisible Cloak
This is the main research area of Professor Junsuk Rho, a world-renowned young researcher in the field of optics. The invisible cloak is made using the metamaterial, which is one of the top ten scientific achievements of the 21st century. It is based on the principle of making people or objects disappear by using the refractive index of light that does not occur naturally – which means, reaching the refractive index of 0 with artificially designed metamaterials. With the development of scalable manufacturing, it may just be possible to produce the invisible cloak of our imagination.

Photoacoustic Microscopy Captures Super-Resolution Images 500x Faster
#Future_for_All
I long for a future where everyone can enjoy the convenience of AI.

#Professor’s_Warm_Love
My professor opened my eyes to endless possibilities of chemistry research to lead me on a new path to conquering diseases.

#Lighthouse_for_Brighter_Tomorrow
The synchrotron radiation accelerator will brighten the future of humanity beyond Korea.

#Small_But_Huge_Universe
I am taking on the challenge to create a healthy and sustainable future through the micro-nano world.

#Communicating_through_Technology
I dream of a world where technology helps us to live better together.

#Navigator_of_Life
POSTECH helped me to discover the real me.

#Dream_Booster
POSTECH boosts my potential by 200%.

#Vaccine_Protecting_Our_Future
I dream of ushering in the future of R&I with POSTECH’s excellent faculty members and research infrastructure.

#Walking_Together
POSTECH’s great scientific achievements form a beautiful mosaic made by everyone working together.

#Small_But_Huge_Universe
I am taking on the challenge to create a healthy and sustainable future through the micro-nano world.

#Powerplant_for_Future
We will lead the energy revolution globally by developing high-efficiency and eco-friendly materials.

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