

*Seeking Truth,
Pursuing Innovation*



*Office of Global Engagement
866 Yuhangtang Road, Hangzhou, P.R.China 310058
globalzju@zju.edu.cn
www.zju.edu.cn/english
Image credits: ZJU staff and students*



ZHEJIANG UNIVERSITY



2024
OVERVIEW

LEADING THE WAY SINCE 1897



1897

Qishi Academy, the forerunner of Zhejiang University (ZJU), was founded to be a modern academy of higher education in China.



1928

The enlarged school was renamed National Chekiang University. It was praised as one of the four most prominent universities in the Republic of China.



1944

British sinologist Dr. Joseph Needham, FRS, hailed the University as "Cambridge of the East". He was impressed by the faculty's dedication to research even during the tribulations of war.



1936

Professor CHU Kochen became the president of National Chekiang University and would leave a profound imprint. Addressing new students in 1936, he posed two questions: "First, why do you come here? Second, who do you want to become after graduation?"



1998

The current ZJU was re-established through the merger of four independent universities, which had been split during the institutional restructuring period in the 1950's.

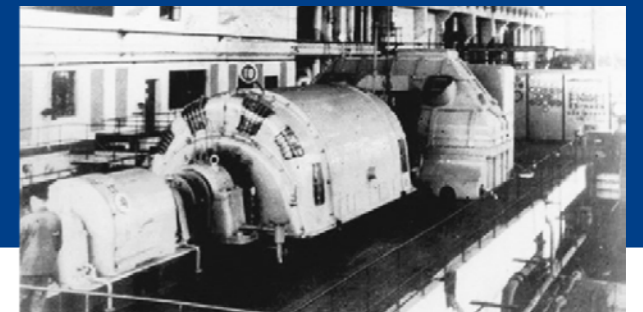
2017

ZJU celebrated its 120th anniversary. In the same year, ZJU broke into world's top 100 universities for the first time (QS 2018) and was also selected for the national "Double First-class Initiative".



1958

ZJU scientists designed China's first dual inner water-cooled turbo-generator.



7

CAMPUSES

40

SCHOOLS / COLLEGES

7

AFFILIATED HOSPITALS

29,000+

UNDERGRADUATE STUDENTS

38,000+

GRADUATE STUDENTS

4,600 +

FACULTY MEMBERS

#3

IN CHINA
ACADEMIC RANKING OF WORLD
UNIVERSITIES 2023

#44

IN THE WORLD
QS WORLD UNIVERSITY RANKINGS 2024

05

EDUCATING FOR TOMORROW

13

MEETING THE CHALLENGES

25

ENGAGING WITH THE WORLD

29

CREATING A SUSTAINABLE FUTURE

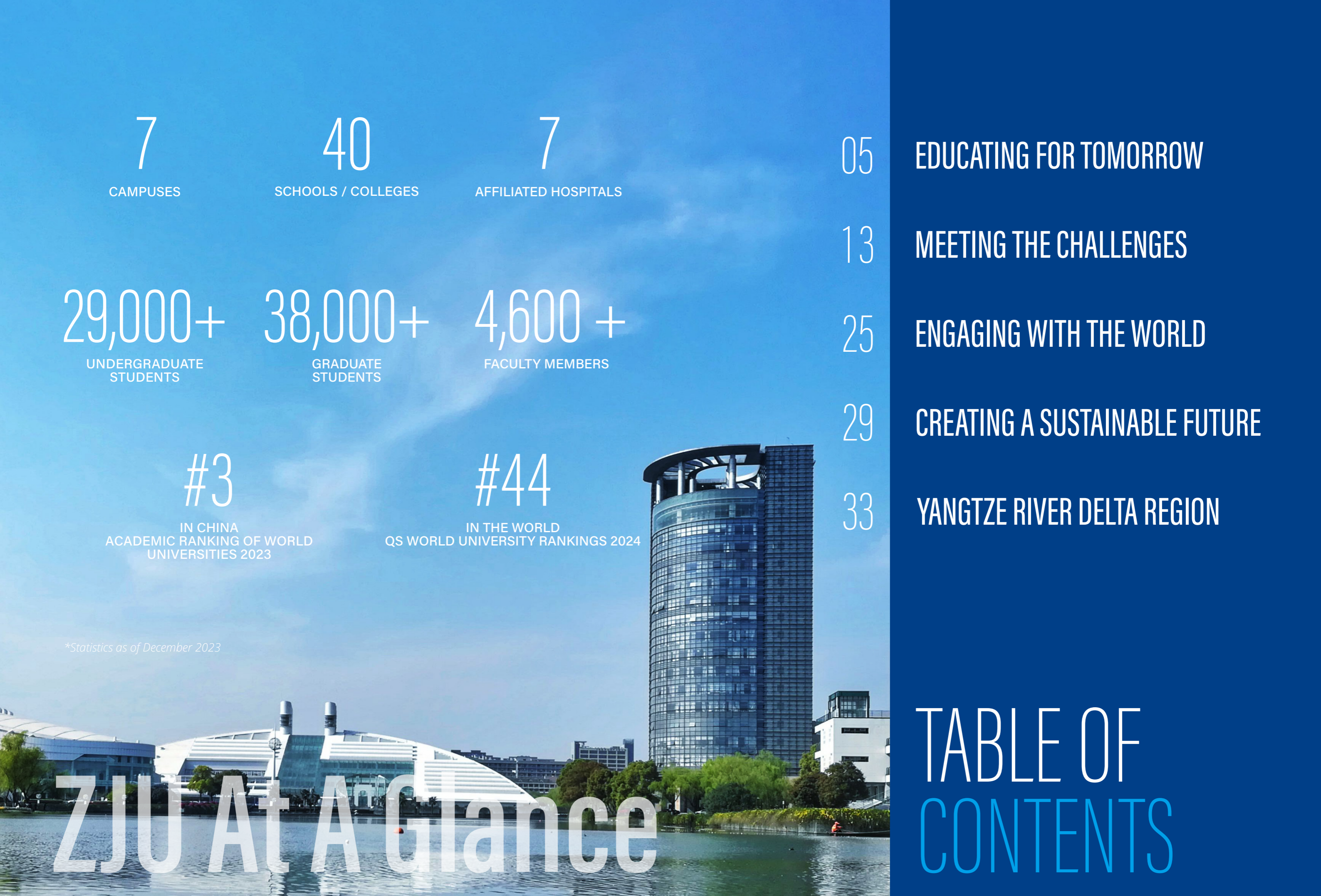
33

YANGTZE RIVER DELTA REGION

**Statistics as of December 2023*

ZJU At A Glance

TABLE OF CONTENTS



EDUCATING FOR TOMORROW

As one of the most prestigious research and learning institutions in the country, ZJU creates a dynamic educational experience that empowers students with an international perspective, global competence, and social responsibilities – attributes that are essential for enabling our graduates to make a meaningful impact on the world.

119

UNDERGRADUATE
PROGRAMS

600+

GLOBAL STUDY
PROGRAMS

~70

COLLABORATIVE
PROGRAMS

8.08M+

VOLUMES IN TOTAL
LIBRARY COLLECTION

225+

STUDENT
ASSOCIATIONS

#35

IN THE WORLD
QS GRADUATE EMPLOYABILITY
RANKINGS 2022

STUDY AT ZJU



The Green Origin Association, one of ZJU's 231 student associations, has made outstanding achievements in 2022, including collecting and recycling tons of waste with 1,000+ volunteers, organizing environmental events with 10,000+ participants and saving 150 birds, which earned them the 2022 UN PRME Student Recognition Award for excellence in SDG impact.

At ZJU, we adopt a boundary-crossing approach to deliver a student-centered education that prioritizes individual growth and development. Our aim is to inspire critical thinking and nurture global citizenship through the integration of "four learning spaces". These spaces include cross-disciplinary classroom experiences, on-campus activities, social practices, volunteer work, and outbound exchange programs. The University requires all undergraduates to take a three-credit cross-disciplinary module, and trains PhD students in multi-disciplinary centers of excellence such as "Engineering plus X" and "Agriculture plus X". Through cross-disciplinary courses and a diverse range of learning opportunities that extend beyond traditional classroom settings, we believe that our students will be well-equipped to make positive contributions to society and succeed in an increasingly interconnected world.

ZJU undergraduates from various backgrounds, including agriculture, life sciences and pharmacy, have won ten iGEM golds since 2010, applying cross-disciplinary expertise to solve real-world problems, such as using biomineralization to restore artifacts.



The SDG Global Summer School in 2022 offered three modules themed on Smart City, Inclusive Development and Carbon Neutrality, inspiring students to think critically and find solutions. Through Metaverse and ZJU's e-learning platform, it broke physical constraints to benefit up to 1,000 students from over 80 countries and regions.



Opening ceremony of the 2022 Summer School in the Yaotai Metaverse

ZJU undergraduate students developed the elder-care robot, called X-Spider, which can navigate obstacles, carry objects and is conversant in Mandarin and the local dialect.



Since 1999, 320 ZJU graduates have joined the ZJU volunteer teaching group to serve one year at the 20 designated schools in southwest China. One team has taught 4,000 high schoolers in Yunnan province and helped the school top the province by college enrollment rate.



ZJU students (in white T-shirt) volunteered teaching in Jingdong Yi autonomous county, in Yunnan province, 2,600km away from Hangzhou, where ZJU is located.

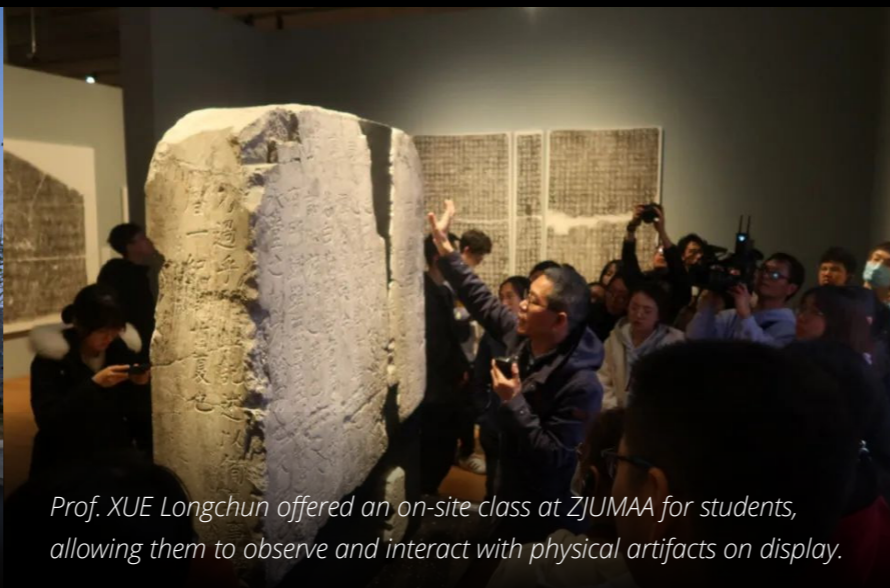


ZHEJIANG UNIVERSITY MUSEUM OF ART AND ARCHAEOLOGY (ZJUMAA)

ZJU interdisciplinary team created the world's first movable 3D grotto replica.



ZJUMAA



Prof. XUE Longchun offered an on-site class at ZJUMAA for students, allowing them to observe and interact with physical artifacts on display.

ZJUMAA was officially opened in September 2019. Its mission is to support and enhance education and research at ZJU.

Occupying an area of 8.23 acres with a floor area of 25,000 square meters, the complex is divided into two zones: the museum facilities and the academic institute. Its educational activities include exhibitions, publications, lectures, conferences, film screenings and live performances. Through collection, research, and exhibition of artwork and archaeological artifacts, the Museum seeks to elevate the aesthetic sensitivity and visual literacy of the ZJU community.

MEETING THE CHALLENGES

ZJU is proud of its leading experts in many fields, including engineering, chemistry, materials science, agricultural science, computer science, plant and animal science, clinical medicine, pharmacology and toxicology. Driven by the big picture, ZJU researchers push the boundaries of knowledge and create discoveries and innovations that change our world for the better.

#1
IN CHINA
3,887 authorized national patents

11
WORLD'S TOP 1% DISCIPLINES
ESI, Jan 2023

#3
IN CHINA
233 Highly Cited Chinese Researchers

11
INTERNATIONAL COLLABORATIVE CENTERS
MoE, MoST

#7
IN THE WORLD
Nature Index 2023 Tables

5,900+
INTERNATIONAL COLLABORATIVE PAPERS

*Statistics in 2023

\$ 1.12B
RESEARCH FUNDING

INNOVATION 2030

Capitalizing on its broad research portfolio, ZJU announced a university-wide framework in 2018, INNOVATION 2030, to catalyze greater collaboration among discipline clusters and find innovative solutions for big questions of tomorrow.

30+
DISCIPLINES

The knowledge, theories, methods, data and scientific communities of 30+ disciplines are coordinated into the projects to open up new vistas on research.

1

BRAIN RESEARCH AND ARTIFICIAL INTELLIGENCE

- Brain and cognition research
- Development of next generation AI
- Human-machine interface design

QUANTUM INFORMATION SCIENCE

- Quantum control and manipulation
- Quantum sensing
- Quantum imaging

2

3

AGRICULTURAL BREEDING BY DESIGN

- Genomic information
- Development of gene editing technology
- Big data-driven targeted breeding
- Innovation in crop resistance to biotic and abiotic stress

CONSERVATION OF ECOLOGY AND ENVIRONMENT

- Alleviation of environmental impacts
- Restoration of natural ecosystems
- Development of renewable and clean energy
- Environmental big data analytics
- Institutional innovation and cultural communication

4

SMART OCEAN

- Ocean informatization
- Ocean environment sensing
- Intelligent ocean equipment

5

PRECISION MEDICINE

- Multi-omics based molecular diagnosis and genotype of diseases
- Innovation and translation of precision diagnosis and treatment
- Precision diagnosis and prevention technologies

6

7

HYPERGRAVITY FIELD

- Hypergravity effects on multiphase media
- Hypergravity multiphase evolution of rock and soil masses
- Geo-environmental mechanics
- Hypergravity experiments with geological processes
- Experimental earth sciences
- Hypergravity materials science and engineering

8

NEW MATTER DISCOVERY AND FABRICATION

- Synergistic innovations of research paradigms
- Advancing the synthesis, characterization and application of new matter
- Development of intelligent manufacturing, synthetic biology, and intelligent medicines

9

ASIAN CIVILIZATIONS

- Blending and clashing of civilizations
- Inheritance and innovation of cultures
- Contacts and variations of languages
- Circulation and recreation of classical literature
- Preservation and protection of cultural relics
- Interpretations and dialogue of arts and literature

10

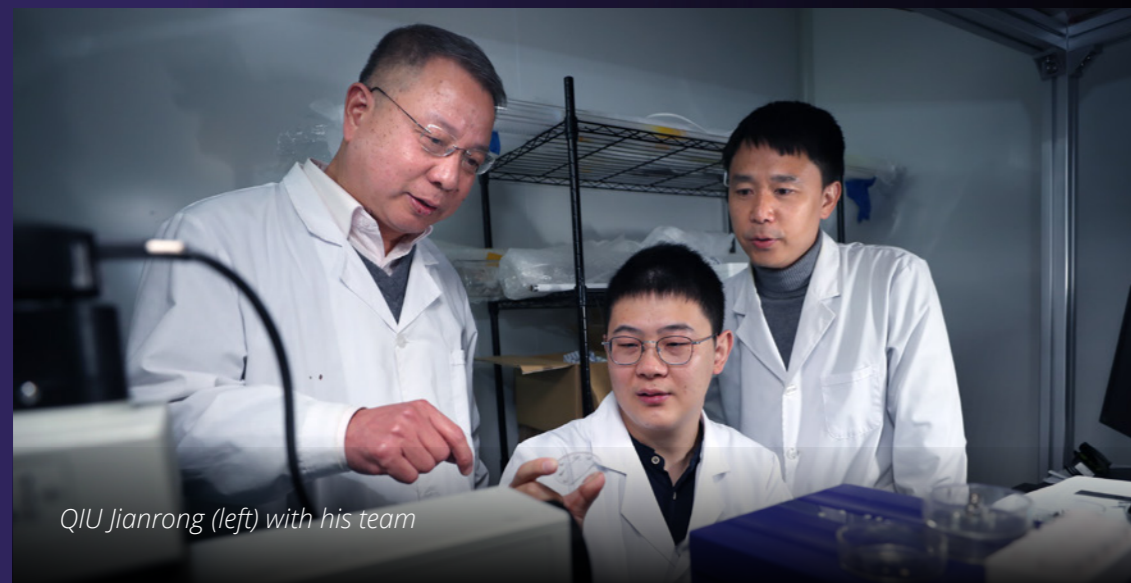
DIGITAL SOCIAL SCIENCE

- Digital economy
- Digital innovation
- Digital governance
- Digital rule of law
- Digital media

Groundbreaking Research in Femtosecond Laser-Matter Interaction

The research team led by Prof. QIU Jianrong from the College of Optical Science and Engineering discovered a new mechanism for the femtosecond laser-induced formation of micro/nano structures in complex systems. Their findings were published in the journal *Science* in January, 2022. (<https://www.science.org/doi/10.1126/science.abj2691>)

This major achievement was crowned as one of China's top 10 scientific advances of 2022.



QIU Jianrong (left) with his team

A femtosecond laser is a laser which emits optical pulses in 1-1000 femtoseconds ($1 \text{ fs} = 10^{-15} \text{ s}$). The stable, precise and sharp femtosecond laser thus has extensive applications in various fields, such as myopia surgery. However, to understand the remarkably intricate mechanism for the interactions between femtosecond lasers and matter, researchers should put in strenuous efforts.



Direct lithography of PNC patterns and devices

Prof. QIU Jianrong and his colleagues discovered a new mechanism for the femtosecond laser-induced formation of micro/nano structures in complex systems. Take, for example, the oxide glass system containing chloride, bromide and iodide ions. The researchers conducted ultra-fast three-dimensional lithography on composition-tunable perovskite nanocrystals which could display a full spectrum of colors, including red, orange, yellow, green and blue, inside glass. The nanocrystals exhibited remarkable stability even when subjected to UV irradiation, soaked in organic solutions, or exposed to a high temperature of 250°C . Moreover, this three-dimensional micro/nano structure could be displayed in a dynamic, stereoscopic, polychromatic and holographic manner at the 1080p level. This study reveals the laws of femtosecond laser-induced spatially selective mesoscopic-scale phase separation and ion exchange and opens up new vistas for femtosecond laser-induced three-dimensional manufacturing.

Prof. QIU Jianrong's team has long engaged in research into femtosecond laser-matter interaction and has made a string of breakthroughs. For example, they have discovered new phenomena and mechanisms, such as variations in femtosecond laser-induced refractions, and polarization-dependent nano-grating. They have also pioneered in new technologies, including the spatially selective manipulation of ion valence states, and the direct writing of three-dimensional optical waveguides. Some of their findings have been applied in integrated optical circuits and optical communications.

INNOVATION FOR IMPACT

Our research has real-world impacts beyond academia. Since its inception, ZJU has never stopped transforming new ideas and discoveries into new innovations for society.



Lab discussion led by ZHENG Jinyang (second from left)

Over the past 20 years, Prof. ZHENG Jinyang, the CAE fellow at the College of Energy Engineering, and his team have been committed to addressing the problems of the safe and efficient hydrogen storage. The tank developed by his team is the largest in volume among those under the same pressure in the world, contributing to "clean and green" Winter Olympics.



YE Ming'er in the orchard

YE Ming'er, associate professor of horticulture, was named "Food Hero" by FAO for his efforts in promoting fruit tree technology for over 30 years. His innovative approach has boosted growth and yield of several fruits, increasing farmers' income as well as protecting natural resources.

The research led by Prof. GU Baojing from the College of Environmental and Resource Sciences and Prof. ZHOU Xinyue from the School of Management quantifies the impact of ageing on agricultural sustainability in China and offers solutions to address the issue. The research results were published in *Nature*.



The ZJU multidisciplinary team has dedicated 17 years to completing the digital publication of *A Comprehensive Collection of Ancient Chinese Paintings*, by far the most comprehensive archive of ancient Chinese paintings, which is a collection of 12,405 ancient Chinese paintings from 263 cultural institutions and museums around the globe.



ENGAGING WITH THE WORLD

GLOBAL STRATEGY

International engagement has long been central to ZJU's strategy, which aims to create a genuinely global institution that remains rooted in China's educational ecosystem. In 2018, ZJU published "Global ZJU: CREATE to impact", a global strategy underpinned by the six pillars of culture, research, education, administration, talent and engagement. In 2022, ZJU released its refreshed global strategy, seeking to maximize the university's impact on the world stage.



Advance a broad range of meaningful, multi-layered global partnerships and networks, lead and shape the agenda on global issues.

4

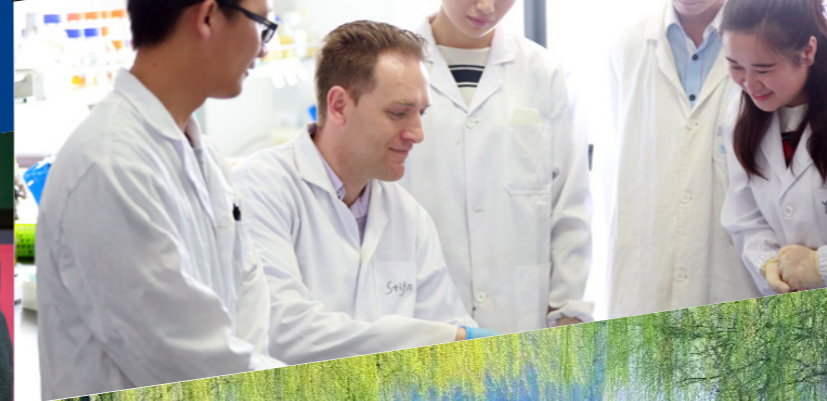


Recruit and retain the most talented faculty from around the world, and enable them to thrive in their careers and realize their full potential.



Deliver gold-standard education to nurture globally competent and competitive students, and become a more influential hub for international education.

1



Deepen international research collaborations to address pressing global challenges, and initiate in-depth dialogue among cultures and civilizations.

2



Foster the ecosystems where a global dimension will be truly embedded in all we do, and our international-at-home experiences will be tremendously enriched.

5

A GLOBAL ZJU

ZJU is one of China's most international universities. Working closely with our partners in six continents, we are committed to promoting student and faculty mobility, developing substantial research cooperation and leading innovative changes.



200+

PARTNER
UNIVERSITIES IN 6
CONTINENTS

4,700+

INTERNATIONAL
STUDENTS

150+

COUNTRIES REPRESENTED
BY INTERNATIONAL
STUDENTS

HAINING INTERNATIONAL CAMPUS

Located in Haining city, 80 km away from the main campus, ZJU's International Campus welcomed its first batch of students in September 2016. The campus follows a unique "1+X" model, in which ZJU partners with multiple world-renowned universities to establish innovative models of transnational education and integrates the best education practices of both the East and the West.



2

JOINT
INSTITUTES
ZJU-LIOE INSTITUTE (ZLIE)
ZJU-UIUC INSTITUTE (ZJUI)

1

BUSINESS
SCHOOL
ZHEJIANG UNIVERSITY
INTERNATIONAL BUSINESS
SCHOOL (ZIBS)

7

UNDERGRADUATE
PROGRAMS

19

MASTER'S
DEGREE
PROGRAMS

34

PHD
PROGRAMS

CREATING A SUSTAINABLE FUTURE

As a socially responsible and globally-minded higher education institution, ZJU aspires to make a distinctive and positive impact by strengthening its commitment to the Sustainable Development Goals (SDGs).

In March 2021, ZJU launched its Sustainability Action Plan: A Global ZJU for Social Good (Z4G), aiming to improve our sustainability-related education, research, and practices within the ZJU community and among other stakeholders in China and beyond. As one aspect of this initiative, we hosted an online forum and, together with 61 universities from 31 countries and regions, issued the Joint Statement of Global University Leaders on the 2030 Agenda for Sustainable Development, pledging to work together to realize the SDGs.

10,000+

ARTICLES IN NET ZERO
RESEARCH (2011-2020)

(Elsevier's report *Pathways to Net Zero: The Impact of Clean Energy Research*)

1,000+

COURSES ON
SUSTAINABILITY

5

JOINT SEED FUNDING
FOR SDGS WITH
GLOBAL PARTNERS



CHEN Zaiming (second from right), a ZJU expert in wild mushrooms, taught local people in Jingdong how to exploit wild mushroom resources.



Prof. HU Hailan from the School of Medicine has pioneered major discoveries in neuroscience, informing the development of next generation drugs for depression. Her recent study unraveled neural mechanism underlying depressive-like state associated with social status loss, providing insights into interventive therapy for depression. She was honored with the 2022 L'Oréal-UNESCO for Women in Science International Award in recognition of her groundbreaking work on depression.



ZJU is committed to assisting residents in Jingdong Yi autonomous county, an underdeveloped area in China's Yunnan province, through a range of initiatives, such as applying new technologies to local industries, expanding agricultural product sales channels, and providing volunteer teaching, training, and medical assistance. This ongoing effort was recognized as one of the world's top poverty reduction practices at the 2022 International Seminar on Global Poverty Reduction Partnerships, jointly organized by IPRCC, IFAD, FAO, WFP, and CIIC.

**MAKE A REAL
DIFFERENCE**

YANGTZE RIVER DELTA REGION

A Jewel in the Crown of China's Economic Transformation

With robust market vitality and strong regional interconnection, the Yangtze River Delta region offers the world a glimpse of the resilience and potential of the Chinese economy. Covering the three provinces of Anhui, Jiangsu and Zhejiang as well as the city of Shanghai, the Yangtze River Delta region is one of the regions with the fastest economic growth, the highest level of openness, and the strongest innovation capabilities in China.

With a population of 236 million people, the region accounts for about a quarter of China's total economic output, one third of China's annual research and development (R&D) expenditure and one third of the number of invention patents in force in China. It boasts about a quarter of China's "Double First-class" Universities.

In order to promote the integrated development of higher education in the Yangtze River Delta region, in May 2019, ZJU proposed and co-initiated the Alliance of Research Universities in Yangtze River Delta with Fudan University, Nanjing University, Shanghai Jiao Tong University and University of Science and Technology of China.



ZHEJIANG UNIVERSITY