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NEWSLETTER



清华大学
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FOCUS

Xi stresses building world-class universities to serve nation in visit to Tsinghua



BEIJING, April 19 (Xinhua) -- Chinese President Xi Jinping on Monday stressed adhering to the direction of building world-class universities with Chinese characteristics to serve national rejuvenation as he visited Tsinghua University ahead of its 110th anniversary.

Xi, also general secretary of the Communist Party of China (CPC) Central Committee and chairman of the Central Military Commission, extended congratulations to Tsinghua's faculty, students and alumni at home and abroad on behalf of the CPC Central Committee. He also sent greetings to young students across China.

Xi said as the new journey to fully build a modern socialist China has begun, the cause of the Party and the country is in unprecedented need of higher education, scientific knowledge and outstanding talents.

China's higher education should make contributions to the prosperity of the country, the rejuvenation of the Chinese nation and the well-being of the people, Xi said.

He encouraged young people in China to rise up to the mission of national rejuvenation.

Xi, accompanied by Wang Huning, a member of the Standing Committee of the Political Bureau of the CPC Central Committee and a member of the Secretariat of the CPC Central Committee, visited a special exhibition celebrating the university's anniversary at the Academy of Arts and Design.

Xi called for applying more artistic elements to urban and rural planning and building, and making art achievements better serve the people's need for a high-quality life.

He also encouraged more international cultural exchanges.

While visiting a laboratory on imaging and intelligence, Xi urged steady growth of spending in basic research, and motivated researchers to carry out free exploration, dare to challenge existing theories, and be bold in opening up new directions in scientific research.

"Chinese education is capable of nurturing maestros. We should have faith in that," said Xi.

Xi underlined the importance of strengthening basic research and independent innovation. New ideas and theories should be drawn from China's reform and development, he added.

Xi also met and talked with the faculty representatives, calling on the university to foster virtue through education and take the serving of the country as its highest value.

He asked the university to make greater contributions to realizing the Chinese Dream of national rejuvenation and advancing the progress of human civilization.

While visiting a gymnasium, Xi talked with some basketball players practicing there, noting that Tsinghua has a fine sports tradition. He called on the students to carry on the university's traditions regarding both academic study and sports to achieve comprehensive development.



Xi then attended a symposium with representatives of faculty members and students.

Xi said over the past 110 years, Tsinghua has taken root in China, establishing fine traditions of patriotism, dedication and the pursuit of excellence, and nurturing generations of outstanding talents.

Applauding China's achievements in developing higher education since the 18th CPC National Congress in 2012, Xi said a country's higher education system requires the strong support of world-class universities. He urged efforts to uphold Party leadership and the guiding role of Marxism at such universities.

The key to building world-class universities lies in the unceasing efforts to nurture higher-quality talents, he said.

Demanding efforts to upgrade their current disciplinary system, Xi called on universities to target the frontiers and key areas of science and technology.

World-class universities should also have the courage to tackle problems in core technological research that hinder the country's development, he added.

Xi also called for building platforms for international exchanges and cooperation in education and culture as a joint response to global challenges, and called on young people to love the country and people, refine their morality, dare to innovate, and work hard.

Speaking of the role of teachers, Xi urged the faculty to set a fine example for students.

With a view to achieving cutting-edge academic results globally and serving significant national demands, they should commit themselves to solving practical problems, be good at acquiring new knowledge, and be firm in ideals and convictions, said Xi.

On his departure, Xi received warm farewells from the faculty and students.

Tsinghua University 110th Anniversary Ceremony held

Tsinghua University held its 110th anniversary ceremony at New Tsinghua Xuetang, on April 25. The theme of the anniversary celebration was "Strive for Excellence; Innovate for the Future."

Chen Xu, Chairperson of the Tsinghua University Council, presided over the ceremony.

Chinese President Xi Jinping visited Tsinghua University and delivered an important speech on April 19, ahead of the university's 110th anniversary. Xi highly affirmed its achievements over the past 110 years, and expressed his expectations for the development of China's higher education and the building of world-class universities, and his hopes for teachers and students.

The attendees watched a video of President Xi Jinping's visit to Tsinghua University.

Xi's visit and his important speech set the direction for the future development of Tsinghua and provided fundamental principles to adhere to and follow. All teachers and students of Tsinghua felt extremely excited and encouraged, Chen said.

Chen noted that Tsinghua University should follow Xi's request, adhere to the construction of a world-class university with Chinese characteristics, be patriotic and dedicated, pursue excellence, and serve the country's prosperity, national rejuvenation and the people's happiness.

Qiu Yong, the President of Tsinghua University, delivered a speech at the ceremony. Qiu recalled that Tsinghua was born in a time fraught with deep civil unrest and international aggression. Initially named Tsing Hua Imperial College at its founding 110 years ago, the school was devoted to the "cultivation of all-round talents and enhancing of national strength". In the same year, the progressive movement Xinhai Revolution (also known as the 1911 Revolution) broke out, sending China on the path of progress and promoting Tsinghua to embark on the struggle of saving the country and empowering the country with high sense of historical mission.

In his speech, Qiu mentioned that time will honor Tsinghua University's legacy. Over the past 110 years, Tsinghua



people, who strive for self-improvement, have always put the interests of the country and people first. Of the 23 "Two Bombs, One Satellite Meritorious Award" laureates, 14 are Tsinghua alumni. "It's our greatest pride and honor to build our country with our own hands, making solid contributions across the country for the rejuvenation of the motherland. At this very moment, let's give our warm applause for all Tsinghua people who have devoted themselves to the motherland and the nation," he said.

President Xi Jinping emphasized during his visit to Tsinghua that we must adhere to the goal of becoming a world-class university with Chinese characteristics and contribute to the prosperity of the country, the rejuvenation of the Chinese nation and the well-being of the people. In this crucial stage full of strategic opportunities for China, which is also a key period for improving the quality of the education system, Tsinghua should seize opportunities to accelerate its development and achieve more accomplishments. "Strive for Excellence; Innovate for the Future." With every opportunity being seized, Tsinghua will ride the upward trend to fulfill a university's grand responsibilities to serve the country and the global community. New breakthroughs will be achieved to reach an ever-expanding landscape.

The character of Tsinghua after 110 years has become more composed and confident given new achievements in reform and development. With such a posture, Tsinghua will concentrate energy with confidence and at its own pace, and a composed attitude on valuable and meaningful task for the benefit of the long-run, Qiu said,

adding that self-development is the grounding for the Tsinghua people's spirit and innovation is their unwavering aspiration. To build up strength on its own, we must seek innovation, and self-development could be achieved only through innovation. At a new starting point, Tsinghua will fully raise its capability of running the university with more ambitions and boldness. Stepping into the future with confidence and calmness, Tsinghua will not fail its mission by chasing self-development and innovation.

Zheng Fuzhi, Vice Minister and a member of Leading Party Members' Group of Ministry of Education, extended his congratulations on the 110th anniversary of Tsinghua University, and spoke highly of its brilliant performance in the past 110 years. He also urged everyone to implement the important instructions of President Xi Jinping given in his visit to Tsinghua on April 19.

Zheng noted that this year marks the 100th anniversary of the founding of the Communist Party of China and the country has embarked on a new development stage, and hoped that Tsinghua will make unremitting efforts to continue as a world-class university to serve the nation and contribute more to realizing the Chinese Dream of national rejuvenation and advancing the progress of human civilization.

By upholding the Party leadership and the guiding role of Marxism, Zheng underlined the importance of fostering character and civic virtue in higher education, and called for more efforts to equip China's youth with patriotism and global vision so as to be qualified to shoulder the mission of national rejuvenation.



He also required Tsinghua to put weight on basic research and independent innovation, and to promote innovation in the university management system and explore a new model of Sino-Foreign educational cooperation and exchange as a vital force in building China into a great power.

On behalf of the Municipal Government of Beijing, Xia Linmao, a member of the Standing Committee of the CPC Beijing Municipal Committee and Secretary of the Education Work Committee of the CPC Beijing Municipal Committee, extended his congratulations and tribute to Tsinghua University.

He noted that Tsinghua serves as a flagship of Chinese higher education. As a university in Beijing, Tsinghua University has always provided excellent service to the city's development. It has integrated itself into the construction of "four centers", and has also evolved with the country, establishing fine traditions of patriotism, dedication and the pursuit of excellence and nurturing generations of outstanding talents.

Xia also expressed his hope that Tsinghua will continue to be a model in socialist education development with Chinese characteristics, as well as a front-runner in producing top-quality talents, so that it continues to inject scientific and technological impetus into China's economic and social development, and serve the country's development pattern of opening wider to the world.

On behalf of Chinese universities, Hao Ping, President of Peking University, extended his congratulations on Tsinghua's 110th anniversary, spoke highly of Tsinghua's achievements as one of the top universities in China, and praised Tsinghua for becoming the flagship of China's education.

As the two universities have shared close exchanges and ties throughout their long histories, Hao recalled the tremendous days of collaboration with Tsinghua during the War of Resistance against Japanese aggression, and expressed his hopes of establishing more cooperation with Tsinghua, cultivating a new generation's talents, setting

moral standards, and promoting higher education and the growth of science and technology. His vision is to work together to build a more prosperous China through socialist modernization.

Stephen J Toope, Vice-Chancellor of the University of Cambridge, affirmed Tsinghua's contributions to China's development in all aspects through education and East-West exchange, and expressed his hope that Tsinghua will continue to educate citizens – engaged citizens, curious citizens, even critical citizens.

Stressing the importance of universities and their cooperation, Toope said that "Universities have a key role in the creation, curation and communication of knowledge," adding that they should harness the power of ideas to benefit different societies and serve as a space for people to engage in challenging conversations about the type of societies in which they wish to live. He also urged that universities like Tsinghua and Cambridge must think hard - and think together - about how they adapt to change.

Li Ting, a 1980 undergraduate from Tsinghua's Department of Civil Engineering, delivered a speech as an alumni representative. He reviewed his career progress from a common technician to the chief engineer at Central-South Architectural Design Institute Co., Ltd (CSADI) and expressed his gratitude to the Tsinghua spirit for being the guiding force of his life and giving him a strong will and full confidence.

Li made a special mention of his experience in leading his company to fight COVID-19 in Wuhan. Li's company received the order to build an 80,000 square meter Leishenshan Hospital within 12 days. A total of 38 anti-epidemic construction projects were completed within one month, and over 30,000 hospital beds were produced, making the impossible mission possible. Li said that what he did was to practice the spirit of Tsinghua, fulfill his duty, and realize the great mission of national rejuvenation.

Zhou Shuyun, recipient of the "May 4th Youth Medal", and Professor in the Department of Physics of Tsinghua, made a speech on behalf of the faculty.

Working in Tsinghua for nine years, Zhou's career has long been integrated with the development of the university. A teacher should be a role model for students in studying and working, and help them to acquire all-round development, she said.

Noting that the mission of the university is to expand the frontiers of scientific development and knowledge, the development of new materials and new physics is an important cornerstone of information technology and social development. Zhou hoped the experience that students have in overcoming the challenges in their scientific research and the joy they receive will illuminate their way forward.

Liu Zhizhen, a senior student of Tsinghua, majored in electrical Engineering. He shared his impressions of learning at Tsinghua, saying that its outstanding education system helped him grow into a talent with academic capabilities and a strong physique.

At Tsinghua, Liu pitched himself into targeted poverty alleviation in rural areas, and joined the mass pageantry during the celebrations marking the 70th anniversary of

the founding of the People's Republic of China. He said that he would continue to adhere to the university motto and make more contribution to the country's development.

Guests attending the ceremony included representatives of relevant departments of central and state offices, provinces, autonomous regions and municipalities, and brother colleges and units, as well as entrepreneurs, middle school principals, people from all walks of life, representatives of international organizations, alumni and senior leaders at Tsinghua university, recipients of outstanding contribution awards, academicians, distinguished professors of arts, humanities and social sciences, and representatives of teachers and students.

Alumni, teachers and students and friends from around the world watched the conference online through the network platform.



Tsinghua University holds 110th Anniversary Gala

Tsinghua University held a grand gala to celebrate its 110th anniversary on the night of April 25 at Zijing Sports Field.

The gala was composed of 15 segments in four parts, "Origin: Source of the Spirit," "Campus: Path of Youth," "Destiny: Ties of Kinship" and "Union: A Dream of Time and Space."

It began with a colorful light show that included an approaching animated bus, signifying the arrival of alumni guests at the venue.

Accompanied by Guan Xia's masterpiece First Symphony Overture played by Tsinghua's symphony orchestra, more than a dozen senior alumni and teachers walked onto the stage. They received a warm ovation from the audience and flowers from student representatives as a tribute to their immeasurable contributions.

Among them were outstanding alumni representatives, academicians of the Chinese Academy of Sciences and the Chinese Academy of Engineering, and senior liberal arts professors.

After the opening performance, precious historical images of Tsinghua were presented to the audience.

Later, a drama titled Conversations Across Time and Space in 2021 told the stories of four alumni - Liang Qichao, Wen Yiduo, Deng Jiaxian and Nan Rendong, each representative of Tsinghua at different stages of its history.

The famous pop singer Li Jian, who is also a Tsinghua graduate, contributed a song he composed for his alma mater's 110th anniversary at the event. The lyrics of the song were written by another alumnus, Xu Rongkai, who is the former governor of Yunnan province.

One of the gala's most touching moments came when young Tsinghua students joined hands with middle-aged and senior alumni to present the audience with a performance titled We Are Young, which consisted of three songs.

The first song was written and sung by current students, while the second song was the latest work of Shuimu Nianhua, a famous Chinese band whose members are

all Tsinghua graduates. It was the first time the band performed as a trio.

The third song was a combination of songs sung by senior members of Tsinghua University's Shanghai Alumni Association Art Troup; video clips of the group's past performances have gone viral on the internet. The average age of its members is 76 and the oldest member is 91 years old. Members of the group all devoted their youth to the construction of their motherland.

In another segment titled I Report my Work to my Alma Mater, 13 alumni representatives from different age groups shared their own stories with the audience. Among them were the famous translator Xu Yuanhong, who just celebrated his 100th birthday, Chen Houqun, academician of the Chinese Academy of Engineering, Zhang Tao, the Deputy Managing Director of the International Monetary Fund, Chen Wei, recipient of the national honorary title "People's Hero", Yang Yang, the first Chinese athlete to win a gold medal at the Winter Olympics, and Tan Xuefeng, who was honored as a national-level outstanding individual in China's poverty-eradication campaign.

After the performances, the Tsinghua alumni in the audience who graduated from 10 to 60 years ago also made their reports in groups.

The gala ended with a performance of the song My People, My Country by pupils from the elementary school affiliated to Tsinghua University. The young singers were later joined by the audience in waving Chinese national flags and Tsinghua flags.

There were also 130 actor volunteers who interacted with the audience during some performances.

The gala night was broadcast live on multiple social media platforms.



Global universities seek more openness, integration, and resilience to address global issues at GFUP 2021



Tsinghua University hosted the Global Forum of University Presidents (GFUP 2021) on April 24, the eve of its 110th anniversary, bringing together university leaders from all around the world to discuss the future development of higher education and the evolving mission of universities during periods of rapid change.

The theme of the Forum was “Innovate for the Future: Vision and New Mission of Universities.”

Tsinghua University President Qiu Yong, delivering his remarks at the GFUP 2021, thanked all the university leaders for joining the Forum at Tsinghua and online around the world, and said the Forum brought university leaders together in the spirit of celebration, collaboration and as leaders of a shared future.

He said that the Forum was held as Tsinghua celebrated its 110th anniversary as the occasion offered a good time to explore the past, present and future of the University’s development, and to celebrate its collaborative achievements with its cherished global partners.

He underscored that the Forum had addressed the complexity of higher education, sparked a collaborative spirit in pursuit of greater synergy among universities, and enhanced the capacity of universities to define and redefine their collective vision and mission.

“In the last sixteen months, higher education has been tested by a once-in-a-century pandemic. But Covid-19 has only added to a long list of severely disruptive global challenges, like climate change, social inequality, and the threat to international collaboration and exchange,” he said. “Through this test, we now understand the effort needed to overcome threats of this magnitude and we have proven that even closer collaboration will be needed to overcome future challenges.”

The President said Tsinghua, like universities around the world, lives out the spirit of cooperation and service, and bravely takes on responsibility, as he gave an overview of Tsinghua’s 110 years of history and its collaborative initiatives with international organizations and other global partners in the fields of public health, climate change and online education.

Reflecting on the vision and new mission of universities, President Qiu pointed out three mandates for universities: to remain steadfast in cultivating their values and identity, to remain connected with each other, and to remain focused on the future by embracing innovation.

President Qiu expressed his belief that more open, integrative and resilient universities would promote inclusive environments to address the challenges of this new era, break through physical boundaries, disciplinary barriers, and technological limitations to make greater contributions to society, and demonstrate their resilience by continuing to thrive as one of the oldest institutions in existence.

“I am convinced that universities will play an irreplaceable role in tackling global challenges, and will make humanity better prepared for future crises, by creating knowledge, striving for innovation, and cultivating leaders and change makers,” he added.

President Qiu said it was inspiring to see that the Forum’s outcomes had been articulated in the GFUP Tsinghua Consensus.

He expressed hope that the Consensus would serve as a new starting point, guiding the vision and mission of universities to carry forward the excellence and innovation that they have represented for a millennium.

He concluded that the contributions made by all participants and supporters of this Forum had led to a great anticipation of the lasting impact which this Forum would leave for future generations.

Siddharth Chatterjee, United Nations Resident Coordinator in China, who also attended the Forum’s plenary session on-site, announced a congratulatory letter from United Nations Secretary-General António Guterres to the GFUP 2021.

In his message, Guterres stated, “The United Nations looks forward to continued partnership with universities and educators worldwide as we work together to make multilateralism fit for the 21st century, and to build a more equitable, resilient and sustainable future for all.”

“After a year of enormous suffering, today there is palpable hope thanks to the rollout of vaccines. Our focus must be on ensuring that everyone, everywhere, can be vaccinated as soon as possible,” Guterres said. “Recovery is our chance to get on track with determined efforts to build inclusive economies, achieve gender equality and safeguard the natural environment.”

The UN Secretary-General also mentioned that universities have a central role to play in addressing longstanding global challenges, by nurturing new generations of young leaders and global citizens, by promoting digital cooperation, and by helping to ensure access to quality education.

Tsinghua University Vice President and Provost Yang Bin moderated the opening of the GFUP 2021’s plenary session and read the GFUP Tsinghua Consensus.

In the Consensus, they maintain that the world is facing new challenges, which include: public health crises, equity and access, sustainability and climate change; and new uncertainties from the innovation of educational models through technological advancements.

To meet these challenges, universities must undertake greater social responsibility by becoming more open, more integrative, and more resilient, according to the Consensus.

“We hereby pledge our shared commitment to accelerate the development of higher education by fostering greater openness, integration, and resilience in our institutions,” it concludes.

Afterward, the plenary session of the Forum saw two thematic discussions on the topics of “More Open Universities” and “More Integrative and Resilient Universities” respectively. Each thematic discussion featured speeches from university leaders around the world, followed by an insightful roundtable discussion.

During the first thematic discussion, Robert J. Zimmer, President of the University of Chicago, said that the increasing scale and complexity of societies’ problems required universities and their partners to take a more open and integrative approach, utilizing knowledge

and expertise from across the disciplines and building partnerships that bring together the power of public and private universities, government and industry in a way that amplifies the collective strengths of each partner.

Teruo Fujii, President of the University of Tokyo, said he saw the forced transition to carrying out a lot of activities online following the spread of Covid-19 as a new opportunity. "I hope that we will be able to improve the quality of the 'time' used by the members of the university by realizing a 'digital campus', and by promoting digital transformation in a variety of fields, including research, teaching and office work," he added.

Francesco Ubertini, Rector of the University of Bologna, put forward the view that more open universities are a global need.

"Alongside openness, engagement is key – engagement with society towards a sustainable future. Being engaged in socially relevant projects and processes is the only way for universities to bring real change and to lead the way for a better future that will impact on everyone's life," he added.

Wei Shyy, President of the Hong Kong University of Science and Technology, said that universities need to have a very strong commitment in terms of mission and courage to pursue even within academic institutions so they could join hands in helping solve and respond to world problems, and this should be cross-disciplinary both in nature and by definition. He also shared his university's efforts to transform its campus as a sustainable smart campus and as a living lab.

Nikolay Kropachev, Rector of St Petersburg University, said that comprehensive universities played a special role in the educational system of any country to advance national innovative and technological potential, making the best national universities competitive in the global research and academic space. Talking about the cooperation between St Petersburg University and Tsinghua, he said, "I'm proud to mention that St Petersburg University online courses are our contribution to the activity of the Global MOOC Alliance. We have become members and co-founders of the Alliance following the invitation of Tsinghua University. Our courses were the first among the courses by Russian universities represented on the Chinese platform XuetangX."

After their speeches, Wu Zhaohui, President of Zhejiang University, Yang Zhenbin, Chairman of the University Council at Shanghai Jiao Tong University, Zhou Yu, President of the Harbin Institute of Technology, Wang Guangqian, President of Qinghai University, and Song Yonghua, Rector of the University of Macau, took part in the roundtable discussion of the first thematic discussion. Wang Hui, Director of the Tsinghua Institute for Advanced Study in Humanities and Social Sciences, was the moderator.

During the second thematic discussion, Brian P. Schmidt, Vice-Chancellor and President of the Australian National University (ANU), remarked that universities have an important role in responding to a crisis – to help shape and build resilience in society. He also said that there must be no delay in addressing climate change and the establishment of the Global Alliance of Universities on Climate in 2019 was an important partnership for universities to lead the world towards a greener future by collaborating and working together.

Tan Eng Chye, President of the National University of Singapore, said that as the world recovers and rebuilds itself following the pandemic, there was growing public support that issues such as sustainable development, equality of opportunity, and the well-being of individuals and the community should take priority. "To meet these challenges, universities will have to transform and innovate successfully. By doing so, we will increase our resilience and dynamism, and increase our contributions to society," he added.

Stephen Kiama Gitahi, Vice-Chancellor of the University of Nairobi, said that building resilience in universities required global partnership, and collective global responsibilities where various universities brought in their unique strengths and engaged together in developing sustainable solutions to addressing global challenges. He added that higher education institutions should harness the opportunities of the technological age, and pass the benefits to all through enhancing access, equity and collaboration.

Thomas F. Hofmann, President of the Technical University of Munich, said he was confident that universities would become more integrative, inclusive spaces of encounter

between people, their ideas and the society of the future as they further engaged in global knowledge creation and nurtured a more diverse community. "Let us join forces along these lines so that we can best contribute to technological, economic and societal progress," he added.

Ignacio Sánchez, Rector of the Pontificia Universidad Católica de Chile, addressed the issue of "more integrative universities" by highlighting evidence of the Chilean university system's integrative and collaborative qualities during the pandemic. The only way to this challenge was acting in collaboration, as a team, as a work team that started from collaboration between professors, researchers and whole institutions, he added.

Peter Salovey, President of Yale University, shared several examples from his university in creating a more integrative university.

"Tsinghua and Yale, for example, have a master of science in environmental engineering, a dual degree program. It allows students from both of our universities to bolster their skills in environmental policy and management, and enhance their expertise in the key areas of environmental engineering," he said. "Universities create knowledge and prepare leaders so we can solve urgent problems we face as a global community; and integrative approach is crucial to our success, it fuels discoveries that improve lives today and in the future."

In the roundtable discussion that followed, Wang Shuguo, President of Xi'an Jiaotong University, Dou Xiankang, President of Wuhan University, Lyu Jian, President of Nanjing University, Tian Hongqi, President of Central South University, and Bao Xinhe, President of the University of Science and Technology of China, exchanged their views. Xue Lan, Dean of Schwarzman College, moderated it.

Before the GFUP 2021 culminated in the plenary session, four sessions were held from April 19 to 23. The first session was held with the theme of "University as a Cultural Space: Looking Back into the Future," the second with "Global Carbon Neutrality: Universities' Responsibility and Action," the third with "Rethinking the Future and New Mission of Online Education," and the fourth with "Global University Leadership" respectively.

The GFUP 2021 brought together leaders and representatives from more than 330 universities worldwide, 77 international organizations, academic institutions, university alliances and industry partners. Likewise, over 300 representatives from leading Chinese universities and high schools attended the Forum on site.

The Forum was broadcast live on Tsinghua's multiple social media platforms.



GLOBAL ENGAGEMENT

Tsinghua releases its first report on SDGs

Tsinghua University launched its first report on Sustainable Development Goals (SDGs) at the fourth forum of the anniversary special "On the University" series on April 15.

The report prepared by the Institute for Sustainable Development Goals of Tsinghua University (TUSDG), highlights the University's efforts and endeavors to implement the 17 UN SDGs over the years and shows the commitment for joining hands with other universities to promote the SDGs in the future.

Adopted by all United Nations member states in 2015, the 17 SDGs aim to lead countries in their efforts to eradicate all forms of poverty, achieve equality and tackle climate change, while ensuring that no one is left behind. The SDGs set the direction for global development and international collaboration and outlines a blueprint for a prosperous and sustainable world by 2030.

Professor Xue Lan, Dean of Schwarzman College and Co-Director of the TUSDG, and Professor Zhu Xufeng, Associate Dean of the School of Public Policy and Executive Director of the TUSDG, jointly released the SDG report at the forum,

which was held on the theme of "Towards Sustainable Development Goals."

The opening remarks at the forum were delivered by United Nations Resident Coordinator in China Siddharth Chatterjee and Colombia University Professor Jeffrey Sachs, who is the President of the UN Sustainable Development Solutions Network.

Chatterjee commended Tsinghua University for its commitment and efforts to implement the SDGs, and wished Tsinghua great success and scholarship.

"The talent pool we have in this university is simply remarkable," he said, recalling his recent visit to Tsinghua.

He emphasized the central role of universities like Tsinghua in addressing global challenges and realizing the SDGs.

Chatterjee also praised China for making significant gains in realizing the SDGs.

"As we march and race towards the Sustainable Development Goals, all 17 goals, we must keep in mind,

it is our human spirit, our human compassion, our human endurance, our human knowledge and our spirit of multilateralism which will lead to the implementation of the SDGs. ...The World Bank is already projecting that by the end of 2021 about 150 million people will fall back into poverty (due to the pandemic). Yet here is a country (China) where I am standing in, is not only REACHING the SDG 1 (of no poverty) but has actually REACHED it and is now moving towards rural revitalization to make sure no one is left behind," he said.

He emphasized that as the world moves towards 2030, China's role in the field of multilateralism would be crucial in achieving the SDGs globally.

Professor Sachs congratulated the TUSDG for launching the important SDG report and praised Tsinghua University for playing an enormous role in helping China and the world to achieve sustainable development.

He said that Tsinghua's role was growing and was of historic significance as the world battled COVID-19 and faced other global challenges like climate change and the need to make society prosperous and fair for all people.

He said the world needed the spirit of Tsinghua's anniversary theme "Strive for Excellence, Innovate for the Future" to achieve the SDGs globally, as he extended his best wishes to Tsinghua on its 110th anniversary.

Following their remarks, Professor Xue Lan shed light on the significance of the SDG report.

He said that the report offered a full review of Tsinghua's practices to implement the SDGs in the past and shows the commitment for joining hands with other universities to promote the SDGs in the future.

"We wish to work with other universities in the world to proactively be involved in the implementation of the SDGs," he said. "We hope that this report can be a call for universities in China and the world to solidly practice the sustainable development concept."

Professor Zhu Xufeng talked about how Tsinghua has been implementing the SDGs through talent training, scientific research, social contribution, cultural inheritance and innovation.

He said Tsinghua had launched the SDGs related courses, research projects and social-training programs, offered scholarships to students with financial difficulty, initiated environment-friendly concepts like its green campus, and

deepened international exchanges, among other things for sustainable development.

He also invited--Professor He Kebin from the School of Environment of Tsinghua University and the Academician of the China Academy of Engineering; Dr. Margaret Chan, the Inaugural Dean of the Vanke School of Public Health and Emeritus Director-General of the WHO; together with Professor Feng Yuan, the Vice President of the China Federation of Literary and Art Circles, the Vice President of the China Central Institute for Culture and History, the Honorary President of the China Artists Association and the first Director of the Tsinghua Art Museum--to share their own experiences related to the SDGs in each field.

He said Tsinghua was looking forward to working with the UN and all the universities around the world to create more open, inclusive, resilient, and sustainable universities and thus pave a brighter future for mankind.

Professor Zhu's speech were followed by a roundtable discussion moderated by Wu Hongbo, China's first Special Representative for European Affairs, Co-Director of TUSDG, and former Under-Secretary-General of the UN. Three speakers exchanged their views on the importance of realizing the SDGs.

Professor He Kebin talked about the efforts made by Tsinghua research teams to tackle pollution and address climate change.

"To fully realize the blue-sky goal and the SDGs, Tsinghua will continue to make efforts," he said.

Dr. Margaret Chan stressed the need for international cooperation to improve public health and medical system for global sustainable development.

"As the Dean of the Vanke School, we would like to work with all my colleagues to achieve universal health coverage and the SDG3- Good Health and Well-being," she said.

Feng Yuan highlighted the importance of creating a humanistic environment in universities to foster cultural inheritance and innovation and pave the way for a sustainable future.

The forum, chaired by Zhu Junming, Associate Professor of the School of Public Policy and Vice Director of the TUSDG was held both online and offline, and broadcast live by various media on their social media platforms.



Global Forum of Public Health School Deans sheds light on Health in a changing world

On April 21st, the Global Forum of Public Health School Deans, with the theme “Health in a Changing World, Innovation and Collaboration: the Next Generation” was held online.

The forum was hosted by Dr. Margaret Chan, the founding Dean of the Vanke School of Public Health (“VSPH”). Other participants in the forum included Professor Qiu Yong, President of Tsinghua University; Professor Sir Jeremy Farrar, Director of the Wellcome Trust; Professor Harvey Fineberg, President of the Gordon and Betty Moore Foundation; Professor Nancy Ip, Vice President of Research and Development in The Hong Kong University of Science and Technology; Professor Ilona Kickbusch, Founding Director and Chair of the Global Health Centre; Professor Ellen J. MacKenzie, Dean of the Johns Hopkins Bloomberg School of Public Health; and Professor Teo Yik Ying, Dean of the NUS Saw Swee Hock School of Public Health. James Chau, Special Advisor to Dean Margaret Chan and WHO Goodwill Ambassador for SDGs and Health, also joined the forum as the moderator.

The forum started with a pre-recorded welcome remark by Professor Qiu Yong. He expressed his great appreciation to all the guest speakers and participants, and also affirmed the progress and rapid development that VSPH has achieved in the past year. He mentioned that VSPH was established to “cultivate professional, international,

interdisciplinary and high-level public health leaders for the interests of humanity”, it will continue to “identify pathways to a healthier, more equitable and more sustainable future” with the support of experts and scholars in public health all over the world.

In the panel discussion session, seven experts shared their visions on the challenges and opportunities of global public health, public health and humanity, as well as new requirements for future public health leaders, especially in the post-pandemic era.

According to Dr. Chan, our world is going through a very difficult period in human history due to COVID-19. Thus, people from various sectors need to “think and rethink what kind of world we want to live in the post-pandemic era and start working on what measures need to take place”.

Professor Jeremy Farrar responded to Chan’s view and said the 21st century will present some real challenges in public health, energy, and water, among other critical challenges, but “they can be solved if we act together, if we act across continents, and between countries”, and we should realize “what the drivers of the issues are, rather than just treating the symptoms”.

Professor Harvey Fineberg said “in addition to thinking, rethinking and acting, public health brings a proactive perspective of preventing and looking ahead with foresight

to anticipate future problems as well as the ones we confront today. Those problems are so evident, dominant and daunting that we need to mobilize as a world to be able to overcome them”.

Professor Nancy Ip also pointed out that “though the pandemic has caused unprecedented changes, it also showed itself to be a driving force of innovation”. “We are witnessing how global efforts in the face of devastating disease is leading to new possibilities and advances in science and medicine. I do feel optimistic about the future”, she said.

Dr. Chan, by sharing a story of her helping a boy who was discriminated against for his disease of HIV/AIDS when he returned to school, explained her understanding of “humanity”. She mentioned that HIV/AIDS was a trailblazer. It demonstrated, through collective efforts, how a disease which was like a sentence of death to people could be changed to a non-communicable disease. She said “we need to think how to apply the insights of tackling HIV/AIDS to deal with the looming challenges”. She promised that “VSPH is committed to train new generations and leaders as public health leaders so as to be able to serve humanity, whether it is in HIV, COVID-19 or climate change”.

Professor Sir Jeremy Farrar echoed Chan’s point and argued that we can think about humanity at a global level or in the context of regional trends, but it comes down to individuals, their families, communities, and societies in the end, which should be kept as the center of our concerns.

Professor Teo Yik Ying also mentioned “a well-organized school of public health, by having its focus on public health practice together with the commitment to make an impact on public policies and national programs on health, can advise governments, NGOs and private sectors nationally and internationally, in order to achieve the vision of a more sustainable, fairer and more comfortable world”.

Professor Teo Yik Ying added “the best global public health policies and programs will be the ones that can be implemented successfully and effectively with the purpose of combining people and society”.

The evolving world requires people working in public health not only to be experts in their academic field, but also to be experts in crisis management and to be capable of interacting with social media and understanding new policies.

Professor Ilona Kickbusch stated that people in public health need to have a better understanding of global



public health, since nobody is safe until everyone is safe. “We must see global public health diplomacy as a form of public health practice”, she said, adding that “it is the responsibility of people in public health to apply global public health diplomacy to strengthen global solidarity, so as to achieve a consensus on globally consistent standards and norms”. Global public health can be achieved only if students in public health have a broader mind to understand well the context of different systems and dependencies.

Professor Ellen J. MacKenzie also observed that “skills of managing public health crisis and communication are so critical”. “We did not do a good job in communicating the value of public health and translating the research we do into terms that the public and the decision makers can use and act upon. We really need to teach our students the practical skills much better than ever before”, she stated.

In the final session, experts communicated with two student representatives on topics of gender equality, the driving force of big data and other technological advances, as well as suggestions for future talent training in public health.

This forum convened top scholars from leading Public Health Schools around the world to promote mutual understanding and further support collaboration on the occasion of the first anniversary of the Tsinghua Vanke School of Public Health, aligned with the celebration of the 110th birthday of Tsinghua University.

The forum was broadcast live on various social media channels in both Chinese and English.



International Studies on Confucianism founded

The first issue of a new journal entitled International Studies on Confucianism was released at a press conference held at the Confucius Temple and Guozijian (Imperial College) Museum in Beijing on May 24.

The event was sponsored by the International Confucian Association (ICA) and co-organized by Tsinghua University and the Imperial College Museum.

The founding of the journal is a pioneering initiative from the ICA, and is also a grand event in international Confucianism circles. The publication is jointly sponsored by the association and by Tsinghua. It is the first official journal created by the ICA since its establishment 27 years ago.

The journal will strive to build a first-class academic platform, display high-level research results, support the growth of outstanding academic talents, promote international academic and cultural exchanges, rational dialogue and mutual learning, and build a bridge for people from all over the world to communicate.

ICA Honorary Presidents Wang Meng, Dai Yi, and Zhang Qizhi, ICA Honorary Advisors Ye Jiaying and Yang Zhenning, former French prime minister Jean-Pierre Raffarin, and UNESCO Deputy Director-General Qu Xing all sent messages to the journal expressing their support.

First Forum of the “On The University” Series-“Tsinghua-A Global University” held

The first forum of the “On The University” series was held at the New Tsinghua Xuetang on April 12, with the topic of “Tsinghua- A Global University”.

The 110th Anniversary “On The University” series of forums were broadcast live in two languages around the world, presenting Tsinghua’s new century and features on five aspects: “Global University”, “Innovation”, “Public Welfare”, “Sustainable Development”, and “Thoughts”. The sharing was focused on the results achieved in recent years and showed the responsibility and mission of Tsinghua University.

Since the release and implementation of the “Global Strategy”, Tsinghua University has continuously improved its global layout, built a “global competency” talent training system, optimized the international cooperation system, and built an international campus. On the 110th anniversary of the founding of the institution, Tsinghua specially planned the “Global University” forum to explain the concept of opening schools to the world and show the effectiveness of international schooling.

A total of six speakers gave their speeches: Li Jinliang, Professor and Dean of International Affairs; Michael Powers, Chair of the Zurich Insurance Group and Professor at the School of Economics and Management; Stella Christie, Research Chair at Tsinghua’s Brain and Intelligence Laboratory, and Associate Professor at the Department of Psychology; Bartek Czech, member of the Institute for Advanced Study; and finally, Chinese and foreign student representatives.

Professor Li Jinliang illustrated Tsinghua’s first ever global strategy at the Forum. “Openness is a prerequisite of higher education reform and an essential element in the cultivation of global talents.”

Tsinghua facilitates a vast array of collaborative opportunities such as global research and exchange programs, to provide campus-wide transformative learning experiences for global competence development, said Li.



Professors Bartek Czech and Stella Christie spoke about their family’s move to Tsinghua and about their physics and psychology research groups. They highlighted China’s steadfast scientific progress and described Tsinghua as a welcoming home in which they lead fulfilling personal lives.

“We have each built our research groups with two learning languages, English and Chinese, so that our students are globally prepared to work anywhere in the world,” said Czech.

Since their arrival at Tsinghua University, the couple have turned this place into their home, putting their child in the local kindergarten and making long-term plans.

“We are doing our best here, just like everyone does their best for the place they call home, and for us, this home is Tsinghua,” added Christie as they concluded their speech.

Michael Powers from the U.S. shared his experience in the increasing opening of the Tsinghua campus and his thoughts on China’s experience on the world stage.

“As the world breeds global institutions, Tsinghua University provides an openness that is necessary to preserve and participate in both the development of the Chinese economy and society,” said Powers.

Chinese and foreign student representatives Li Yadong, a graduate student at Schwarzman College, and Ekaterina Kaligaeva, a Belarusian undergraduate student from the School of Journalism and Communication, shared their

experiences as Tsinghua students in learning, research, academic exchange, and life on campus.

“Openness is the teaching tradition of Tsinghua University, and it has already lived in various focal points of the university,” said Li, as he recalls the support he received from Tsinghua and its faculty members when deciding to leave Tsinghua and work in Africa. “I think if I am not studying at Tsinghua University, I can hardly imagine my encounter with Africa in such way.”

“Outstanding students from around the world have brought diverse cultures to Tsinghua University, and contributed their own strength to the construction of an international education,” added Kaligaeva. “No matter where you are from, Tsinghua always opens its arms and embraces future students.”

With less than two weeks left before the celebrations for the 110th Tsinghua Anniversary, further forums and events will be held online and offline for global viewers to participate in. The topic of “Innovation” will be broadcast live on April 13 at 8 pm.

SCIENTIFIC INNOVATION

Researchers develop durable and efficient electrocatalyst for saline water splitting

A team of researchers from the Tsinghua-Berkeley Shenzhen Institute (TBSI) and Shanghai Advanced Research Institute (SARI), Chinese Academy of Sciences, have synthesized a new type of electrocatalyst that is low-cost, durable, and highly efficient for saline water splitting. The discovery was published in the journal *Advanced Functional Materials* on 21 May.

Water electrolysis is promising for industrial green hydrogen production to achieve a sustainable hydrogen economy, but the high cost of the technology limits its market share. Developing economic catalysts with good efficiency and durability in splitting low-grade water or seawater is important for industrial implementation of the electrolysis to produce green hydrogen, yet is very challenging. Taking hydrogen evolution reaction (HER) as an example, platinum group metals (PGMs) have advantages in performance but suffer the drawbacks of scarcity and high cost. Non-PGM catalysts are cheaper, but have a much poorer performance and few meet industrial demands for use with strong alkalis, saline and low-quality water. Developing economic catalysts that can work well at high current densities in industrial conditions and various extreme electrolytes thus remains a big challenge, preventing the wide use of water splitting for hydrogen production.

Led by TBSI Associate Professor Bilu Liu and SARI Professor Jiong Li, the team has synthesized a new type of electrocatalyst where trace precious metals are strongly anchored on corrosion-resistant matrix. As an example, the produced Pt/Ni-Mo electrocatalyst only needs an overpotential of 113 mV to reach an ultrahigh current density of 2000 mA cm⁻² in saline-alkaline electrolyte, standing as the best performance reported so far. It shows high activity and long durability in various electrolytes and under harsh conditions, including strong alkaline and simulated seawater electrolytes, and under elevated temperatures up to 80 °C. This electrocatalyst is produced on a large scale at low cost and shows good performance in a commercial membrane electrode assembly stack, demonstrating its feasibility for practical water electrolysis.

[Link to full article: https://onlinelibrary.wiley.com/doi/10.1002/adfm.202010367](https://onlinelibrary.wiley.com/doi/10.1002/adfm.202010367)



Tsinghua launches Quantum Information Class

On May 24, Tsinghua University announced the creation of a new Tsinghua Xuetang class — Quantum Information Class. Professor Andrew Chi-Chih Yao, IIS Dean, is the Chair Professor, and IIS CC Yao Professor Luming Duan is the Program Director. It is the third Tsinghua Xuetang Class that was founded and designed by Prof. Yao, following the Yao Class (computer science) and the Artificial Intelligence Class.

The aim of the program is to cultivate high-achieving talents in the quantum information field, and it will provide significant resources in enabling the students to gain a strong foundation as well as in-depth knowledge in this discipline. The program will receive applications this summer, and 20 students will be enrolled in the Class of 2021.

The launch ceremony took place at the Lecture Hall, FIT Building, and was attended by Jing Xu, General Director of the Department of Strategy and Planning, Ministry of Science and Technology, Rong Zeng, Vice Provost of Tsinghua University, Qixin Chen, Director of Tsinghua Undergraduate Admission Office, besides Prof. Andrew Yao and Prof. Luming Duan.

Research examines evolution mechanisms of lithium metal anodes

Lithium metal is widely regarded as the "Holy Grail" of future lithium battery technology. However, the surface of lithium metal is prone to irregular evolution during the battery cycle, which will shorten battery life and cause safety hazards, posing a key challenge in this field. In-depth understanding of the polymorphic morphologies and evolution mechanism of lithium metal and its effective regulation is the only way to address this issue and is urgently needed for theory development in the field.

In a review article published on 16 April in *Chemical Reviews*, a group led by the Tsinghua Shenzhen International Graduate School (Tsinghua SIGS) Associate Prof. Cheng Yang and Prof. Feiyu Kang innovatively revealed the polymorphic evolution mechanism and regulation strategy of lithium metal anodes from the perspective of multi-physical fields.

The review first introduced and discussed the limitations of theoretical models that simulate the evolution of different forms of lithium metal. Then, it gave a systematic summary of the impact of the chemical, electrochemical and metallurgical properties of lithium metal and its solid electrolyte interphase (SEI) layer on the evolution and growth of irregular forms of lithium. It also summarized current research progress in delaying, inhibiting and directionally inducing irregular lithium evolution to improve the stability and safety performance of lithium metal batteries, and concluded with the challenges and directions for future development of metal anodes.

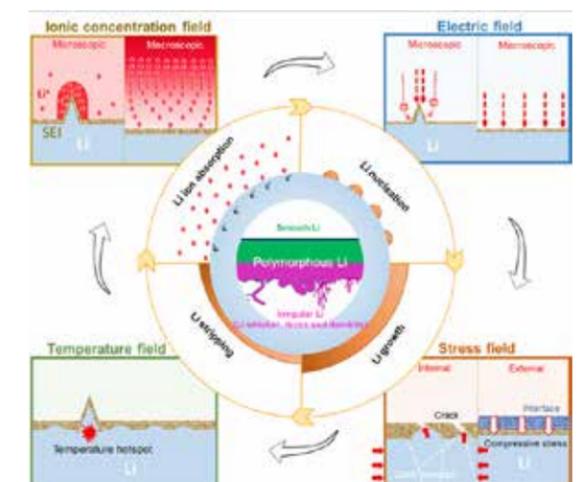
In this review article, the authors systematically analyzed the formation mechanism, influencing factors and control strategies of three different types of irregular lithium deposition morphologies in a liquid electrolyte system from the perspective of multi-physical fields (ion concentration field, electric field, stress field, and temperature field). On the basis of previous opinions, this review provides novel and profound insights for an in-depth understanding of lithium metal deposition/dissolution evolution behavior. In addition, the multi-physics classification method and related theoretical knowledge proposed in this paper are

helpful for understanding the electrochemical evolution behavior of other metals, providing a guiding role for the development of high-performance metal anode batteries, and show important scientific research value.

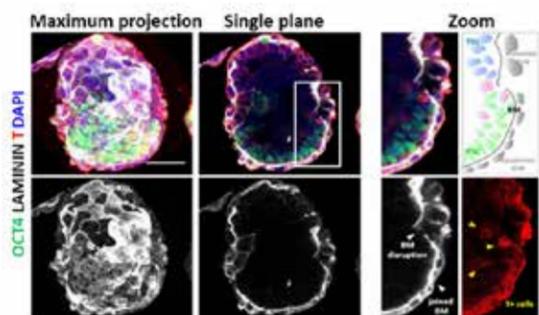
Overview of the connection between multi-physical fields and polymorphous Li metal evolution during its entire cycle life.

A related work "Polymorph Evolution Mechanisms and Regulation Strategies of Lithium Metal Anode under Multi-physical Fields" was recently published in the international journal *Chemical Reviews*. Prof. Feiyu Kang and Associate Prof. Cheng Yang of Tsinghua SIGS and Prof. Huolin Xin from the University of California, Irvine, are the co-corresponding authors of this article. Dr. Peichao Zou and Yiming Sui are the first co-authors of this article.

[Link to full article: https://pubs.acs.org/doi/abs/10.1021/acs.chemrev.0c01100](https://pubs.acs.org/doi/abs/10.1021/acs.chemrev.0c01100)



Researchers developed a machine learning-assisted image analysis strategy to study stem cell-based embryos



Collaborative research carried out by researchers from the School of Medicine, Tsinghua University, and Cambridge University set up machine learning-assisted high-content image analysis to study pluripotent stem cell-derived embryos in vitro. The study enabled automated and high-throughput analysis of stem cell-based embryo models.

Stem cell-based embryo models synthesized by laboratory cultured pluripotent and extraembryonic lineage stem cells are novel platforms to model mammalian embryo development. Previously, analyses of stem cell-based embryo models were mainly done through researchers' visual inspection. Their drawback was low efficiency, lack of standardization, and bias by different researchers. Moreover, it was hard to determine the variation between different pluripotent stem cell (PSC) lines due to their genetic background, derivation, culture, and reprogramming methods. Therefore, an automated, high-throughput, multi-dimensional, and unbiased workflow to quantitatively analyze stem cell-based embryo models was needed.

To facilitate the efficient and unbiased analysis of the stem cell-based embryo model, the team set up a workflow to use machine learning-assisted high-content analysis to study embryo-like structures derived from several induced pluripotent stem cell (iPSC) lines and embryonic stem cell (ESC) lines. Moreover, using this system, the team screened 55 small molecules and cytokines and found that BMP4 was the best candidate to facilitate the formation and the development of the iPSC/ESC and trophectoderm stem cell assembled embryos termed ITS or ETS embryos.

In the study, the researchers first set up a 3D condition to co-culture iPSCs and extraembryonic stem cells to form embryo-like structures, termed ITS, mimicking the early developmental events including pre-amniotic cavity formation, basement membrane assembly, symmetry breaking, and mesoderm induction.

Next, the researchers set up a machine learning workflow to extract multi-dimensional features and quantify ITS embryos using 3D images collected from a high-content screening (HCS) system. The machine learning protocol automatically scanned tens of thousands of pictures and extracted hundreds of multivariate features from each ITS embryos. Then it could recognize high-grade ITS examples from the whole culture with an Accuracy of 0.92 and F1 score of 0.80. The machine learning protocol was able to calculate complex morphology features, polarization, the ratio of high-grade ITS, the quality of embryonic and extraembryonic parts of ITS embryos.

Using the machine learning protocol, researchers compared different PSC lines' ability to form embryo-like structures and conducted a chemical molecule and cytokine screen. They identified that BMP4 best promoted the morphogenesis of the ITS embryo and explored the molecular mechanism through transcriptomic and epigenetic analysis.

In summary, the team established robust, unbiased, and automated machine learning-based protocols to evaluate multiple iPSC and ESC lines and perform cytokine and small-molecule screens to find factors that can promote ITS embryo generation. The study revealed the variation among different iPSC and ESC lines in forming embryo-like structures. These approaches and findings are highly informative and valuable for future studies of stem cell-based embryo and organ models.

The results of this study were published online on April 23, 2021, under the title "Machine Learning-Assisted High-Content Analysis of Pluripotent Stem Cell-Derived Embryos in vitro" in *Stem Cell Reports*, a leading stem cell biology journal.

Reference: Jianying Guo,^{1,2,6} Peizhe Wang,^{1,6} Berna Sozen,^{3,4} Hui Qiu,^{1,2} Yonglin Zhu,¹ Xingwu Zhang,¹ Jia Ming,¹ Magdalena Zernicka-Goetz,^{3,5,*} and Jie Na^{1,*} Machine Learning-Assisted High-Content Analysis of Pluripotent Stem Cell-Derived Embryos in vitro. *Stem Cell Reports*, 2021,16:1–16

[Link to full article: https://www.cell.com/stem-cell-reports/fulltext/S2213-6711\(21\)00148-X](https://www.cell.com/stem-cell-reports/fulltext/S2213-6711(21)00148-X)

Tsinghua is awarded Grand Prize in the Global Cooling Prize contest

On April 30, the award ceremony of the Global Cooling Prize (GCP) was held at the Beijing National Convention Center. Tsinghua University, partnering with Gree Electric Appliances, was awarded the Grand Prize. Supervised by Associate Professor Wang Baolong and Professor Shi Wenxing from the School of Architecture, the Tsinghua/Gree joint team exceeded other teams, including teams from Massachusetts Institute of Technology and the University of Cambridge, and won the final award medal and a prize of 500,000 US dollars.

In the award ceremony, Iain Campbell, chairman of the GCP organizing committee, announced "the solution of Tsinghua/Gree has achieved an 85.7% reduction in climate impact" and believed this technology "has become an important part of the global climate change solution." Academician Jiang Yi spoke highly of the winning technology in his opening speech: "The achievement of Gree and Tsinghua fully demonstrated the innovative capabilities of China in the field of refrigeration and air conditioning. That proved China can play a key leading role in decreasing the climate impact of global HVAC industry".

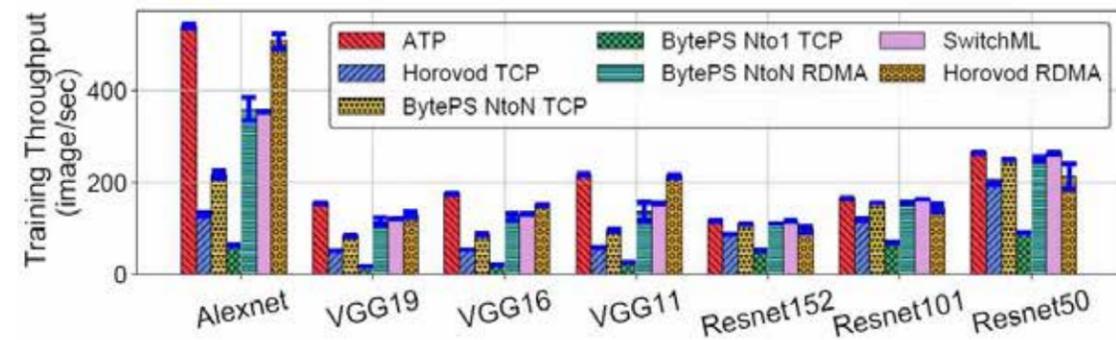
Liu Yanhua, Director of the National Climate Change Expert Committee and former vice-minister of the Ministry of Science and Technology, presented the award to the Gree-Tsinghua joint team on behalf of the organizers.

The GCP is jointly sponsored by the Rocky Mountain Institute, the Government of India, and Mission Innovation. It is co-hosted by the Rocky Mountain Institute, Conservation X Laboratory, the Energy Efficiency Economics Alliance, and CEPT University in India. It aims to explore breakthrough innovative technology in the refrigeration industry to solve climate challenges. The GCP was launched in November 2018, convening innovative companies and research teams around the world, and encouraging them to develop breakthrough refrigeration technologies that can reduce the climate impact to one-fifth of the current market standard air-conditioning level, and guarantee that the cost of this technology is no more than twice that of the benchmark air conditioner. More than 2,100 teams from 96 countries signed up for this competition. 139 teams submitted detailed applications. In November 2019, after being reviewed by the technical

committee, eight finalist teams were selected. The finalists prepared prototypes of their concepts which were field and lab tested at locations in India between Sept. 2020 to March 2021.

Gree/Tsinghua's cooling solution integrates advanced vapor compression refrigeration, evaporative cooling, ventilation, and photovoltaic direct-driven technology, which efficiently utilizes renewable energy sources and free cooling sources. The innovative hybrid solution is designed to have an automatic, climate-smart operation in three modes - vapor compression refrigeration, direct evaporative cooling, and ventilation. It can operate individually or in parallel to provide optimized indoor temperature and humidity control according to the weather conditions. The vapor compression refrigeration system adopts a parallel compression cycle with dual evaporation temperature. It is realized based on a specially-designed triple-cylinder compressor, a low GWP refrigerant, and an improved-designed evaporator and condenser. The ventilator, operating in ventilation mode or direct evaporative cooling mode, strives to decrease the indoor cooling load and eliminate the latent load. The energy consumption of the cooling solution can also be decreased by the ventilator even when the outdoor air has a higher specific enthalpy than the indoor air. A small PV panel is integrated into the power system by a smart modulator for power transformation and distribution.





Prof. Wu Wenfei’s Research Group receives Best Paper Award of NSDI 2021

ChonLam Lao, Chen Yixi, IIS master candidates, and Prof. Wu Wenfei received the best paper award at the 18th USENIX Symposium on Networked Systems Design and Implementation (NSDI 2021) for their paper "ATP: In-network Aggregation for Multitenant Learning". This is the first time that this award has been granted to a Tsinghua member as the first author in China.

Distributed deep neural network training (DT) systems are widely deployed in clusters where the network is shared across multiple tenants, i.e. multiple DT jobs. Each DT job computes and aggregates gradients. Recent advances in hardware accelerators have shifted the performance bottleneck of training from computation to communication. To speed up DT jobs' communication, Prof. Wu's group proposed ATP, a service for in-network aggregation aiming at modern multi-rack, multi-job DT settings.

ATP uses emerging programmable switch hardware to support in-network aggregation at multiple rack switches in a cluster to speedup DT jobs. ATP performs decentralized, dynamic, best-effort aggregation, enables

efficient and equitable sharing of limited switch resources across simultaneously running DT jobs, and gracefully accommodates heavy contention for switch resources. ATP outperforms existing systems accelerating training throughput by up to 38% - 66% in a cluster shared by multiple DT jobs.

The work is conducted by Assistant Professor Wu Wenfei's group in collaboration with Prof. Aditya Akella's group from the University of Wisconsin-Madison. ChonLam Lao is the first author while Prof. Wu Wenfei the corresponding author.

NSDI is a premier conference in network system sponsored by USENIX. It focuses on the design principles, implementation, and practical evaluation of networked and distributed systems. This year, the conference received 369 submissions with 59 papers accepted with an acceptance rate of 16%. Each year, one paper is picked as the Best Paper.

The full paper is available at <https://www.usenix.org/conference/nsdi21/presentation/lao>

Research reveals new techniques for energy recovery and CO2 sequestration as hydrates under marine conditions

Natural gas hydrates (NGH), also known as "combustible ice", are formed naturally in the presence of methane (CH4) and water (H2O) within suitable high-pressure and low-temperature conditions. Widely dispersed in marine locations and in or below permafrost, they have been identified as a future clean energy resource with huge potential. Since 2019, a research group led by Prof. Daoyi Chen from the Tsinghua Shenzhen International Graduate School (SIGS) Institute for Ocean Engineering has been developing technologies that could couple NGH recovery with carbon dioxide (CO2) geological sequestration processes for the dual benefit of clean energy and a low-carbon future.

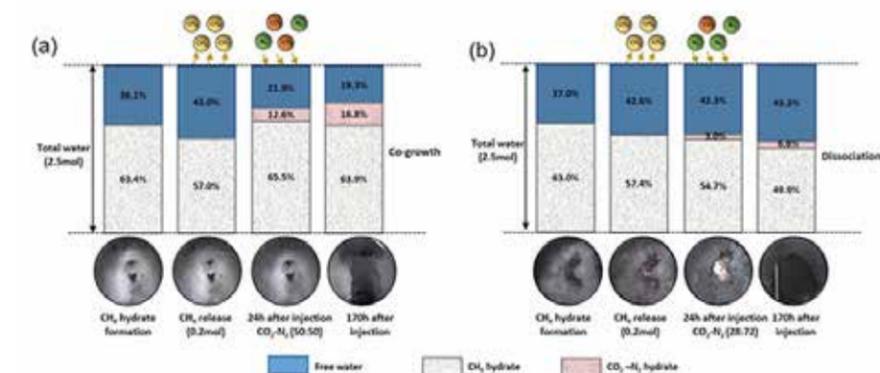
Based on the geological properties of hydrate reservoirs located in the South China Sea, possible marine conditions were identified where CH4-CO2-N2 mixed hydrates could potentially form. The group thus proposed a novel method to recover CH4 and sequester CO2 synergistically under high-pressure and high-temperature marine conditions. To test the above hypothesis, a series of experiments were designed and conducted to recover CH4 by a short-term depressurization process followed by the injection of CO2/CO2-N2 gas mixtures in a specially-designed high-pressure (>15.0 MPa) reactor. Time-dependent pressure and temperature data, gas chromatography results and in-situ hydrate morphology images were acquired for data analysis. The group also developed a numerical method by estimating the partition of all components (CH4, CO2, N2 and H2O) in various phases (gas, liquid and hydrate) to quantify the dynamic behavior of hydrate formation, dissociation and replacement processes.

Fig. 1. Schematic of the evolution of H2O during the entire process and the corresponding hydrate morphology images in (a) co-growth mechanism and (b) dissociation mechanism

The study revealed both the thermodynamic and kinetic feasibility of CH4 recovery under marine conditions by combining depressurization with the injection of CO2/CO2-N2 gas. The presence of free CH4 in the system in a way assisted the sequestration of CO2/N2 as hydrate mixtures. In addition, direct injection of CO2/CO2-N2 would result in either the co-growth of mixed hydrate or the dissociation of CH4 hydrates largely depending on the gas composition.

This study was published on 15 September in the Chemical Engineering Journal under the title "Effectiveness of CO2-N2 injection for synergistic CH4 recovery and CO2 sequestration at marine gas hydrates condition" with Tsinghua SIGS Ph.D. student Mengya Niu as the first author. Experimental results and findings from this study could provide guidance on the design of CH4 recovery and CO2 sequestration tests in future field production trials at marine conditions in South China Sea. The study was supported by the Guangdong MEPP Fund, Shenzhen Municipal Bureau of Planning and Natural Resources, and the Tsinghua SIGS International Joint Research Fund.

Link to full article: <https://www.sciencedirect.com/science/article/pii/S138589472101202X>



Microbunching illuminates new technological horizon

A scheme that causes electrons to form microbunches' could yield high power and coherent extreme-ultraviolet light, and perhaps the means to produce circuits faster.

A new source of high-power extreme-ultraviolet (EUV) light, steady-state microbunching (SSMB), is peeking over the horizon, following a proof-of-principle experiment published in *Nature*¹. Corresponding author, Chuanxiang Tang, says the potential power of SSMB EUV could be used to etch more-intricate patterns onto semiconductor circuits, which are used to store and transfer data in devices.

"A high-power EUV source is of crucial importance for high-volume manufacturing using EUV lithography," explains Tang, a professor in the Department of Engineering Physics at Tsinghua University. EUV lithography reduces the steps needed to manufacture circuits by bypassing multi-patterning, a multiple-exposure method currently used to get finer circuit pattern resolution. But power is the key to realizing viable EUV lithography, says Tang, since the optical system is reflective and the power loss of each of the 11 reflections exceeds 30%.

Rolling with the bunches

The concept of SSMB was first proposed in 2010 by two scientists at Stanford University, Daniel Ratner and Alexander Chao. Published in *Physical Review Letters*², their idea was that electrons circulating in a synchrotron are organized into small bunches that support the emission of coherent light. However, the SSMB concept lay dormant for several years because its potential was not immediately recognized and it is difficult to perform experiments as most synchrotrons aren't suitable.

"After the paper was published in 2010, I was expecting some interest from the community, but nothing happened for five years," explains Chao. "In 2015, I finally realized that if there would be any response to this very interesting and promising idea, I would have to push for it. So, in 2015, I started to give talks about the idea."

In 2016, following a conference talk on SSMB from Chao, scientists from Tsinghua University and Helmholtz-Zentrum Berlin expressed interest, and a collaboration was born. A plan was devised to experimentally test SSMB at the

Metrology Light Source, a synchrotron in Berlin owned by the Physikalisch-Technische Bundesanstalt, who became a third collaborator. The Metrology Light Source is one of the few synchrotrons at which SSMB could be experimentally investigated, as it operates in a 'low-alpha mode', in which the circulation times of the electrons are nearly independent of their energies.

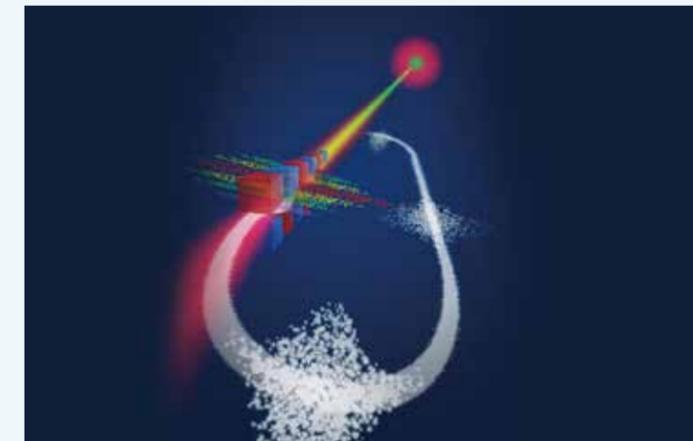
In the experiment, a pulsed near-infrared laser is fired as electrons pass through a periodic arrangement of alternating magnets in the ring, causing them after one circulation to form localized spatial patterns of small bunches, separated on the scale of the laser wavelength. Importantly, these microbunches should emit light in a coherent manner, allowing higher power emission.

The key, says Tang, was to maintain phase correlation between the electron energies introduced by laser fields over a complete revolution in a storage ring. A precise, turn-by-turn phase correction created steady-state microbunching.

A completely operational SSMB source has still to be demonstrated. It will require using a special magnet lattice and a high-power optical enhancement cavity, according to Tang.

Dr Alexander Chao (centre), a co-author on the paper, works with colleagues to experimentally test steady-state microbunching (SSMB) in Berlin. He came up with the theory behind SSMB while at Stanford University, where he was a professor until he retired in 2019.

If realized in this way, the technique could also prove useful for fundamental experiments in condensed-matter physics that require high-flux, energy-tunable EUV photons, notes Tang. However, with the global EUV lithography market

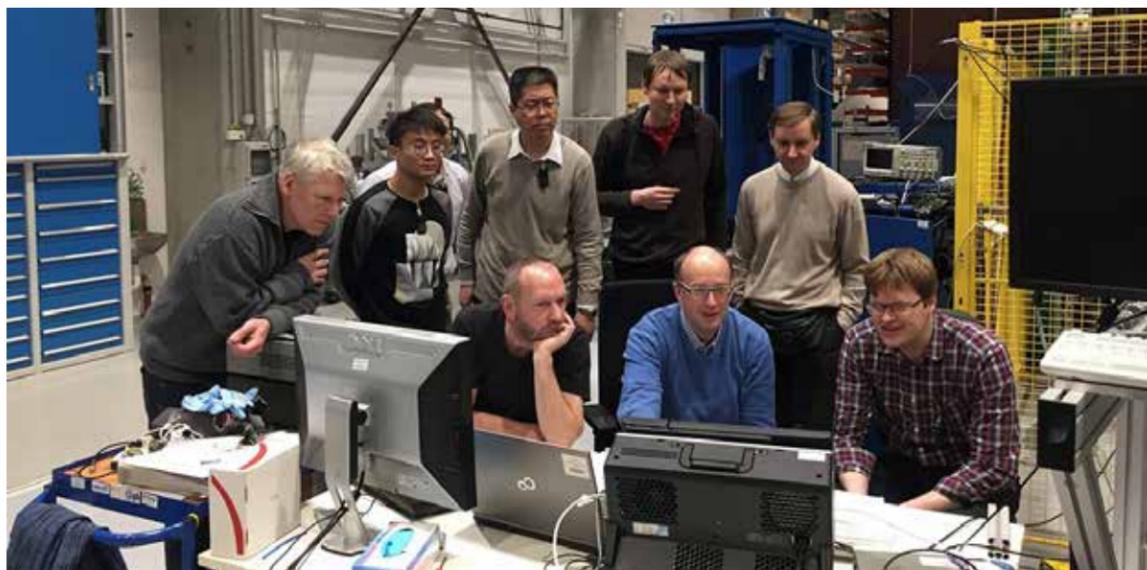


forecast to grow more than 20% between 2020 and 2021, Tang expects industry interest to be the driving force.

If funding is forthcoming, the Tsinghua team hope to construct a dedicated SSMB storage ring in Beijing, says Tang. "If things go well, we plan to build it in the following five to six years."

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DIVERSE CAMPUS

Tsinghua holds Commencement Ceremony for Undergraduate Students

Tsinghua University held its commencement ceremony for undergraduate students on June 27th.

During the ceremony held outside the East Sports Ground, the university awarded degrees to 3,488 undergraduates of the class of 2021. 565 undergraduate students were awarded a second bachelor's degree.

Chen Xu, Chairperson of the University Council, announced the list of the titles awarded, of which 10 classes were awarded the title of "advanced collectives" and 71 undergraduate students were awarded the title of "outstanding undergraduates".

The commencement ceremony was livestreamed across the world on various media and social media platforms.

Graduating students and their families who were not able to join the ceremony in person attended via video link.

The university also invited some students who were unable to attend the graduation ceremony last year due to the pandemic, to experience graduation day on campus.

In his congratulatory speech, Tsinghua's President Qiu Yong extended his warmest congratulations to all the undergraduate students.

He remarked that the profound history and culture and the generation-after-generation striving of Tsinghua people have built the excellence and personality of the university. He hoped the students could stay true to their reality and originality so as to give full play to their potential.



"The background color of life, and the core of one's spirit and quality lay the foundation of the future," President Qiu said. He encouraged the students to be patriotic and dedicated, to be steadfast and self-confident, to aim for the highest and the pursuit of excellence, and to follow the principle that actions speak louder than words throughout their lives.

"Dear students, please remember, Tsinghua University will always be your home," he concluded.

Wang Jiaheng, who graduated from the Department of Engineering Physics, delivered his commencement speech on behalf of the undergraduate students of the class of 2021.

Wang thanked Tsinghua for cultivating him and offering opportunities and platforms to do research on quantum information.

"After graduation, I will continue studying at the newly established School of Integrated Circuits for a PhD degree and engage in quantum information and quantum computing research," said Wang.

Xia Deming, who completed his doctoral degree in 2007 from Tsinghua's Department of Electrical Engineering and started working at the Northeast Branch of the State Grid Corporation of China as an engineer, delivered his speech at the commencement ceremony as the alumni representative.



Xia reviewed his nine years of study in Tsinghua, from a boy who knew nothing about electrical power systems, to a doctorate in the field with a solid theoretical foundation.

He said the experience of studying in Tsinghua gave him the courage and perseverance to face difficulties in his future work and research.

He also advised students to adhere to the Tsinghua spirit of "Actions Speak Louder than Words", and maintain a positive heart to pursue dreams and make greater contributions to the prosperity of our country, the rejuvenation of the nation, and the happiness of the people.

Tsinghua holds Commencement Ceremony for Graduates



Tsinghua University held its commencement ceremony for graduates on June 26th.

During the ceremony, which was held outdoors, the university awarded doctoral degrees to 3,168 graduates of the class of 2021. 5,650 graduates were awarded the master's degree. 87 doctoral graduates and 78 master's graduates were awarded the title of "outstanding graduates".

The commencement ceremony was live-streamed across the world on different media and social media platforms. Graduating students and their families who were not able to join the ceremony in person attended via video link. The university also invited some students who were unable to attend the graduation ceremony last year, due to the pandemic, to experience graduation day on campus.

In his congratulatory speech, Tsinghua's President Qiu Yong extended his warmest congratulations to all the graduate students.

"2021 is a very special and important year. On April 19th, on the eve of the 110th anniversary of Tsinghua University, President Xi Jinping visited the campus, and delivered an important speech," President Qiu said. "Fellow students, you have witnessed the strength of China moving forward courageously through challenges, and witnessed the new style of Tsinghua endeavor, and you have also witnessed and withstood the severe test of the pandemic."

"I believe that you will continue to work even harder and continue to grow in the years to come and become outstanding talented people who can carry on the grand tasks of the times," said President Qiu.

He asked them to reach the height of life in the practice of deeds that speak louder than words, grasp the present time, cherish the years of youth, and strive for a higher and more exciting life.

Ai Liqiang, a graduate of the School of Aerospace Engineering, delivered a commencement speech on behalf of the graduate students of the class of 2021.

Ai thanked Tsinghua for cultivating him for more than 10 years, training him from an undergraduate to a PhD, and realizing his aerospace dream.

"The colorful life and strict academic atmosphere of Tsinghua has provided me with a platform for all-round development and strengthened my ambition to fight for building China into a country with strong aerospace power," said Ai.

Wu Beili, who graduated from Tsinghua's Department of Biological Sciences and Biotechnology in 2006 and worked at the Shanghai Institute of Materia Medica, Chinese Academy of Science, as a researcher, delivered her speech at the commencement ceremony as the alumni representative.

Wu reviewed her life in Tsinghua with her classmates and tutors and her experience of learning and making experiments on protein in labs. She thanked Tsinghua for influencing her with its academic spirit of perseverance that guided her to make bigger accomplishments in her future work and research.

She also advised the graduate students to cherish their time and always take Tsinghua's pursuit of excellence as their life creed to make greater contributions to the country and the world.

Celebrate International Museum Day at Tsinghua museums

18 May marks International Museum Day, a day celebrated worldwide to highlight the importance of museums in preserving history and culture, and disseminating knowledge to the public. Museums play a crucial role in showcasing different cultures, promoting mutual understanding and cooperation, and building respect for all cultures among people in the world.

This year's theme for International Museum Day is "The Future of Museums: Recovery and Reimagination," a theme inspired by the changes in the world caused by the pandemic. It encourages innovative solutions to transform museums into more resilient learning institutions in the future.

As the world celebrates International Museum Day, let's explore Tsinghua's various museums and find out their contribution to the world and society in terms of cultural exchange, cooperation, and peace building.

Tsinghua University History Museum was built in April 2011. The museum displays the history and achievement of Tsinghua over a century, based on pictures and texts accompanied by precious archives and natural objects.

Pictures at the history museum show university management, the idea of literature, art education, and how scientific research was developed during this time. The history museum also displays Tsinghua's contribution to China's development.

Art museums are considered the most important cultural institutions because they preserve history, display human creativity, and provide unique insights across cultures.

Tsinghua University Art Museum was built in 2016 and owns 23,079 art objects, including six significant categories in embroidery, furniture, painting and calligraphy, porcelain, bronzeware, and comprehensive artwork. The museum engages in exhibition curation, quality collection presentation, and academic activities. It also plays an essential role in spreading historical, humanistic, and artistic achievement as well as modern technological innovation.

The preparations of Tsinghua University Science Museum were officially started in April 2018. It will be the first comprehensive science museum with a collection set up by a university in China. It showcases the combination of science and technological relics with high-tech.

Tsinghua University Science Museum displays the historical scientific discoveries and technological inventions with the extraordinary achievements of Tsinghua in modern science and technology.

There is so much to discover about museums at Tsinghua; those who have a passion to understand history, art, and science are welcome to visit the Tsinghua museums. The museums at Tsinghua are open to the public. They also offer virtual tours for you to complement your knowledge about history, art, and science.



Tsinghua Cultural and Creative Carnival held

This year's Tsinghua Cultural and Creative Carnival recently kicked off at the Tsinghua University Art Museum and lasted until May 5.

A group of themed cultural products created for the school's 110th anniversary celebrations were launched at the opening ceremony.

The products, covering artefacts, silk scarves, ties, umbrellas, and stationery, were designed by a team led Chen Nan, a Professor at the university's Academy of Arts & Design.

One highlight of the carnival was an exhibition of Warrior Shoes (also known as Huili in Chinese). The shoes on display were entries of a competition for Tsinghua alumni and designed for the 110th anniversary of the university. They have been well recognized by Tsinghua faculty, students, alumni and all walks of life since their debut.

The carnival has been held for two years. It provides a platform for Tsinghua faculty, students, alumni and cultural institutions to demonstrate their creativity and innovation, and contributes to the cultivation of a good ecosystem for cultural creations, according to the Vice Chairperson of the University Council Xiang Botao.

He added that the event will be developed into a key calling card for the cultural creativity and innovation of Tsinghua University.



First interdisciplinary monthly salon for young scholars held in Tsinghua

Themed on "Interdisciplinary Research in the Field of Brain Science", the first monthly salon for young scholars in Tsinghua University was held in the school's Center for Faculty Development on 19 March.

Academician Dai Qionghai, Head of the Institute for Brain and Cognitive Sciences, delivered a keynote report entitled "Birds and Frogs".

He suggested that research work should attach equal importance to the international frontiers and major national needs, and take training international first-class talents as the highest goal.

The salon is one of the interdisciplinary forums in Tsinghua, held usually in the last week of each month.

Co-sponsored by Tsinghua's Research & Development Affairs Office and the Center for Faculty Development, the salon aims to carry out in-depth discussions on the issues of interdisciplinary fields, help young scholars in various fields conduct interdisciplinary research, build a platform for cooperation and exchange, and create a strong interdisciplinary atmosphere.

In 2021, discussions will be focused on artificial intelligence, big data, the brain and cognition, intersection of medical workers, intelligent unmanned systems, intelligent connected vehicles, flexible electronic technology and other fields.



Students, teachers encouraged by President Xi's visit

Chinese President Xi Jinping on Monday stressed adhering to the direction of building world-class universities with Chinese characteristics to serve national rejuvenation as he visited Tsinghua University ahead of its 110th anniversary.

Xi, also general secretary of the Communist Party of China (CPC) Central Committee and chairman of the Central Military Commission, extended congratulations to Tsinghua's faculty, students and alumni at home and abroad on behalf of the CPC Central Committee. He also sent greetings to young students across China.

Xi said as the new journey to fully build a modern socialist China has begun, the cause of the Party and the country is in unprecedented need of higher education, scientific knowledge and outstanding talents.

China's higher education should make contributions to the prosperity of the country, the rejuvenation of the Chinese nation and the well-being of the people, Xi said.

He encouraged young people in China to rise up to the mission of national rejuvenation.

Xi, accompanied by Wang Huning, a member of the Standing Committee of the Political Bureau of the CPC Central Committee and a member of the Secretariat of the CPC Central Committee, visited a special exhibition celebrating the university's anniversary at the Academy of Arts and Design.

Xi called for applying more artistic elements to urban and rural planning and building, and making art achievements better serve the people's need for a high-quality life.

He also encouraged more international cultural exchanges.

While visiting a laboratory on imaging and intelligence, Xi urged steady growth of spending in basic research, and motivated researchers to carry out free exploration, dare to challenge existing theories, and be bold in opening up new directions in scientific research.

"Chinese education is capable of nurturing maestros. We should have faith in that," said Xi.

Xi underlined the importance of strengthening basic research and independent innovation. New ideas and theories should be drawn from China's reform and development, he added.

Xi also met and talked with the faculty representatives, calling on the university to foster virtue through education and take the serving of the country as its highest value.

He asked the university to make greater contributions to realizing the Chinese Dream of national rejuvenation and advancing the progress of human civilization.

While visiting a gymnasium, Xi talked with some basketball players practicing there, noting that Tsinghua has a fine sports tradition. He called on the students to carry on the university's traditions regarding both academic study and sports to achieve comprehensive development.

Xi then attended a symposium with representatives of faculty members and students.

Xi said over the past 110 years, Tsinghua has taken root in China, establishing fine traditions of patriotism, dedication and the pursuit of excellence, and nurturing generations of outstanding talents.



Applauding China's achievements in developing higher education since the 18th CPC National Congress in 2012, Xi said a country's higher education system requires the strong support of world-class universities. He urged efforts to uphold Party leadership and the guiding role of Marxism at such universities.

The key to building world-class universities lies in the unceasing efforts to nurture higher-quality talents, he said.

Demanding efforts to upgrade their current disciplinary system, Xi called on universities to target the frontiers and key areas of science and technology.

World-class universities should also have the courage to tackle problems in core technological research that hinder the country's development, he added.

Xi also called for building platforms for international exchanges and cooperation in education and culture as a joint response to global challenges, and called on young people to love the country and people, refine their morality, dare to innovate, and work hard.

Speaking of the role of teachers, Xi urged the faculty to set a fine example for students.

With a view to achieving cutting-edge academic results globally and serving significant national demands, they should commit themselves to solving practical problems, be good at acquiring new knowledge, and be firm in ideals and convictions, said Xi.

On his departure, Xi received warm farewells from the faculty and students.

Students, teachers encouraged by President Xi's visit



Fan Jingtao, Associate Research Professor recalled, "President Xi recognized our team for our original research and said Tsinghua University is representative of the Chinese colleges which are working hard to become world-class institutions. He said he has strong faith in us."

Chen Yitong, a PhD candidate, mentioned, "President Xi was very surprised to know that we are all young. He said a promising future awaits us. He urged us to be more confident in domestic talent, after he found out that all the four students he met here were all educated in the country."

In view of President Xi's delivery on global challenges, Shi Zekun, a graduate from the School of Public Policy and Management, felt honored to represent graduates working in international organizations. "I hope to continue to practice the Tsinghua spirit in my work, and strive to be a good storyteller of China on international platforms," said Shi.

"I feel that the Chinese government attaches great importance and concern to education," said Nick Gu (Russia), an undergraduate student from the School of Social Sciences, as he recalled President Xi highlighting the importance of moral education. At the same time, Nick agreed that international cooperation and exchanges should be strengthened to jointly address global issues.

"It is reassuring that China and its president treat us international students as a part of this community, and it encourages us to be a better version of ourselves and wanting to contribute to our common success," said Anna Lujza Honecz, also known as Lulu, a Hungarian student

pursuing her PhD degree in the School of Humanities. She is grateful that her experience in China is providing a good foundation for her to achieve her goal of further developing the relationship between China and Hungary.

Zeng Maozhou, men's basketball team captain who met President Xi in the gymnasium, said, "The president is kind and understands sports development well. This inspires me to train harder in my last academic year."

Song Kexin, women's basketball team captain recalled, "My coach introduced the men's team and asked me to introduce the women's team to President Xi. The president also asked me which position I play in basketball. He said he was looking forward to watching the game I play in the future, which thrilled me."

For student representatives, what inspired Wang Mengyao, a PhD student in the Academy of Arts & Design, the most was the holistic development of the youth stressed by President Xi. "We will always uphold the University spirit of 'Actions Speak Louder than Words', and harvest high-quality aesthetic lives," said Wang Mengyao as she shared her determination.

It was also a great honor for Harood Nishat (Pakistan) from the School of Materials Science and Engineering to meet President Xi. Deeply inspired by President Xi's speech, it has motivated him to work harder at the same time. "Being a TsinghuaRen means you always have the world in heart and social commitment on shoulders," he said.



Meet the aspiring Tsinghua youth

Editor's Note:

If the youth are the hope of the future, their determination, passion and innovation are the force to bring about changes, changes that make a difference, the difference that advances human progress, and the progress that leads to a community with a shared future for mankind.

As China celebrates National Youth Day on May 4, meet some of our inspiring Tsinghua youth who have been striving for excellence and innovating for the future with great passion and concrete actions.



Chen Xiang: Fuel scientific exploration with passion and determination

"Tsinghua's long-cherished ethos 'Actions Speak Louder than Words' has nurtured the truth-seeking spirit among us, which further directs us to frame our research with rigor and precision."

After completing his undergraduate study at Tsinghua in 2016, Chen Xiang commenced his PhD specializing in energy chemistry. Years of dedication have turned him into a well-established independent researcher and sharpened his edge in spotting complex scientific issues and mapping out plans for solutions.

Chen's research has been published in top-ranking international journals, which made him become the only PhD student at Tsinghua to be named among those Highly Cited Researchers by Clarivate Web of Science. Currently, he serves as a Shuimu Tsinghua Scholar, a prestigious and competitive program launched by Tsinghua for leading and innovative researchers in various fields.

"Major challenges such as COVID-19 make the world full of uncertainties. And the development of scientific research in China faces many challenges as well as opportunities, which calls for the efforts and devotion of us young researchers," he says.

Harood Nishat: No sports, no Tsinghua

"Life here at Tsinghua is like a box of chocolates, full of possibilities."

Harood Nishat, a Pakistani graduate student from the School of Materials Science and Engineering, spoke as a guest speaker at an iTalk event. He completed a 110 lap run (44kms) to celebrate Tsinghua's 110th Anniversary.

Talking about the underpinning force for his persistence, Harood makes a special mention of Tsinghua's long-cherished sports tradition of "No sports, no Tsinghua," as well as the spirit of "Always moving forward with persistence and fortitude," the power that helps sustain his never-failing effort throughout his athletic training.

Harood is motivated to contribute to the relationship between China and his home country of Pakistan. "I do want to play a role as a TsinghuaRen in the everlasting and ever-growing friendship between Pakistan and China and shouldering the social commitment to build a better future for humankind," Harood says.





Ekaterina Kaligaeva: Share Tsinghua stories with the world

"At Tsinghua, I've learned to be open to new things and to be innovative. Tsinghua has broadened my horizons and made me look at things from different perspectives. I do not know where I would be if not for Tsinghua. Tsinghua is like my second home."

Ekaterina Kaligaeva, an international student from Belarus, is an undergraduate in the School of Journalism and Communication. Since entering Tsinghua, Ekaterina has had multiple opportunities to represent Tsinghua University and her country in many Chinese national TV shows, such as "Chinese Bridge" and "Happy Camp," CCTV "Chinese Story," "China and Me". She has also hosted several Tsinghua official events, including the 2019 New Year Gala, and the 2018 Freshmen Enrollment Ceremony.

For her outstanding contributions to the University's global communication by sharing Tsinghua's stories with the world, she was awarded as one of the eight students for the first cohort of Tsinghua Global Student Ambassadors.

"Be brave and don't be afraid to take on challenges that come towards you. Try to leave your comfort zone and experience new things as much as you can!"

Cai Zezhou: Find the path that suits you the most

"I believe there are many different paths to take in this world. There is no need to rush; find the path that suits you the most."

Cai Zezhou, a PhD student from the School of Public Policy and Management, has continued her academic career in Tsinghua since she graduated from Tsinghua's School of Law in 2016.

After finishing her undergraduate law degree, she received the Fulbright Scholarship to study at Georgetown University. With the mindset of "choosing to leave for a better return," Zezhou returned to Tsinghua to join the Schwarzman Scholars program.

As a result of her education both in Tsinghua and abroad, Zezhou firmly believes that the analysis and discussion of public policy and administration fit her interests. She hopes to solve current social issues through public policy and administration, which motivates her to pursue a PhD at the School of Public Policy and Management.

"I didn't set a clear goal; instead, I would open up my mind, experience extensively, and gradually form my direction."

With their enthusiasm, creativity, and ceaseless effort, youth around the world play important roles in various fields and contribute to society immensely. The future world, which faces both challenges and opportunities, calls for more dedication and efforts from the young talents now more than ever.





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