

• 2004 •

何梁何利奖

HI HL PRIZE

何梁何利基金评选委员会 编

THE SELECTION BOARD OF HO LEUNG HO LEE FOUNDATION



中国科学技术出版社

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内 容 提 要

本书是何梁何利基金出版物——《何梁何利奖》的第十一集。书中概要介绍了 2004 年度何梁何利基金 49 位获奖人的生平经历和主要科技成就。为了便于海内外人士了解本奖背景，书中同时收入了反映何梁何利基金及其科技奖励情况的资料，作为附录刊出。

This is the eleventh collection of the publications of Ho Leung Ho Lee Foundation——*Ho Leung Ho Lee Prize*. In this book, the biographical notes on the awardees of the year 2004 and their main scientific and technological achievements are accounted briefly. This collection includes appendices concerning Ho Leung Ho Lee Foundation and its scientific and technological prize in order to help the readers both in China and abroad to understand the background of this prize.

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国务委员陈至立、全国人大常委会副委员长许嘉璐和全国政协副主席周铁农等国家领导人在人民大会堂与 2004 年度何梁何利基金获奖人合影

Chen Zhili, State Councilor, Xu Jialu, Vice Chairman of the Standing Committee of the National People's Congress, Zhou Tienong, Vice Chairman of the Chinese People's Political Consultative Conference (CPPCC), and other senior leaders have a group photo taken with the winners of 2004 HLHL Prize.



2004 年 11 月 10 日,何梁何利基金 2004 年度颁奖典礼(第十一届)暨基金成立十周年纪念大会在北京人民大会堂举行。国务委员陈至立、全国人大常委会副委员长许嘉璐和全国政协副主席周铁农等在主席台上

On November 10, 2004, 2004 Award Ceremony (the Eleventh) of Ho Leung Ho Lee Foundation and the Commemoration Meeting of the Tenth Anniversary of the Founding of Ho Leung Ho Lee Foundation is held at the Great Hall of the People in Beijing. Chen Zhili, State Councilor, Xu Jialu, Vice Chairman of the Standing Committee of the National People's Congress, Zhou Tienong, Vice Chairman of the Chinese People's Political Consultative Conference, and other senior leaders are on the rostrum.



国务委员陈至立为 2004 年度何梁何利基金科学与技术进步奖数学力学奖获奖人颁奖

Chen Zhili, State Councilor, presents award to the winners of Mathematics and Mechanics Prize of 2004 HLHL Prize for Science and Technology Progress.



全国人大常委会副委员长许嘉璐为 2004 年度何梁何利基金科学与技术进步奖物理学奖获奖人颁奖

Xu Jialu, Vice Chairman of the Standing Committee of the National People's Congress, presents award to the winners of Physics Prize of 2004 HLHL Prize for Science and Technology Progress.



全国政协副主席周铁农为 2004 年度何梁何利基金科学与技术进步奖化学奖获奖人颁奖
Zhou Tienong, Vice Chairman of the Chinese People's Political Consultative Conference, presents award to the winners of Chemistry Prize of 2004 HLHL Prize for Science and Technology Progress.



全国人大常委会教科文卫委员会主任委员朱丽兰为 2004 年度何梁何利基金科学与技术进步奖获奖人颁奖

Zhu Lilan, the Chairwoman of Education, Science, Culture and Public Health Committee of the National People's Congress, presents award to the winners of 2004 HLHL Prize for Science and Technology Progress.



何梁何利基金评选委员会秘书长、国有重点大型企业监事会主席段瑞春宣布获奖名单

Duan Ruichun, the Secretary-General of the Selection Board of Ho Leung Ho Lee Foundation, the Chairman of the Board of Supervisors of Large-sized and Key State-owned Enterprises, announces the list of winners of 2004 HLHL Prize.



何梁何利基金 2004 年度颁奖典礼(第十一届)暨基金成立十周年纪念大会会场全景

Panorama for meeting place of 2004 Award Presentation Ceremony (the Eleventh) of Ho Leung Ho Lee Foundation and the Commemoration Meeting of the Tenth Anniversary of the Founding of Ho Leung Ho Lee Foundation.

在何梁何利基金 2004 年度颁奖典礼暨基金成立十周年纪念大会上的讲话

全国人大常委会副委员长 许嘉璐

(2004 年 11 月 10 日,北京)

各位来宾,同志们、朋友们:

今天,何梁何利基金隆重举行 2004 年度颁奖典礼暨基金成立十周年纪念大会,向荣获 2004 年度“何梁何利基金科学与技术进步奖”的 49 位优秀科学家颁奖,同时庆贺何梁何利基金 10 年的成功历程,总结社会力量创办科技奖励的宝贵经验,推进我国科技进步与创新。这是我国科技界、教育界和社会各界的一大盛事。

今天获得何梁何利基金“科学与技术进步奖”的 49 位科学家,是我国科技工作者的杰出代表。他们中间,有为我国基础科学毕生耕耘、成就卓著、德高望重的老一辈科学家,有作为我国重大科技攻关中流砥柱,创造杰出业绩的中年科技骨干,也有在新科技革命大潮中脱颖而出、后来居上的一代科技新秀;有活跃在沿海地区和中心城市,进军科技前沿的科技精英,也有扎根祖国内陆和边疆艰苦环境,奋发有为的卓越人才。他们在数学、物理学、化学、天文学、地学、生物学、医学、农学和技术科学等不同领域,顽强拼搏、勇攀高峰,所取得的重大发明、发现和科技成果,为加速我国现代化建设做出了突出贡献。他们获得奖励是当之无愧、众望所归。在这里,我代表全国人大、代表国务委员陈至立和全国政协副主席周铁农,向全体获奖科学家表示热烈的祝贺。

科学技术是第一生产力。人才是开拓和解放先进生产力的第一资源。以人为本是科学发展观的核心。我国宪法把奖励科学研究成果和技术发明创造,确定为国家的神圣职责之一。依据《科学技术

进步法》，我国积极实施国家科学技术奖励制度，同时支持和鼓励社会力量创办科技奖励，为推进科技进步与创新建立富有生机与活力的激励机制。正是以奖励我国优秀科学家为崇高宗旨，香港爱国金融实业家何善衡、梁铨琚、何添、利国伟先生于1994年3月捐赠巨款设立何梁何利基金。在1994年5月举行成立大会期间，朱镕基同志高度评价基金的创立是一项义举、善举，功在当代，泽被永远。10年来，基金信托委员会、评选委员会和投资委员会不辱使命，不负众望，以鲜明的宗旨、透明的制度、规范的管理，“公平、公正、公开”的评审规则，使得何梁何利基金成为在国内外影响巨大的社会性、公益性、权威性科技奖励基金。截至2004年，共有21位杰出科学技术工作者荣获“科学与技术成就奖”，555位优秀科技工作者荣获“科学与技术进步奖”。在这576位获奖人中，有6位已经荣登国家最高科学技术奖的宝座。在今天的大会上，为纪念基金成立10周年首发的《何梁何利基金纪念文集》（1994 - 2004）和《功在当代，泽被永远——何梁何利基金十周年》画册，生动记录了何梁何利基金十年成功历程，展示了基金创立者促进祖国科技事业的远见卓识和获奖科学家致力科技进步与创新的丰功伟绩，同时深刻总结了按照“一国两制”方针，内地和香港共同创办科技奖励基金的经验。这是一笔宝贵的精神财富，不仅对促进新时期科技事业的发展，而且对推进我国内地与香港的科技合作与交流，具有十分重要的作用。

在这里，请允许我再次代表全国人大，代表我国科技界、教育界和社会各界，对何梁何利基金的捐款者、创建者表示衷心的感谢；对在10年间相继离开我们的已故三位捐款人何善衡、梁铨琚、何添表示深深的哀悼和怀念，对基金信托委员会、评选委员会和投资委员会的出色业绩致以诚挚的谢意，对所有志愿为何梁何利基金竭诚服务、默默奉献的工作人员，致以崇高的敬意。

当今世界，科学技术已经成为推动经济社会发展的主导力量，科学技术发展不断突破人类传统认识极限，引发新的科学和技术革命。学科之间、科学和技术之间、自然科学和人文社会科学之间相

互交叉渗透，导致众多跨学科领域的诞生，预示着科学技术将进入一个前所未有的创新密集时代。未来 20 年，是我们必须紧紧抓住并且可以大有作为的战略机遇期。全面建设小康社会，必须依靠科技进步与创新，坚持以人为本，树立和落实科学发展观，坚定不移地实施科教兴国战略和可持续发展战略，走出一条科技含量高、经济效益好、资源消耗低、环境污染少、人力资源优势得到充分发挥的新型工业化道路。为此，国务院正在研究和制定《国家中长期科学与技术发展规划纲要》，确定新时期发展科学技术的指导方针、优先领域、重大项目和政策环境与条件，全国人大常委把修订《科学技术进步法》，健全科学技术法制，促进、引导、规范和保障科学技术事业的全面发展和进步列入重要日程。我国科技战线肩负重要的历史使命。

面对新时期、新任务、新机遇、新挑战，我衷心希望我国科技战线进一步发扬开拓、创新、务实、奉献的精神，努力攀登科学技术高峰，推进基础研究和高技术研究，推进原始性创新和集成创新，推进高新技术产业的群体崛起，创造新时期科技进步与创新的新辉煌。同时，我衷心期待何梁何利基金从新的起点出发，按照科学发展观，在下一个十年把何梁何利科技奖办得更好、更成功，使何梁何利基金伴随新时期科教兴国和人才强国的主旋律，为加速我国科技进步与创新，谱写更新、更美的篇章。

同志们，让我们在 21 世纪世界经济快速发展的激流勇进中，高举邓小平理论和“三个代表”重要思想的伟大旗帜，紧密团结在以胡锦涛同志为总书记的党中央周围，发扬开拓、创新、求实、奉献的精神，为实现中华民族的伟大复兴做出新的更大贡献。

ADDRESS AT THE 2004 AWARD CEREMONY AND THE MEETING OF THE TENTH ANNIVERSARY OF THE FOUNDING OF HO LEUNG HO LEE FOUNDATION

Vice Chairman of the Standing Committee of
the National People's Congress, Xu Jialu
(November 10, 2004, Beijing)

Guests, Comrades and Friends:

Today we're gathering here to hold the 2004 Award Presentation Ceremony and the Meeting of the Tenth Anniversary of the founding of Ho Leung Ho Lee Foundation, and award the 2004 Prize for Scientific and Technological Progress to 49 excellent scientists, at the same time, congratulate a 10-year brilliant course of Ho Leung Ho Lee Foundation, summarize the valuable experience of establishing the scientific and technological award through forces in society in order to promote progress and innovation of China's science and technology.

This is a great event for all walks of life, especially for the scientific and educational circles. The 49 awardees of the Prize of Ho Leung Ho Lee Foundation for Scientific and Technological Progress are the outstanding representatives of China's scientific and technical workers. Among them there are the scientists of the old generation, who have devoted themselves to scientific and technological undertakings, achieved remarkable achievements, enjoyed high prestige, there are the middle-aged scientists, the mainstay in tackling key problems in the field of China's science and technology, and the backbone of the scientific and technological contingents, who have produced excellent results in science and technology; there are also the new batch of gifted people, who have emerged in the tide of the scientific and technological revolution and surpassed the old-timers; there are the elite of scientific and technological circles, who are working hard in the coastal areas and central cities, marching towards the frontiers in the fields of science and technology; there are also the promising and diligent talented people, who have settled down in the country's

hinterland and border areas. By braving difficulties and hardships in a tenacious spirit to scale the heights of science and technology, they have made outstanding contributions for accelerating China's modernization drive, and obtained a lot of important inventions, discoveries and other achievements in scientific research in the fields of mathematics, physics, chemistry, astronomy, geosciences, biology, medicine, agriculture, technological science and other disciplines. They are fully deserved to be awarded and to enjoy popular confidence. Here, on behalf of the National People's Congress, and Chen Zhili, State Councilor, Zhou Tienong, Vice-Chairman of the Chinese People's Political Consultative Conference, I'd like to extend warm congratulations to all the award-winning scientists.

Science and technology are the first primary forces. Human resources are the first primary resources of developing and liberating advanced productive forces. Putting people first is the core of the scientific outlook on development. The award of the achievements in scientific research and technological inventions and innovations is defined as one of the state sacred duties in China's Constitution. In accordance with the Law of Scientific and Technological Progress, China conscientiously implements the state award system of science and technology, supports and encourages the forces in society to establish the scientific and technological foundations in order to improve scientific and technological progress, innovate and establish the vigorous incentive system. Mr. S. H. Ho, Mr. Kau-Kui Leung, Mr. Ho Tim and Dr. Lee Quo-Wei, the patriotic financial industrialists in Hong Kong, with awarding China's excellent scientists as lofty purpose, established the HLHL Foundation by donating a huge sum of money in March 1994. At the inaugural meeting held in May 1994, Ex-Premier Zhu Rongji spoke highly of the HLHL Foundation, considering its founding as a magnanimous act, a philanthropic act, and boundless beneficence. In the past decade, adhering to the distinctive purpose, transparent system, normal management and selection rules of fairness, impartiality, and openness, the HLHL Foundation Trust Committee, Selection Committee and Investment Committee have made the HLHL Foundation the scientific and technological award foundation featuring the Souality, public welfare, and authority, with enormous influence at home and abroad. Altogether 21 outstanding scientific and technical workers have the honor to

win the Prize for Scientific and Technological Achievements, and 555 excellent scientific and technical workers have the honor to win the Prize for Scientific and Technological Progress. Six of them have already won the state scientific and technological award, the highest award in China. In order to celebrate the Tenth Anniversary of the Founding of the HLHL Foundation, at today's meeting "A Collection of Essays in Commemoration of Ho Heung Ho Lee Foundation (1994 – 2004)" and the album titled " Merits Today, Benefits Forever – The Tenth Anniversary of the HLHL Foundation " were first distributed. They record a ten – year successful course of the HLHL foundation; show the foresight and sagacity the founders had for promoting the motherland's scientific and technological undertakings, and the great achievements the award – winning scientists have made for progress and innovation of China's science and technology. They also summarize the experience that how the mainland and Hong Kong jointly established the scientific and technological award in accordance with the policy of " one country, two systems . " This is a valuable spiritual welfare, which has very important significance for promoting not only the development of the scientific and technological undertakings in the new period, but also the scientific and technological cooperation and exchange between China's mainland and Hong Kong.

Here, allow me, on behalf of the National People's Congress, and all walks of life including scientific and educational circles , to express my sincere gratitude again to the donators and founders of the HLHL Foundation; my deep condolence to and cherished memory of the three late donators, Mr. S. H. Ho, Mr. Leung Kau – Kui, Mr. Ho Tim; my heartfelt thanks to the members of the Foundation Trust Committee, Selection Committee and Investment Committee for their outstanding achievements; and my lofty respects to all volunteers for their wholehearted service and selfless devotion.

In the world of today, science and technology play a leading role in promoting economic and social development. The development of science and technology constantly breaks through the limit of the human traditional knowledge, causing the new scientific and technological revolution. The mutual intersection and infiltration between the disciplines, between science and technology, between the natural sciences

and the humanities would lead to the birth of many trans-discipline fields, which indicates a new period of the unprecedentedly intensive innovations. In the coming 20 years, we must seize the most important strategic opportunities to develop our intelligence and wisdom to the full. In order to build a well-off society in an all-round way in China, we must rely on progress and innovation of science and technology, adhere to the principle of putting people first, establish and implement the scientific outlook on development, firmly carry out the strategy of invigorating China through science and education, and the strategy of sustainable development, take a new industrialization road featuring the high scientific and technological contents, high economic benefits, low consumption of the resources, little environmental pollution, and the advantages of human resources can be given to full play. For this purpose, the State Council is studying and formulating a medium-and long-range state plan for developing science and technology in order to define the guiding policy for developing science and technology in the new period, the fields of preferential development, key projects, and policy surroundings and requirements. Revising the Law of Scientific and Technological Progress, amplifying the legal system of science and technology, promoting, guiding, standardizing and guaranteeing the all-round development and progress of the scientific and technological undertakings have been placed on the important agenda by the Standing Committee of the National People's Congress. The Chinese scientific and technical workers shoulder the important and glorious historical mission.

I sincerely hope, faced with the new period, new tasks, new opportunities and challenges, China's scientific and technical workers will further carry forward the spirit of pioneering, innovation, realistic approach and devotion, make efforts to scale new heights in science and technology, promote the basic research and hi-tech research, promote the original innovation and integrated innovation, promote the emergence of the groups of new and hi-tech enterprises, and create brilliant achievements in scientific and technological progress and innovation. Meanwhile, I sincerely hope, in accordance with the scientific outlook on development, and from a new starting point, HLHL Foundation will be managed better and more successfully in the following decade, and will add newer and more illustrious chapters to accelera-

ting progress and innovation of China's science and technology, with the strategy of invigorating China through science and education and the strategy of invigorating China through human resources development as themes.

Comrades, let's make greater contributions for realizing great rejuvenation of the Chinese nation in the rapid development of the global economy in the 21st century, by firmly rallying around the Party's Central Committee with Comrade Hu Jintao as General Secretary, by holding high the great banners of Deng Xiaoping Theory and the important thought of the "Three Represents," and by carrying forward the spirit of pioneering, innovation, realistic approach and devotion.