



清华大学  
Tsinghua University



1<sup>st</sup> Global COE International Symposium on Chemistry Innovation through  
Cooperation of Science and Engineering:  
Doctors' Brilliant Career Design

# Graduate School Education at Tsinghua University

Yaning He

2008-02-15

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## Yaning He (和 亚宁)

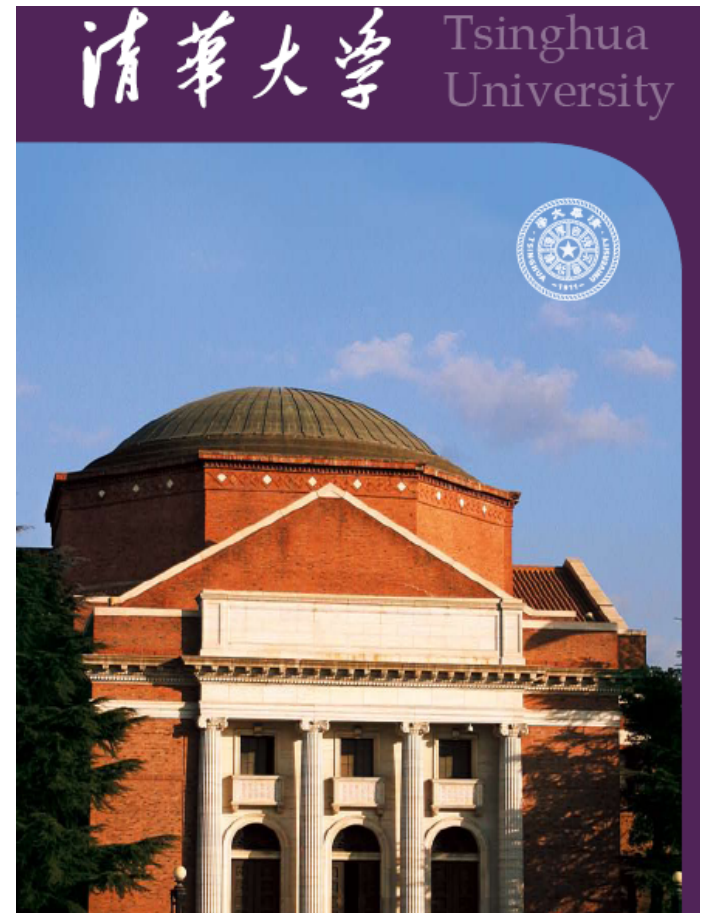
JSPS Postdoctor In Prof. Aida's Lab.  
Department of Chemistry and Biotechnology  
The University of Tokyo

### Education

B.E. Polymer Materials & Chemical Engineering,  
Tsinghua University, Beijing, China, 1998.  
Ph.D. Polymer Science,  
Tsinghua University, Beijing, China, 2003.

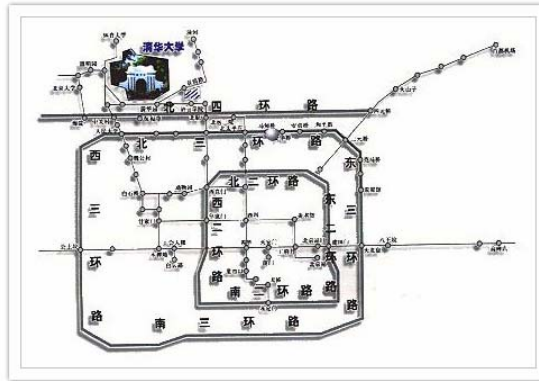
### Research Experiences

2003.01-2006.12 Lecture, Department of Chemical Engineering,  
Tsinghua University, Beijing, China.  
2007.01-Present Associate Professor, Department of Chemical Engineering,  
Tsinghua University, Beijing, China.  
2007.11-Present JSPS Post Doctoral Fellow, The University of Tokyo.





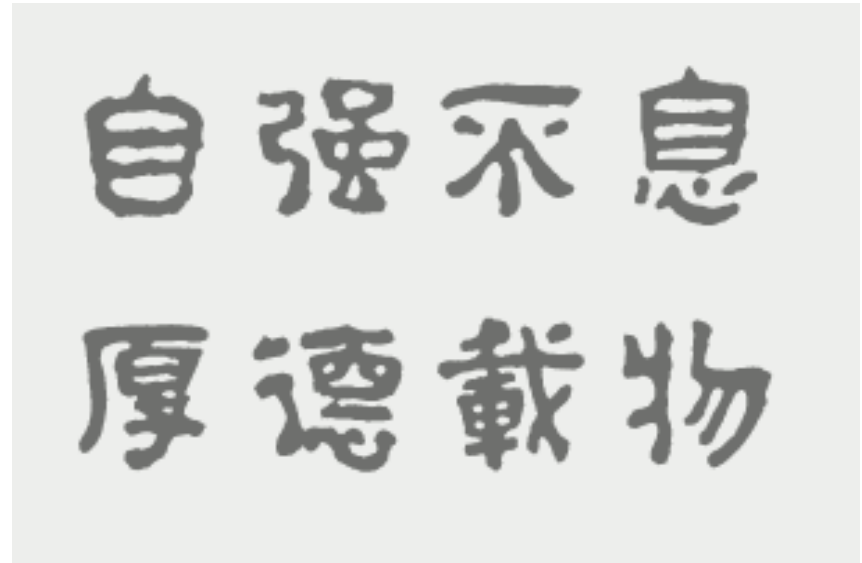
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***Founded in 1911, Tsinghua University--one of China's most famous universities--is situated in former Qing Dynasty imperial gardens surrounded by many historical sites in northwest Beijing. Tsinghua's evolution over the past 97 years has been closely linked to China's development.***



***Actions Speak Louder Than Words***



***Self-discipline and Social Commitment***

**“Self-discipline and Social Commitment” “Actions Speak Louder Than Words” are the inspiring mottos of Tsinghua. The university has produced more than 120,000 graduates. They contribute significantly to China’s economic, social, cultural, educational and scientific development.**



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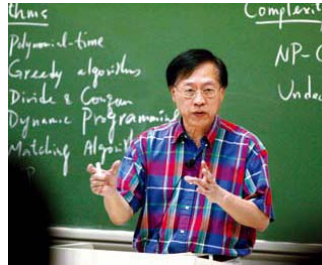
NS-1 纳型卫星  
Nano-Satellite No.1

**Nano-Satellite No.1**

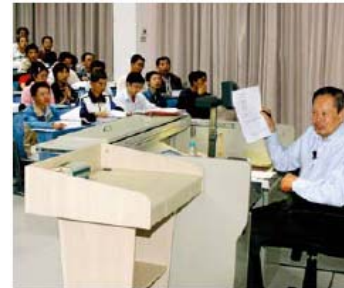


大型集装箱检查系统已在海关成功安装运行并批量出口  
Large container inspection systems installed in Customs and exported

**Large container inspection systems installed in customs and exported**



图灵奖获得者、中国科学院院士姚期智教授  
Professor Andrew Chi-chih Yao, Turing Award Winner and member of the Chinese Academy of Sciences



诺贝尔奖获得者、中国科学院院士杨振宁教授  
Professor C.N. Yang, Nobel Prize Winner and member of the Chinese Academy of Sciences



中国科学院院士、中国工程院院士张光斗教授  
Professor Zhang Guangdou, member of the Chinese Academy of Sciences and the Chinese Academy of Engineering



**Miyun reservoirs**

**The university currently has the highest number of academicians and nationally renowned teachers of any college or university in China.**

**Many government leaders in China were graduated from Tsinghua university.**



由建筑设计研究院设计的 2008 年北京奥运会射击馆  
Beijing Shooting Range for the 2008 Olympic Games designed by the Architectural Design and Research Institute of Tsinghua University

**Beijing Shooting Ranger for the 2008 Olympic Games**



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# The Campus

The garden-like campus of Tsinghua features beautiful scenery of trees and lakes covering more than 3 million square meters. Old, in many cases historic, structures and modern new buildings stand side-by-side on the well-tended grounds. The total area of the university is more than 4 million square meters and the construction area is more than 2.5 million square meters.



清華園  
Tsinghua Garden



工字厅  
建校前清华园的主体建筑之一，初建于 1762 年  
Gongziting  
Originally built in 1762, one of the major buildings in Tsinghua Garden prior to the founding of the university



水木清华  
Lotus Pond



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# TSINGHUA UNIVERSITY



**TSINGHUA FACTS 2007**

## Basic Tsinghua Facts

<b>Total Members of Faculty and Staff</b>	<b>7588</b>
Professors	1291
Associate Professors	1811
Faculty Members	2857
Members of the Chinese Academy of Sciences	34
Members of the Chinese Academy of Engineering	30
Ph.D. Supervisors	939
Postdoctoral Researchers	855
<b>Total Number of Students</b>	<b>31786</b>
Undergraduate Students	13788
Masters Students	12842
Academic Degrees	8065
Professional Degrees	4777
Ph.D. Candidates	5156
<b>Total Area of the University</b>	<b>405.9 Hectares</b>
<b>Construction Area of the University</b>	<b>2.526 million square meters</b>

(The data reflected in The Handbook was collected through December 31, 2006)



# *Graduate Education*

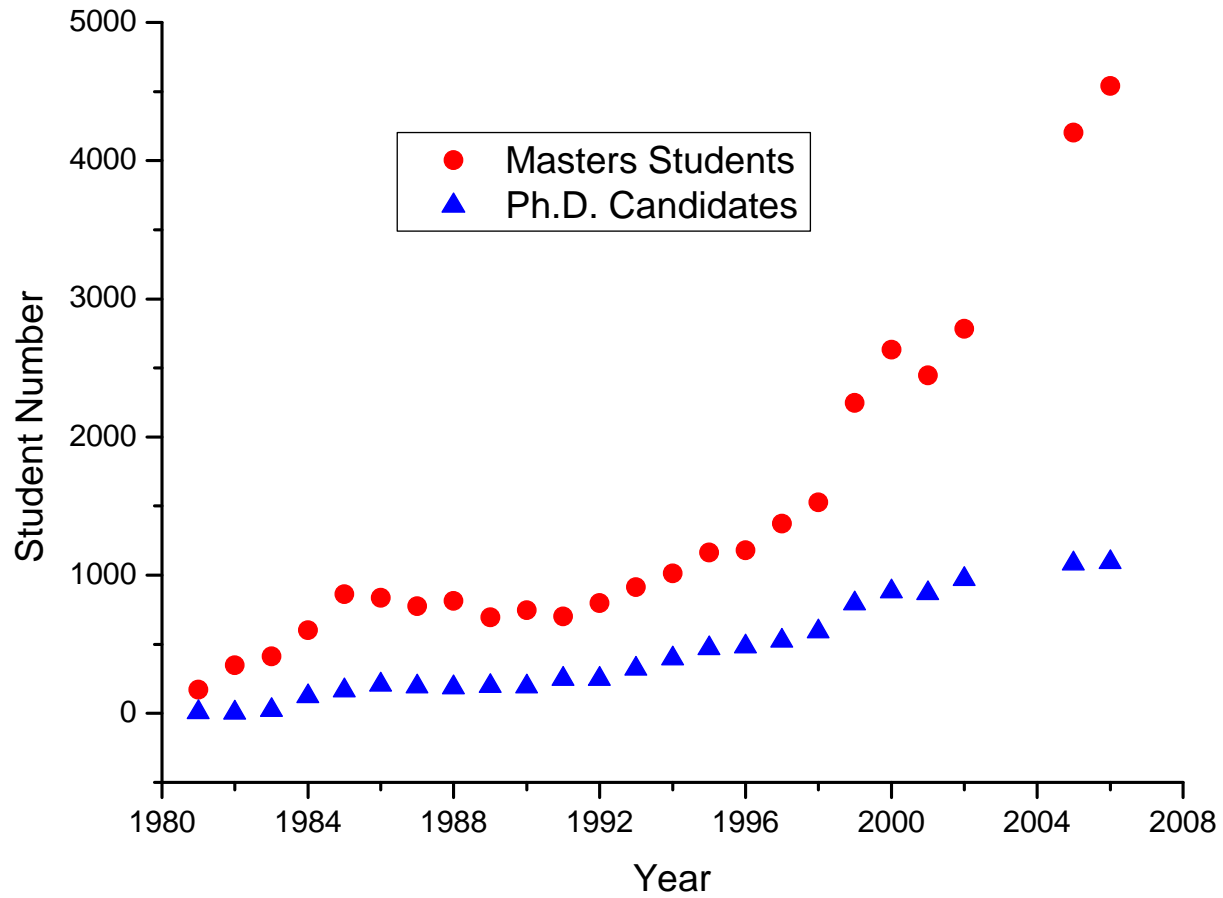


In 2006 Tsinghua enrolled 5,632 graduate students. There were among these 4,539 students working towards masters degrees and 1,093 towards doctoral degrees. Since 1978, Tsinghua University has enrolled 54,000 graduate students. Of this total, 12,300 have been doctoral students and 41,000 masters students.





# Enrolled Students





## Masters Degree Program

*Applicants holding a bachelor's degree or an equivalent degree from an accredited college or university can apply for the master's degree program and take part in the entrance examination. After passing the examination, qualified candidates are interviewed and selected by the University's respective departments. Some students judged to be outstanding can be admitted on the basis of strong recommendations. The period of study for a master's degree is usually 2-3 years.*



2006: Average admission ratio is about

8: 1

Department of Chemical Engineering

162 : 17

Department of Biological Science and Biotechnology

153 : 24

Department of Chemistry

115 : 12

.....



## Masters Degree Program



1. ***Credits  $\geq$  28***
2. ***Master's thesis:***
  - 1) ***At the beginning of the thesis work, the students should have a report including the significance of topics, research methods, working conditions, existing problems.....***
  - 2) ***In the mid-term, the inspection teams will check the progress of the thesis work.***
  - 3) ***At the end of the work, the thesis will be reviewed by 3 experts.***
  - 4) ***The thesis defense.***



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## ***Doctoral Program***

***Applicants holding a master's degree or an equivalent degree can apply for doctoral degree programs. They take part in the examination. Then they are interviewed for admission by the respective departments. Outstanding students can be enrolled directly into doctoral programs after receiving their bachelor's degree. The period of study for a doctoral degree is usually 3-4 years.***



大礼堂  
清华早期建筑之一，1921年建成  
The Auditorium  
Built in 1921, one of the original buildings in Tsinghua's early history



## Doctoral Program

1. ***Credits  $\geq 11$  (from master);  $\geq 33$  (from bachelor).***
2. ***Thesis:***
  - 1) ***Qualifying Examination ( often at the end of the first year).***
  - 2) ***After 1 (from master) or 2 (from bachelor) years work, the student should have a defense on the topics he chooses.***
  - 3) ***The student should take part in the social practice arranged by the university ( about 1 or 2 months).***
  - 4) ***Academic activities and academic report.***
  - 5) ***At the end of the work, the thesis will be reviewed by at least 5 experts (3 will be in anonymous).***
  - 6) ***The thesis defense.***



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## ***Ph. D. Student Innovation Program***

The University has set up a number of funds to improve the quality of Ph.D. graduates by developing doctoral students' creative thinking skills. The funds are the Innovation Fund for Ph.D. Students' Scientific Research, the Doctoral Fund for International Meetings, and the Award Fund for Outstanding Doctoral Dissertations.

## ***Overseas Scholars' Short-Term Courses***

In order to expand graduate students' global vision and to promote design of graduate courses, Tsinghua initiated the "Overseas Scholars' Short-Term Courses Plan". The Plan funds over 130 scholars from abroad universities.

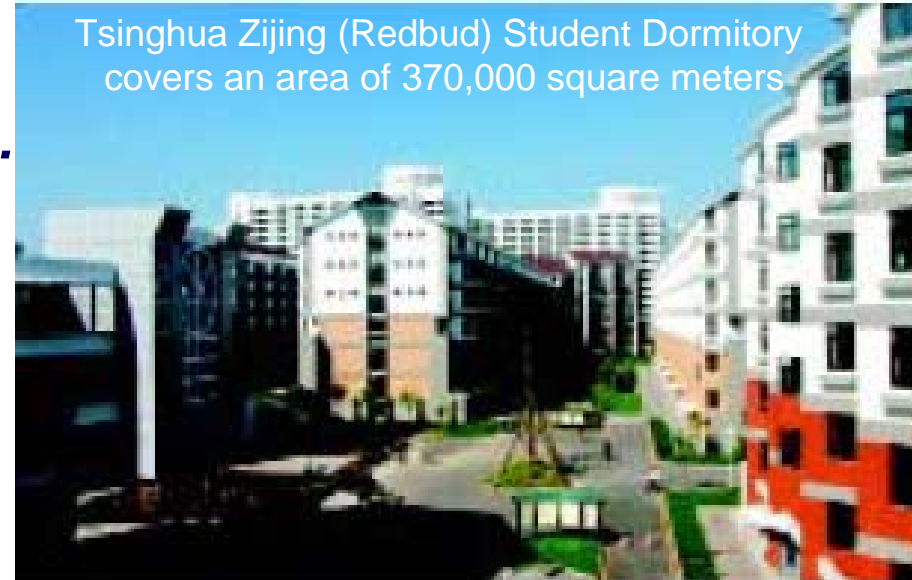
## ***International Cooperation and Exchange in Graduate Education***

International cooperation and exchange activities such as graduate students exchange programs with overseas universities, cooperation in research, and joint-degree programs were adopted to promote graduate education at Tsinghua. In 2006, more than 1,000 graduate students went abroad to do joint-research, to attend international meetings, and to have short-term exchanges. Besides, a number of schools and departments have established graduate degree programs for excellent students from abroad.



## ***Some Differences Between Chinese and Japanese Graduate Education Systems***

- 1. Number of Graduate Students.***
  - 2. Hardworking.***
  - 3. Daily life.***
- .....





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*Thank you very much!*