

POSTECH



October 2008

POHANG UNIVERSITY OF SCIENCE AND TECHNOLOGY



Land: 1,731,759m²

Building: 423,758m²

Student: 2,942
1,377 (undergraduate)
1,642 (graduate)

Faculty: 237

Researcher: 673
(Post-doctoral: 185)

Staff: 232
Regular: 205
Others: 27

(As of April 2008)

- (1) PAL: Pohang Accelerator Laboratory
- (2) RIST: Research Institute of Industrial Science and Technology
- (3) PIRO: Pohang Institute of Intelligent Robotics
- (4) PBC: POSTECH Biotechnology Center



Pohang Accelerator Laboratory (PAL)



Linear accelerator	160m long, 2.5 GeV
Storage ring	2.5 GeV, 12-period Triple Bend Achromat lattice, low emittance third generation machine, 280m in circumference
Beamlines	Operating 23 beamlines
Users	More than 1,000 per year



- 10 undergraduate departments, 14 graduate programs
- Faculty to undergraduate students ratio: 1 to 6
- **Admit 300 freshmen per year representing top 1% of high school graduates**

Undergraduate

Chemistry
Life Science
Mathematics
Physics

Chemical Eng.
Computer Science & Eng.
Electrical & Electronic Eng.
Industrial & Management Eng.
Materials Science & Eng.
Mechanical Eng.
(Division of Humanities & Social Sciences)

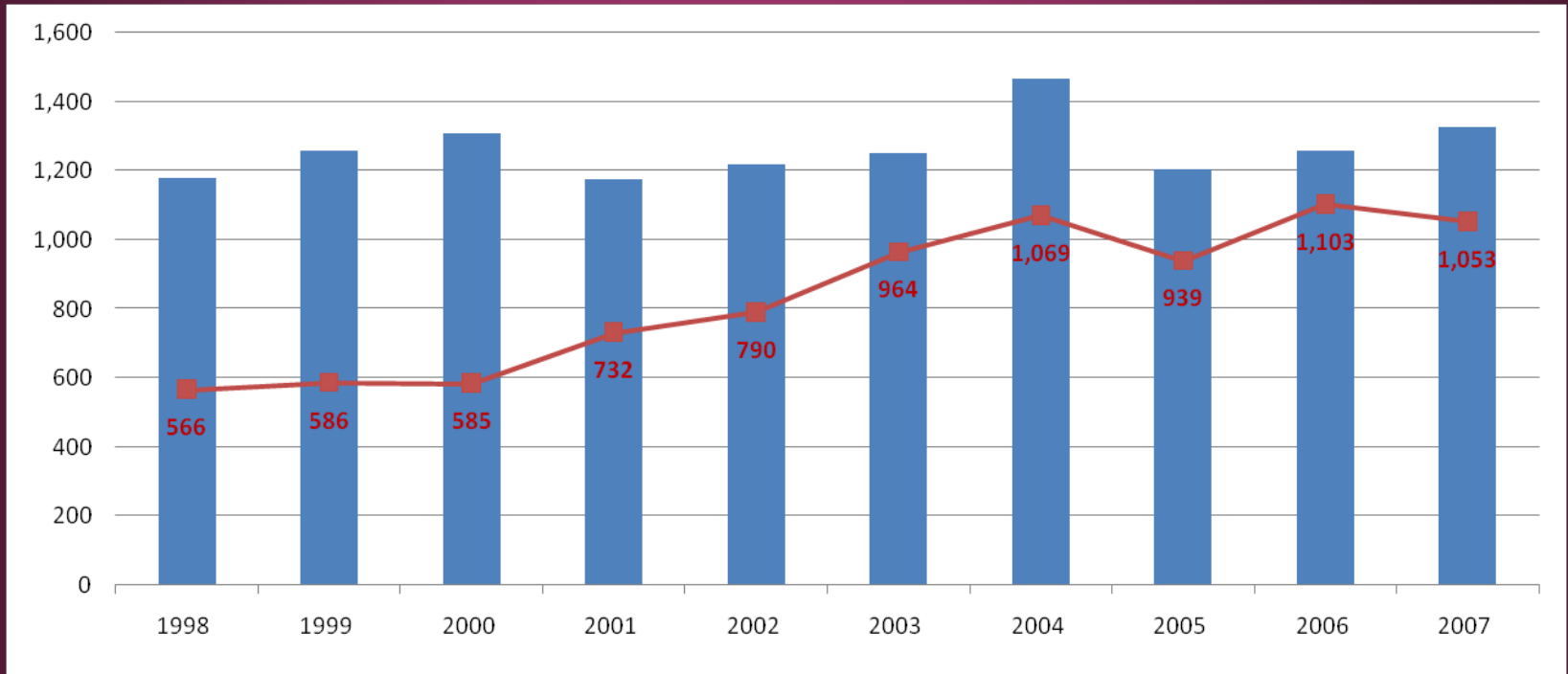
Graduate

Chemistry
Molecular & Life Sciences
Mathematics
Physics

Chemical Eng.
Electrical & Computer Eng.
Materials Science & Eng.
Mechanical & Industrial Eng.

School of Interdisciplinary Biosci. & Bioeng.
School of Environmental Science & Eng.
Graduate School for Information Tech.
Graduate School for Wind Energy
Graduate Institute of Ferrous Technology
Technology Innovation & Management
Graduate Program

Research Publications



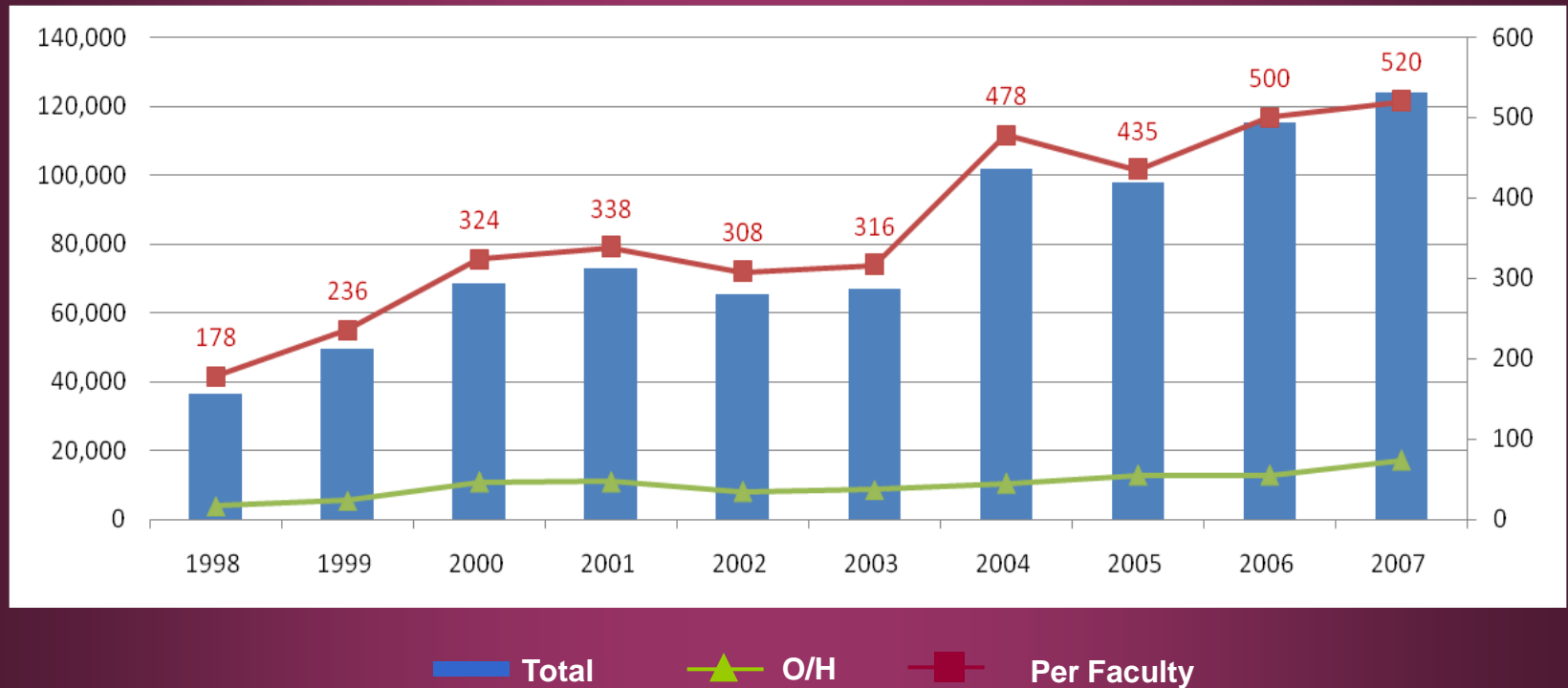
■ Total
 ■ SCI

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Total	1,180	1,257	1,310	1,176	1,219	1,250	1,466	1,203	1,259	1,328
SCI	566	586	585	732	790	964	1,069	939	1,103	1,053
SCI (per Faculty)	2.9	2.9	2.9	3.5	3.8	4.7	5.2	4.4	5.0	4.6
Impact Factor				2.17	2.21	2.17	2.15	2.23	2.40	2.54

Research Grants per Faculty



(Unit: 1,000 USD)



Year	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07
Total	36,624	49,529	68,598	73,051	65,213	66,996	101,740	97,810	115,327	123,847
Per Faculty	178	236	324	338	308	316	478	435	500	520



The Times Higher Education Supplement 2007

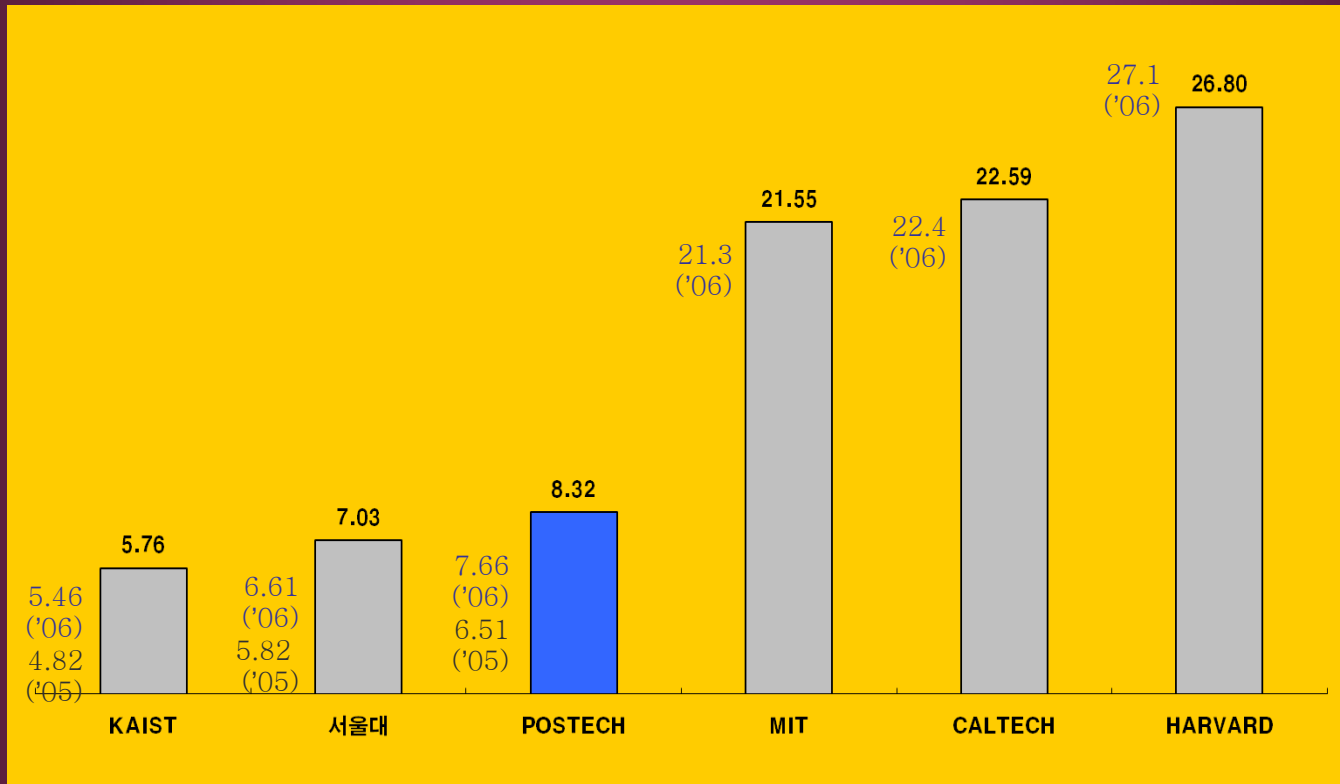
□ World Top 20 – Citations per Faculty

1	CALIFORNIA Institute of Technology (Caltech)	United States	100
2	STANFORD University	United States	99.9
3	MASSACHUSETTS Institute of Technology (MIT)	United States	98.4
4	Ecole Normale Supérieure, PARIS	France	98.3
5	University of ALABAMA	United States	98.2
6	PRINCETON University	United States	96.5
7	HARVARD University	United States	95.9
8	JOHNS HOPKINS University	United States	95.8
9	University of CALIFORNIA, San Diego	United States	95.4
9	University of ZURICH	Switzerland	95.4
11	University of WISCONSIN-Madison	United States	94.8
11	POHANG University of Science and Technology	Korea, South	94.8
13	CORNELL University	United States	93.2
14	University of TORONTO	Canada	93.1
14	LEIDEN University	Netherlands	93.1
16	GEORGIA Institute of Technology	United States	92.7
17	University of HELSINKI	Finland	92.6
18	DUKE University	United States	92.4
18	University of California, BERKELEY	United States	92.4
20	HONG KONG University of Science & Technology	Hong Kong	92



Highest Citation Number per Paper in the Nation

Citation per paper (1/1/1997 ~ 8/31/2007)

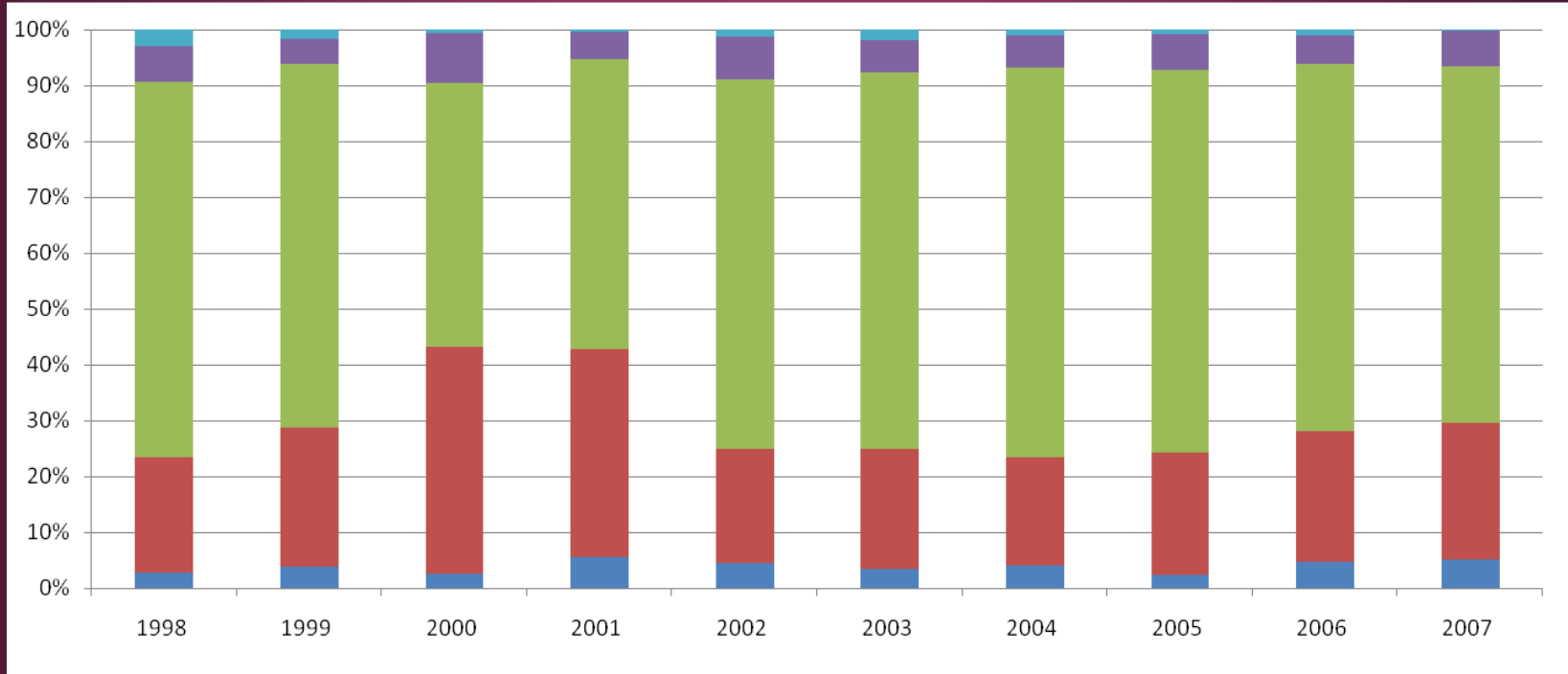


Essential Science Indicators updated on November 1, 2007

Research Grants by Sponsor



(Unit: 1,000 USD)



■ POSTECH
 ■ POSCO
 ■ Government
 ■ Industry
 ■ Others

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
POSTECH	1,027	1,864	1,723	4,081	2,942	2,210	4,120	2,387	5,436	6,300
POSCO	7,524	12,364	27,945	27,110	13,277	14,532	19,621	21,245	27,032	30,316
Government	24,628	32,226	32,413	37,987	43,202	45,142	71,148	67,119	75,665	79,091
Industry	2,331	2,246	6,128	3,522	4,957	3,887	5,757	6,243	6,003	7,921
Others	1,114	829	389	351	835	1,225	1,094	816	1,191	219
Total	36,624	49,529	68,598	73,051	65,213	66,996	101,740	97,810	115,327	123,847

An aerial photograph of a large university campus, likely in South Korea, featuring numerous multi-story academic buildings with green roofs, a central circular road, and surrounding residential areas. The text "Thank You" is overlaid in a large, light blue, sans-serif font across the center of the image.

Thank You



VISION

World's top 20 by 2020

OBJECTIVE

Foster talent in S&T
(creative, progressive, global leaders)
Create research breakthroughs
(strong academic & social impact)

STRATEGY

Selection & Concentration
Interdisciplinary Programs
Globalization
Process Innovation

1. Education

3. Faculty

4. Global Visibility

5. Financial

2. Research

Founding principles



The Times Higher Education Supplement 2007

□ Overall Ranking of POSTECH : 233

Criteria	Peer Review	Recruiter Review	Int'l Faculty	Int'l Student	Faculty/ Student	Citation/ Faculty	Overall Score (Rank)
Weighting of Item	40%	10%	5%	5%	20%	20%	-
Seoul National Univ.	92 (42)	54 (146)	16 (192)	24 (181)	80 (56)	79 (88)	77.1 (51)
KAIST	65 (136)	27 (370)	53 (186)	28 (367)	64 (142)	85 (71)	63.7 (132)
POSTECH	29.8 (372)	30 (344)	40	16	65	95 (11)	51.0 (233)



73 sister universities in 19 countries across the world

Australia (4)

The Australian National U
U of Melbourne
U of Newcastle
U of New South Wales

Austria (1)

Technische Universität Graz

Canada (1)

U of Waterloo

China (13)

Fudan U
Harbin Institute of Technology
Nanjing U
Northeastern U
Peking U
Shanghai Jiao Tong U
Tsinghua U
U of Electronic Science & Technology of China
U of Science & Technology Beijing
U of Science & Technology of China
Xian Jiaotong U
Yanbian U of Science & Technology
Zhejiang U

Denmark (1)

Technical U of Denmark

Democratic People's Republic of Korea (1)

Pyongyang U of Science and Technology

France (10)

École Centrale de Nantes
École Nationale Supérieure des Mines de Paris
Institut National Polytechnique de Grenoble
Institut National Polytechnique de Toulouse
Université de Technologie de Compiègne
Université de Technologie de Belfort-Montbéliard
Université de Technologie de Troyes
Institut National des Sciences Appliquées de Lyon (INSA-Lyon)
École Nationale Supérieure d'ingénieurs de Caen
École Polytechnique

Germany (5)

Freie Universität Berlin
Max Planck Gesellschaft
RWTH Aachen
Technische Universität Berlin
Technische Universität Kaiserslautern

Italy (1)

Politecnico di Torino

Japan (6)

Kyoto U
Kyushu U
Ritsumeikan U
Ritsumeikan Asia Pacific U
Tohoku U
Tokyo Institute of Technology

New Zealand (1)

U of Auckland

Russia (5)

Moscow Engineering Physics Institute
Moscow State U
St. Petersburg Electrotechnical U
The Joint Institute of Nuclear Research
St. Petersburg State Polytechnical U

Slovakia (1)

Slovak U of Technology in Bratislava

Switzerland (1)

Eidgenössische Technische Hochschule Zürich

Thailand (1)

Suranaree U of Technology

Taiwan (3)

National Cheng Kung U
National Tsing Hua U
National Taiwan U

United Kingdom (2)

Imperial College of Science, Technology & Medicine
U of Birmingham

United States (12)

Carnegie Mellon U
U of California, Berkeley
U of California, Davis
U of California, Merced
U of Maryland, College Park
U of Minnesota, Twin Cities
California Institute of Technology
U of Illinois at Urbana-Champaign
Princeton Plasma Physics Laboratory
Rensselaer Polytechnic University
Syracuse U
U of Washington, Seattle

Vietnam (4)

Hanoi U of Technology
Vietnam National U, Hanoi
Vietnam National U, Ho Chi Minh
Vietnamese Academy of Science and Technology



- 1986** • Pohang Institute of Science and Technology open as the first research-oriented university in Korea
- 1992** • Graduate School of Information Technology (GSIT) open
- 1994** • Pohang Accelerator Laboratory, PAL (3rd-generation accelerator: 2 GeV) open
• Change official name to Pohang University of Science and Technology
- 1995** • Graduate School of Iron & Steel Technology (GSIST) open
- 1996** • School of Environmental Science and Engineering (SEE) open
- 1998** • *Asiaweek* Magazine ⁽¹⁾ rank POSTECH #1 among Asian science & technology univ.
- 2001** • Asia Pacific Center for Theoretical Physics (APCTP) headquarters move to POSTECH
- 2002** • *JoongAng Daily* ⁽²⁾ rank POSTECH #1 among Korean universities
• Ministry of Education & Human Resources select POSTECH as 'Excellent university for educational reform' (7 years in a row)
- 2003** • POSTECH Biotech Center, PBC open
• *JoongAng Daily* rank POSTECH #1 among Korean universities
• Tae-Joon Park Digital Library open
- 2005** • *JoongAng Daily* rank POSTECH #1 among Korean universities (4 years in a row)
- 2006** • POSTECH Vision 2020 Declaration Ceremony
- 2007** • *JoongAng Daily* rank POSTECH #1 among Korean universities
• *The Times Higher Education Supplement* ⁽³⁾ rank POSTECH #11 in Citations per Faculty

(1) Published in Hong Kong (2) Major Korean daily newspaper (3) Published in United Kingdom



National Center for Nanomaterials Technology (NCNT)



- **Support nanomaterials industrialization**
- **Establish academy-industry cooperation**
- **Train manpower in the field of nanomaterials**

Pohang Institute of Intelligent Robotics (PIRO)



- **Service robot: moving platform, operating, intelligence technology**
- **Bio-medical robot: cell operating, haptic medical robot, diagnosis robot**
- **Ocean floor robot: probing, picking minerals**



POSCO International Center



Overview	<ul style="list-style-type: none">• Area: 17,032 m2 (5 ground, 2 basement levels)• Main facilities: conference area, hotel, dining facilities
Purpose	International conferences to promote academic and research collaborations



Tae-Joon Park Digital Library



- Digitalization/internet DB construction of academic information
- Information hub with cyber function
- Providing an environment for various multimedia utilization

POSTECH Biotechnology Center (PBC)

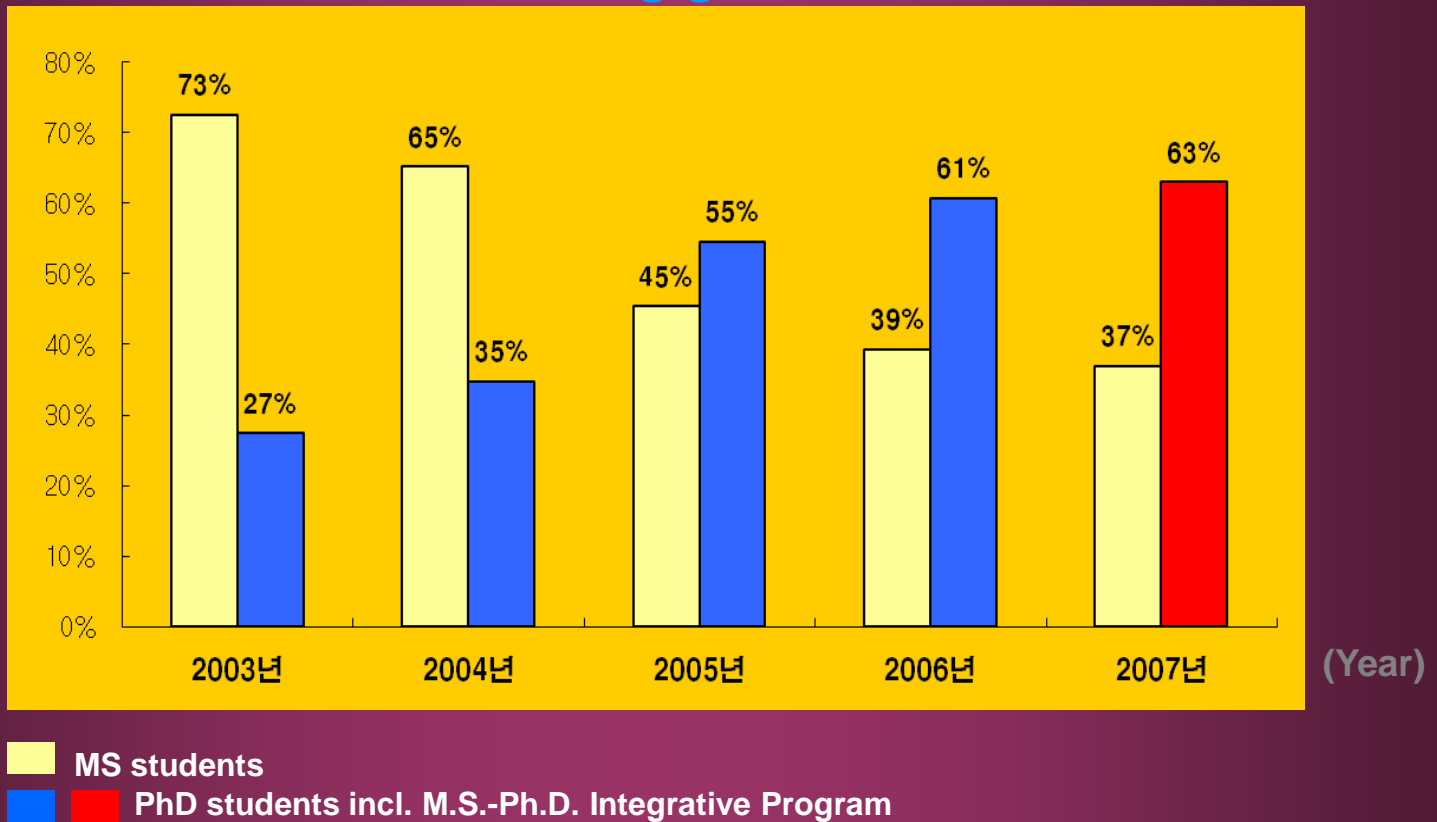


- Cutting-edge research and education in biotechnology, academia-industry cooperation
- Major research areas:
molecular medicine, plant biotechnology,
nanobiotechnology, basic sciences & technology



Greater emphasis on Ph.D. programs to enhance competitiveness

Ratio of students entering graduate schools



What makes POSTECH unique in Korea?



- 1 The best research-oriented university in Korea**
- 2 Small in size but excellence in quality**
- 3 Low faculty to student ratio**
- 4 Highest education investment in Korea**
- 5 Scholarships/assistantships for all students**
- 6 Lodging provided for all academic members**
- 7 Outstanding faculty**
- 8 World-class research achievement**
- 9 Strong academy-industry cooperation**
- 10 Location and strong community support**