



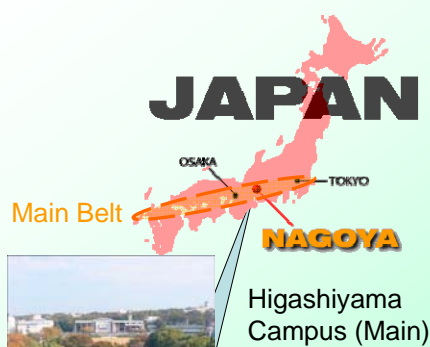
Research Activity of Nagoya University

Prof. Dr. YAMAMOTO, Shin-ichi
Trustee/Vice-President for Research

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Nagoya at the Center of Japan



History of Nagoya University

- 1871 Temporary Hospital
Temporary Medical School
- |
- 1939 Nagoya Imperial University
- |
- 1949 Nagoya University
(under new educational system)
- |
- 2004 Nagoya University
(National University Corporation)

Tsurumai Campus
(Medicine)

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Chief Members of Administration

<u>President</u>	HIRANO, Shin-ichi
<u>Trustee/Vice-President</u>	
(International Affairs & University-Industry Collaboration)	MIYATA, Takashi
(Financial Affairs & Public Relations)	OHMINE, Iwao
(Personnel Affairs & Labor & Legal Affairs)	SABURI, Haruo
(Medicine & Facilities Management & Environmental Safety)	SUGIURA, Yasuo
(Education)	SUGIYAMA, Hiroyuki
(Research)	YAMAMOTO, Shin-ichi
<u>Trustee</u>	
(General Affairs & Planning)	TAKAHASHI, Makoto
<u>Auditor</u>	KIMURA, Youichi
	YUMOTO, Hideyuki
<u>Institute for Advanced Research Director</u>	KONDOH, Takao
<u>Institute of Liberal Arts and Science Dean</u>	WAKAO, Yuji

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Faculty Members & Officials

(as of May 2008)

	Number	Men	Women
Faculty			
Professor	646	93.8%	6.2%
Associate Prof.	522	85.8%	14.2%
Others	624	83.2%	16.8%
Total	1,792		
Official	1,453	47.1%	52.9%
(incl. Technical Official, Nursing Staff of Hospital)			
Full-Time Total	3,245	69.6%	30.4%

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Departments and Students

(as of May 2008)

Undergraduate Course

Letters	609
Education	328
Law	701
Economics	927
Informatics and Sciences	368
Science	1,185
Medicine	1,489
Engineering	3,329
Agricultural Sciences	765

Total 9,701

Men 69.2% Women 30.8%
International Students 1.4%

Graduate Course

Letters	312
Education and Human Development	250
Law	382
Economics	138
Science	541
Medicine	929
Engineering	1,543
Bioagricultural Sciences	386
International Development	292
Human Informatics	5
Mathematics	145
Language and Cultures	224
Environmental Studies	465
Information Science	369
Total	5,981

Men 71.1% Women 28.9%
International Students 13.3% 5



Academic Charter of Nagoya University

February 15, 2000

Appreciating the intrinsic role and historical and social mission of universities, Nagoya University, as a seat of learning, hereby defines its fundamental principles of scholarly activity.

Nagoya University has established its mission as the contribution to the happiness of the people through research and education on humanity, society and nature. In particular, it aspires to foster the harmonious development of human nature and science, and to conduct highly advanced research and education that overlook the broad sweep of humanities, social and natural sciences. Towards this goal, Nagoya University endeavours to implement a variety of measures based on the fundamental objectives and policies outlined below, and to unremittingly carry out its responsibilities as a pivotal university.

1. Fundamental Objectives: Research and Education

(1) Nagoya University, through creative research activity, shall pursue the truth and produce results of scholastic distinction on the international stage.

(2) Nagoya University, through an education that values initiative, shall cultivate courageous intellectuals endowed with powers of rational thought and creativity.

2. Fundamental Objectives: Contribution to Society

(1) Nagoya University, in spearheading scientific research, and through the cultivation of human resources capable of exercising leadership both in the domestic and international arenas, shall contribute to the welfare of humanity and the development of culture, as well as to global industry.

(2) Nagoya University shall put to good use the special characteristics of the local community and, through multi-faceted research activities, contribute to the development of the region.

(3) Nagoya University shall promote international academic co-operation and the education of foreign students, and contribute to international exchange, especially with Asian nations. 6



Academic Charter of Nagoya University

February 15, 2000

(contd.)

3. Fundamental Policies: Research and Education System

- (1) Nagoya University shall study the various phenomena of the humanities, society and nature from an all-inclusive viewpoint, respond to contemporary issues, and adjust and enrich its education system to generate a new sense of values and body of knowledge founded on humanity.
- (2) Nagoya University shall provide for an education system that rightly inherits and develops intellectual resources cultivated in the world's intellectual traditions, and promote educational activity that is both advanced and innovative.
- (3) Nagoya University, through the active dispatch of information and exchange of personnel, and inter-institutional co-operation in Japan and abroad, shall shape the international foundation of academic culture.

4. Fundamental Policies: University Administration

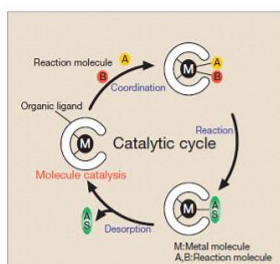
- (1) Nagoya University shall at all times support scientific enquiry based on the autonomy and initiative of its members, and guarantee freedom of academic research.
- (2) Nagoya University shall require its members to participate in the drafting and implementation of both ideals and objectives related to research and education, as well as administrative principles.
- (3) Nagoya University, in addition to promoting autonomous assessment and evaluation from its members with regard to research, education and administrative activity, shall actively seek critical appraisal from external authorities, and aspire to be an accessible university.

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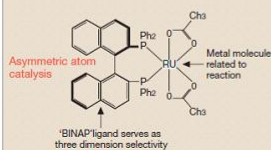


Asymmetric synthesis

Appointed University Professor Ryoji Noyori

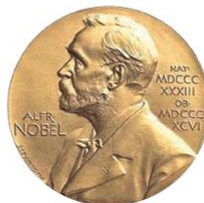


Asymmetric proliferation is possible by using 'molecular catalysis' combined of metal molecule or ion and chiral organic compounds.



Winner of the 2001 Nobel Prize in chemistry

Started catalyzing the new ruthenium complex with ligands of Optically-active phosphine ligand 'BINAP' and 1,2-diamine implemented in the industrial process of perfume (Takasago International Corporation)





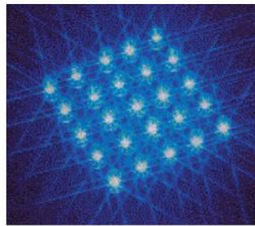
Blue light emitting diode

Emeritus Professor **Isamu Akasaki**

Toyoda Gosei Co., Ltd. put into practice the results, contributing to society
Royalty income on patents returning to the university

→Start of the 'Akasaki Memorial Research Project'

Applied in 1985 → Implemented in 1995



3 researchers associated with NU got Nobel Prize!

Dr. MASUKAWA and Dr. KOBAYASHI win the Nobel Prize in Physics

Dr. SHIMOMURA wins the Nobel Prize in Chemistry



Dr. MASUKAWA



Dr. KOBAYASHI



Dr. SHIMOMURA



Organization for Research

Faculties/Graduate Schools

- Nine undergraduate schools
- Fourteen graduate schools

Research Organizations

- Institute for Advanced Research (IAR)
- Research Institutes
 - EcoTopia Science Institute (ESI)
 - Research Institute of Environmental Medicine (RIEM)
 - Solar-Terrestrial Environment Laboratory (STEL)
- Inter-University Service Facilities
 - Hydrospheric Atmospheric Research Center (HyARC)
 - Information Technology Center
- Inter-Departmental Education and Research Centers
 - Research Center for Materials Science (RCMS)
 - Many Other Centers

Supporting Organization

- Research Strategy & Promotion Office
- The Intellectual Property Office
- University Technical Center

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Major Research Institutes/Centers



EcoTopia Science Institute (ESI) (50)



Solar-Terrestrial Environment Laboratory (STEL) (26)



Research Institute of Environmental Medicine (RIEM) (26)



Hydrospheric Atmospheric₁₂ Research Center (HyARC) (11)



Program for Research

Governmental Research/Support Programs

Global COE Program (6/131)

Targeted Support for Creating World-level Education and Research Bases

JSPS Asian CORE Program (3/16)

To create world-class research hubs in selected fields within the Asian region

JSPS Core-to-Core Program: Strategic Research Networks (1/11)

To build and expand a cooperative international framework in leading-edge fields

Strategic Fund for Establishing the International Headquarters of Universities (1/20)

To develop "International Strategy Headquarters"

Japanese-German Graduate Externship(1/2)

To exchange graduate student between Nagoya University and University of

Münster and collaborative instruction

JSPS International Training Program (1/20)

University Program

Academic Consortium 21 (AC21)

Plans active exchanges of students, faculty members and administrative staff,

provides shared access to information on research interests and academic

activities, develops cooperative education programs and supports international

exchange of culture between local communities.

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Global COE Programs

Global COE Program (6/131)

Life Sciences (1/13)

KONDO, Takao

**Advanced Systems-Biology: Designing The Biological
Function**

Chemistry, Material Sciences (1/13)

WATANABE, Yoshihito

Design of Materials and Molecular Functions

Humanities (1/12)

SATO, Shoichi

Hermeneutic Study and Education of Textual Configuration

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Global COE Programs

Medical sciences(1/14)

SOBUE, Gen

Integrated Functional Molecular Medicine for Neuronal and Neoplastic Disorders

mathematics, physics, earth sciences(1/14)

SUGIYAMA, Naoshi

Quest for Fundamental Principles in the Universe
: from Particles to the Solar System and the Cosmos

mechanical, civil engineering, architectural and other fields of engineering(1/14)

FUKUDA, Toshio

COE for Education and Research of Micro-Nano Mechatronics

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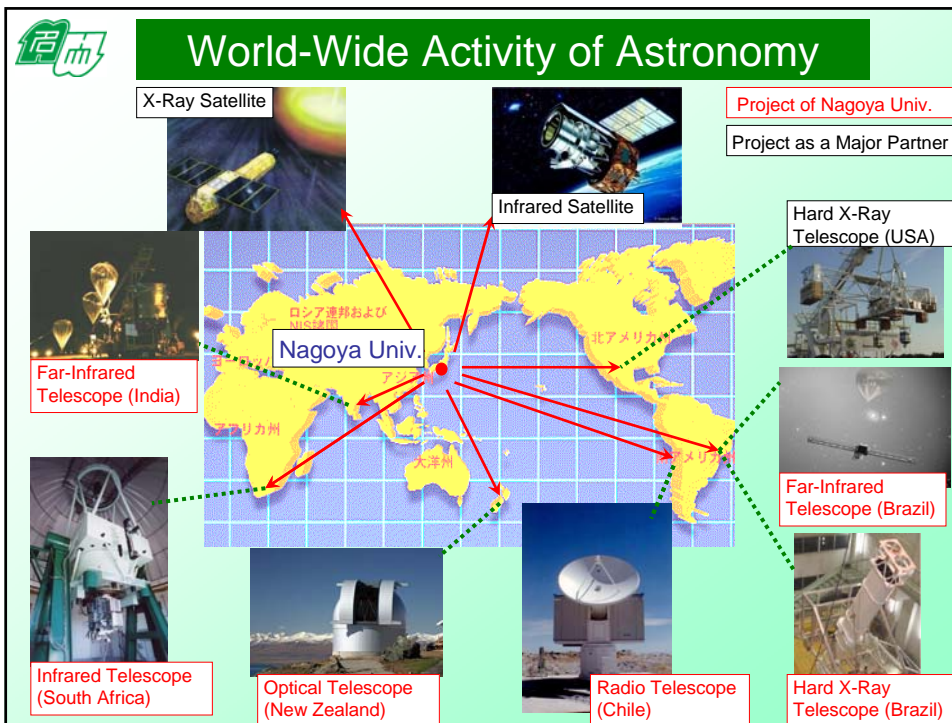


JSPS Asian Core Program Cutting-Edge Organic Chemistry in Asia



Her Royal Highness Princess Chulabhorn visited Nagoya University. (Oct. 2007)

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Academic Consortium 21 (AC21)

International Forum : Nagoya (2002), Sydney (2004), Warwick (2006), North Carolina State (2008), Shanghai Jiaotong (2010)
 Student World Forum: Nagoya (2005), ENPC(2007), Chemnitz (2009)

Member Universities/Institutes

Australia: The University of Sydney	P. R. China: Fudan University Huazhong University of Science and Technology Jilin University Nanjing University Northeastern University Peking University Shanghai Jiaotong University Tongji University
Germany: Albert-Ludwigs-Universität Freiburg Chemnitz University of Technology	U.K.: The University of Warwick
Indonesia: Gadjah Mada University	U.S.A.: North Carolina State University
Japan: Nagoya University	
Laos: National University of Laos	
Thailand: Chulalongkorn University Kasetsart University	

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Ranking

- Times World University Ranking (2007)
112th in the World, 6th in Japan
- Ranking in Grant-in-Aid of MEXT (April 2008)

University	Faculty Member	Adopted Program	Total Grant (M Yen)	Grant per Member(M Yen)
University of Tokyo	4,149	2,745	15,619	3.99
Kyoto University	2,921	1,872	10,837	3.78
Tohoku University	2,634	2,681	7,862	2.93
Osaka University	2,485	1,863	7,592	2.67
Kyushu University	2,322	1,360	4,498	1.98
Hokkaido University	2,113	1,263	4,538	2.18
Nagoya University	1,774	1,232	5,105	2.89

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Big Grant-in-Aid Programs

Tokutei Ryouiki:

Index of Field-Leading Researches

	Nagoya Univ.	All
All Categories	6	105
Humanities	0	8
Science & Engineering	4	55
Biology & Medicine	2	42

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Summary of Research Activity

- Nagoya University is seventh in size among national universities, but the research activity is in the second group following the University of Tokyo and Kyoto University.
- Our research is more active in science & engineering than in humanities.
- International collaboration is active particularly with Asian countries.
- Activeness of industry in this area will assist further growth of this university.
- Toward the top level of the world, international evaluation is critical.

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Thank you !

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