

Dear Partner,

We would like to invite your students to attend our  
**NAIST Pre-screening Program**  
(For Specially Recommended International Students for 2022/2023 Enrollment)  
which will take place **online** at the  
**Division of Materials Science, Nara Institute of Science and Technology (NAIST).**

This program is open to all Master students, faculty members, researchers, or graduates from your university who passionately wish to enroll and continue their studies in NAIST doctoral program.

Unlike the usual year, due to the COVID-19 pandemic, we will have a document screening and online interview test. Successful applicants will have a chance to become a candidate for the MEXT Scholarship.


The applicants who passed the first document screening will be able to join the laboratory tour held by each laboratory online. The participants can learn not only the research of laboratories, but also get to know the atmospheres of the lab. They can choose a number of laboratories that they are interested in and that they wish to work with after their enrollment. After participating in the tour, professors will allocate a **research theme**. Students will select one theme (i.e., one laboratory) and then will take an online interview test. During the interview, students give a presentation and receive questions on their research and the theme they chose. Based on submitted documents and interview, NAIST will confirm students' ability for the NAIST doctoral program and select potential doctoral students. Hopefully, if the situation allows, NAIST would like to invite them to the onsite Internship Program with the financial support before their enrollment (Internship and its period will be considered with and depend on the situation).

Participants who are eventually selected will be admitted to NAIST in October 2022 without any further examination. Some excellent participants may be selected for scholarships. The selection will be based on this whole program.

If students pass this document and interview screening, they are strongly recommended to apply for **MEXT Embassy Recommendation Scholarship** in their country. If students are successful in gaining this scholarship, their enrollment will be in 2023. If students are not successful, they will still have another chance to be selected as a candidate for **MEXT University Recommendation Scholarship** (apply through NAIST) or other scholarship in 2023. Candidates will be selected based on their scores of this program. If selected, their enrollment will also be in 2023.

Please recommend **two to four** of the most suitable applicants from your university who meet our qualifications according to the guidelines. The application deadline is **September 30, 2021**, and the required documents must be submitted to [ms-kokusaijimu@ms.naist.jp](mailto:ms-kokusaijimu@ms.naist.jp) by e-mail. Applicants are not allowed to apply directly. Selection is competitive and not all applicants will be successful.

Sincerely yours,



Tsuyoshi Kawai, Professor

Director of the Division of Materials Science, Graduate School of Science and Technology,  
Nara Institute of Science and Technology

**Application Guidelines for the 2021 Pre-screening for Doctoral Program  
(For Specially Recommended International Students for 2022/2023 Enrollment)****1. Deadline for Application****30<sup>th</sup> September 2021****2. Number of students to be recommended:**

Please recommend **two to four** of the most suitable applicants from your university who meet our qualifications below.

**3. Qualifications of applicants:**

- (1) Those who do not hold Japanese nationality.
- (2) Those who wish to enroll in NAIST-DMS Doctoral Program.
- (3) Those who have a **GPA score of at least 2.30 (out of 3.00)** in his/her most recent academic transcript.
- (4) Those who are highly proficient in English communication, especially in a scientific field.
- (5) Those who are recommended by the president or dean of the following universities, and who are recognized for their excellence in academics, achievement, personality and character.
- (6) In accordance with the above, candidates must meet one of the criteria below:
  - A) Those who are registered as students, faculty members or researchers at the universities on the following list. Those who meet this requirement are required to keep the status until applying for our entrance examination (Screening of International Students by Special Recommendation).
  - B) Those who have graduated from the following universities.

Kasetsart University, Thailand / Chulalongkorn University, Thailand / Universitas Gadjah Mada, Indonesia / Universitas Indonesia, Indonesia / Bogor Agricultural University, Indonesia  
Tianjin University of Technology, China / Liaoning University, China / Nanjing University, China  
Ateneo de Manila University, Philippines / University of the Philippines Diliman, Philippines  
Hanoi University of Science, VNU, Vietnam  
Institute of Materials Science, Vietnam Academy of Science and Technology, Vietnam  
University of Science and Technology of Hanoi, Vietnam / University of Malaya, Malaysia  
Universiti Sains Malaysia, Malaysia / Universiti Tunku Abdul Rahman, Malaysia

- (7) Those who will receive a master's degree by the time of enrollment
  - (8) Those who plan to enroll in NAIST with the scholarship conditions below:
    - A) MEXT scholarship applying through NAIST (Slot: - /Age limit: 35) → 2022 or 2023 enrollment
    - B) MEXT scholarship applying through Japanese Embassy (Age limit: 35)\* → 2023 enrollment
- C) Other scholarship
- D) Private expense (Enrollment fee: 282,000JPY / Tuition fee: 535,800JPY/year)\*

\*Applicants in Indonesia are required to complete their master's degree by the time of application.

\*Student can apply for exemption. Enrollment fee is not exempted in most of the cases while Tuition fee is at least half exempted in most of the cases.

#### 4. Required documents:

- ✓ CV (use NAIST format)
- ✓ Academic transcripts (academic record) of Bachelor and Master program school records
- ✓ Photocopy of a certified TOEIC score or equivalent (e.g., TOEFL, IELTS, etc.) if available
- ✓ Research record

\*Any format is acceptable \*Five A4-size pages max

Research plan

\*Any format is acceptable \*Two A4-size pages

\*Cover the following subjects:

- The contents of master's thesis
- The research field/project that applicants want to work on at NAIST after the enrollment

#### 5. How to apply:

Please send all required documents by email to the International Student Coordinator of DMS-NAIST ([ms-kokusaijimu@ms.naist.jp](mailto:ms-kokusaijimu@ms.naist.jp)). Those documents should be sent as Microsoft Word or PDF files.

Please make sure that the documents are submitted through a faculty member at applicants' university. **Please do not allow applicants to apply directly.**

#### 6. Selection procedures:

The selection consists of four steps below.

(1) Document screening: Participants will be selected based on the documents submitted. Not all applicants will be successful. All the applicants will receive the selection results by **the middle of October, 2021** by e-mail from the International Student Coordinator of DMS-NAIST.

(2) Contacting Period: The applicants who passed the first document screening will be able to join **the laboratory tour** held by each laboratory online. Students can choose a number of laboratories they are interested in and wish to join after enrollment. In this program, the professors will allocate a **research theme**.



Students participating in the tour are given the chance to connect directly with the professors from the laboratories which they wish to join after enrollment. During this contacting period, students can ask and learn more about the research, and have the opportunity to talk with laboratory members.

(3) Interview test: Participants who passed the document screening will take an online interview test. During the interview test, students give a presentation on their own research, including allocated **research theme**, and students will be evaluated on their understanding of the research theme, English proficiency, basic academic ability, enthusiasm, and potential as a researcher.

(4) The result announcement: The results will be announced by **the beginning of January, 2022**.

(5) MEXT embassy recommendation: All participants who passed the interview test are strongly recommended to apply for the MEXT **embassy** recommendation in 2022.

## 7. Selection schedule(Tentative):

September, 2021	Document screening		
October - ,2021	Contacting Period : Joining the Laboratory Tour		
December, 2021	Online interview test		
January, 2022	Result announcement of the interview test.		
Successful participant	MEXT Embassy Recommendation		MEXT University. Recommendation(very few)
February, 2022			<a href="#">Screening of Specially Recommended International Students</a>
April - July, 2022	Application for MEXT scholarship (Apply via Japanese Embassy)		
July-August, 2022	First screening by Embassy (document, paper test, interview test)		
August, 2022	Contact NAIST to let us know the result		
	Pass	Failed	
	Get a Letter of Acceptance.	Send result to NAIST	
October, 2022			Enroll in NAIST
December, 2022			
		2 <sup>nd</sup> Selection by NAIST, based on the result of whole process.	
Around January, 2023	Final Result announcement from MEXT	Result announcement From NAIST	If participant of 2021 failed to gain MEXT Embassy recommendation, they still have chance to be assigned other scholarship by NAIST.
February, 2022	<a href="#">Screening of Specially Recommended International Students</a>		
October, 2022	Enroll in NAIST		

- Embassy of Japan in Thailand ([https://www.th.emb-japan.go.jp/itprtop\\_th/index.html](https://www.th.emb-japan.go.jp/itprtop_th/index.html))

Application deadline previous year: middle of June

- Embassy of Japan in Indonesia (<https://www.id.emb-japan.go.jp/sch.html>)

Application deadline previous year: early in May

- Embassy of Japan in the Philippines ([http://www.ph.emb-japan.go.jp/itpr\\_en/00\\_000193.html](http://www.ph.emb-japan.go.jp/itpr_en/00_000193.html))

Application deadline previous year: end of May

- Embassy of Japan in Malaysia ([http://www.my.emb-japan.go.jp/itpr\\_en/postgraduate.html](http://www.my.emb-japan.go.jp/itpr_en/postgraduate.html))

Application deadline previous year: early in April

- Embassy of Japan in Vietnam ([https://www.vn.emb-japan.go.jp/itpr\\_ja/Vn\\_Culture.html](https://www.vn.emb-japan.go.jp/itpr_ja/Vn_Culture.html))

Application deadline previous year: June

All application procedures for Japanese Government (Monbukagakusho = MEXT) Scholarships are conducted through Japanese embassies, consulates in your countries, or institutions of higher education in Japan. If you require any further information regarding Japanese Government (MEXT) Scholarships, contact Japanese embassies, consulates in your countries. Application fee is not charged. Please be aware that organizations or individuals who charge application fees or deposits have no relation with the Japanese Government.

<IMPORTANT>

MEXT prioritizes applicants with high level English proficiency (i.e, CEFER B2, TOEIC 780)



## Laboratory list

Please choose laboratories you are interested in and want to join at NAIST only from the list below, and write them on your CV (use NAIST format) in order of preference. For the further information about each lab, please access our homepage (<https://mswebs.naist.jp/english/courses/> )

### 2022 NAIST Division of Materials Science: Lablist

<b>Physics</b>	<b>Quantum Materials Science Laboratory</b>	<b>Prof. Hisao Yanagi</b>
	Keywords: Quantum effects, molecular crystals, nanoparticles, ultrathin films, organic electronics, photonics, organic lasers, organic solar cells, light emitting transistors, quantum dots, metamaterials, microspectroscopy, coherent control, time-resolved spectroscopy, femtosecond lasers, Raman spectroscopy	
	<b>Solid-state Information Physics Laboratory</b>	<b>Prof. Tomohiro Matsushita</b>
	Keywords: Solid surfaces, strongly correlated materials, surface superstructure, surface electric conduction, surface magnetism, surface light emission, surface molecular adsorption, electron stimulated desorption, (cross-sectional) scanning tunneling microscopy, electron diffraction, electronic energy bands, angle resolved photoelectron spectroscopy, Fermi surfaces, hole subbands, strained semiconductors, two-dimensional photoelectron spectroscopy, photoelectron diffraction, atomic stereo photography, photoelectron holography, XAFS, photoelectron diffraction spectroscopy, radiation, circular polarization of light, photoelectron microscopes, three-dimensional reciprocal lattice mapping, first-principle calculation, Raman spectroscopy	
<b>Device</b>	<b>Bio-process Engineering Laboratory</b>	<b>Prof. Yoichiro Hosokawa</b>
	Keywords: Development of single cell manipulation technology, applications of ultra-shot pulse laser, microfluidic chips, and Atomic Force Microscopes (AFM), mechanism investigation of laser-induced explosions acting on biological materials	
	<b>Photonic Device Science Laboratory</b>	<b>Prof. Jun Ohta</b>
	Keywords: Image sensors, photonic devices, artificial visual devices, implant devices, brain implant devices, biomedical photonic LSIs, fluorescence detection, CMOS integrated circuits, biocompatible materials, MEMS, $\mu$ TAS, optogenetics, digital ELISA	
<b>Device</b>	<b>Information Device Science Laboratory</b>	<b>Prof. Yukiharu Uraoka</b>
	Keywords: Thin-film transistors, displays, flexible devices, oxide materials, system-on-panels, memory, LSIs, biological materials, fine machining processes, light-emitting elements, EL elements, nanoparticles, High-K, dielectric, high-frequency communication devices, power devices, printing, solar cells, electron-beam evaporation, photolithography	
	<b>Applied Quantum Physics Laboratory</b>	<b>Prof. Takayuki Yanagida</b>
	Keywords: Radiation-induced fluorescence, scintillators, v phosphor, thermoluminescence, afterglow, mechanoluminescence, optical physics, quantum energy conversion, impact ionization, radiation measurement, radiation detectors, quantum beams, X-rays, gamma rays, neutrons, vacuum-ultraviolet light, near infrared light, photoelectric conversion elements, image diagnostic equipment, security equipment, individual radiation exposure dosimeters, detectors for high-energy physics, synchrotron radiation	
<b>Device</b>	<b>Organic Electronics Laboratory</b>	<b>Prof. Masakazu Nakamura</b>
	Keywords: Organic semiconductors, polymer semiconductors, organic thin-film growth, scanning probe microscopy, grazing-incidence X-ray diffraction, terahertz time-domain spectroscopy, quantum chemical calculation, molecular dynamics simulation, thin-film transistors, solar cells, THz-wave imaging sensors, flexible thermoelectric generators	

Chemistry	<b>Photonic and Reactive Molecular Science Laboratory</b>	<b>Prof. Tsuyoshi Kawai</b>
	Keywords: Photochemistry, synthesis of functional molecular materials, photochromism, molecular chirality, conductive polymers, luminescent metal complexes, nanocrystals, electrochromism, sensor molecules, thermoelectric conversion materials, nanowires, ionic liquids, nanotubes, electrochemistry	
	<b>Functional Organic Chemistry Laboratory</b>	<b>Prof. Hiroko Yamada</b>
	Keywords: Functional organic materials, organic semiconductor materials, functional pigments, organic thin-film solar cells, porphyrinoids, acenes, physical organic chemistry, organic photochemistry	
Biomaterials	<b>Biomimetic and Technomimetic Molecular Science Laboratory</b>	<b>Prof. Gwénaél Rapenne</b>
	Keywords: Biomimetic science, molecular machines, technomimetic molecules, molecular chemistry, organic synthesis, coordination chemistry, polyaromatics, molecular motors, molecular gears, nanovehicles, single molecule, surface deposition, artificial membrane, cerasome, membrane dynamics, membrane-active agents, biological function modulation	
	<b>Functional Supramolecular Chemistry Laboratory</b>	<b>Prof. Shun Hirota</b>
	Keywords: Supramolecular science, biomolecular science, nanobiotechnology, bioinorganics, organometallic chemistry, protein science, biophysical chemistry of living things, photochemistry, chemistry related to biological functions, synthetic organic chemistry, complex chemistry, catalytic reactions, optical switching technology, function control, enzyme reactions, metalloproteins, DNA, spectroscopy, functional materials, medicinal chemistry, diseases due to abnormal protein structure, pharmaceuticals	
Biomaterials	<b>Complex Molecular Systems Laboratory</b>	<b>Prof. Hironari Kamikubo</b>
	Keywords: Complex molecular systems, protein science, biophysics, structural biology, protein design engineering, X-ray solution scattering, X-ray crystal structure analysis, neutron crystal structure analysis, low temperature spectroscopy, vibrational spectroscopy, fluorescence lifetime measurements, recombinant DNA technology, artificial proteins, structural proteins, protein transportation systems, nerve axon-elongation systems, optical information conversion systems, intermolecular interaction, intramolecular interaction, dynamic ordering analysis	
	<b>Nanomaterials and Polymer Chemistry Laboratory</b>	<b>Prof. Hiroharu Ajiro</b>
Data Science	Keywords: Biodegradable polymers, biocompatible polymers, biomaterials, gels, polymer structure control, inter-polymer interaction, stereocomplex, polymeric materials, nanostructure, molecular design, molecular techniques, thermoresponsivity, photoresponsivity, pH responsivity	
	<b>Materials Informatics Laboratory</b>	<b>Prof. Mikiya Fujii</b>
	Keywords: materials informatics, process informatics, high-throughput calculations, quantum chemistry, ab initio calculations, machine learning, deep learning, generative models for materials, energy conversion materials, functional materials, data integration modeling, synthesizability Prediction	
Data Science	<b>Data Driven Chemistry Laboratory</b>	<b>Prof. Uraoka, Assoc.Prof.T.Miyao</b>
	Keywords: Data-driven chemistry, materials informatics, chemoinformatics, chemometrics, process informatics, soft-sensor modeling, chemical plant monitoring, in-silico drug discovery, de-novo molecular design, quantitative structure-activity (property) relationships, in-silico functional materials design, ligand-based approaches, chemical space, machine learning, deep learning, statistical methods, Data mining.	