////// Research organization

- Director: Prof. Masahiko Tani
- Research Supervisor: Prof. Teruo Saito
- Vice Director: Prof. Seitaro Mitsudo
- Supervisor of International Cooperation: Specially Apointed Prof. Toshitaka Idehara

////// Research groups of FIR UF

Core Research Division

Group for Development of fundamental far-infrared technologies

Prof. Teruo Saito, Associate Prof. Yoshinori Tatematsu

- Development of high-power far-infrared radiation sources
- Research into the high-efficiency, high-stability, and high-frequency operation of gyrotrons

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Teruo Saito


Yoshinori Tatematsu

Core Research Division

Group for Applications of THz technologies for research in materials science and sensing

Prof. Masahiko Tani, Associate Prof. Kohji Yamamoto, Assistant Prof. Takashi Fruya
Specially Appointed Assistant Prof. Dr. Hideaki Kitahara,
Postdoctoral fellows: Dr. Jessica Pauline Castillo Afalla, Dr. Valynn Katrine P. Mag-Usara

- Development and application of novel THz-wave emitters and detectors
- THz optical and spectroscopic research using broadband THz waves
- Time-domain coherent anti-Stokes Raman scattering (CARS) spectroscopy in the THz region

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Masahiko Tani


Kohji Yamamoto


Takashi Fruya

Core Research Division

Group for Development of new technologies in the far-infrared region

Prof. Isamu Ogawa

- Further improvements in the gyrotron performance for application as a high power far-infrared radiation source
- Development of high-performance transmission lines for wider application of the gyrotrons

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Isamu Ogawa

Core Research Division

Group for Low-temperature and condensed-matter physics

Prof. Seitaro Mitsudo, Associate Prof. Yutaka Fujii

- Electron spin resonance spectroscopy in the submillimeter wave region
- Millimeter and submillimeter wave material processing
- Development and application of dynamic nuclear polarization-enhanced nuclear magnetic resonance (DNP-NMR)

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Seitaro Mitsudo


Yutaka Fujii

International Research Division

Specially Appointed Prof. Toshitaka Idehara, Assistant Prof. Yuusuke Yamaguchi, Specially Appointed Assistant Prof. Masafumi Fukunari, Specially Appointed Assistant Prof. Dmitry S. Bulgarevich.
In addition, several foreign researchers are employed as "Specially Appointed Professors" under the Cross-Appointment System or the Researcher Invitation System.

- Development of high-power THz-wave radiation sources: the Gyrotron FU CW Series
- Development of new THz technologies through international collaborations

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Toshitaka Idehara


Yuusuke Yamaguchi

Visiting Professor's Division

Domestic visitor

Leading researchers in Japan are invited as Visiting Professors.

- Applications of high-power THz waves
- Development and applications of novel THz time-domain spectroscopy (TDS)

Visiting Professor's Division

Research adviser

Yoshiaki Tsunawaki, Takao Mizusaki, Kiyomi Sakai, Shintaro Ishiyama, Mitsuru Toda

Cooperative Research Division

Material physics in the far-infrared region

Prof. Hikomitsu Kikuchi, Prof. Kazutoshi Fukui

- Electron spin resonance (ESR) spectroscopy in the submillimeter wavelength range
- Studies of the optical properties of nitride semiconductors using broadband spectroscopy in the far infrared to vacuum ultraviolet range

Cooperative Research Division

THz spectroscopy and sensing / Millimeter wave communications

Prof. Kazuki Kurihara, Prof. Mitoshi Fujimoto

- Simulation of submillimeter electromagnetic wave propagation
- Development and application of far-infrared molecular lasers

Cooperative Research Division

Materials evaluation in the far-infrared region

Associate Prof. Tomomi Honda

- Mechanical characterization of high-quality ceramics
- Surface characterization of new materials formed using high-power far-infrared technology

Cooperative Research Division

Medical and biological application of far-infrared technologies

Prof. Kanji Katayama, Associate Prof. Hideki Matsumoto

- Evaluation of hyperthermia effect induced by irradiation of electromagnetic wave
- Effect of electromagnetic wave irradiation on biological objects and molecules

Cooperative Research Division

Kenkyu-Dojo program

Associate Prof. Escano Mary Clare Sison, Assistant Prof. Takeshi Moriyasu

- Study on the propagation of terahertz pulse in photo-excited semiconductors
- Investigation of photoconductivity by sub-band gap optical excitations

Research support organization

- Research support staff: Mr. Tomohiro Kanemaki
- Technical staff: Mr. Masashi Tozawa
- Cryogen supply section: Prof. Seitaro Mitsudo (section head)
- Secretaries: Ms. Miyuki Morito, Ms. Kaori Yoshida, Ms. Yoriko Kuwashima,
  Division of Research Promotion, Department for Strategic Planning & Promotion
- Temporary staff (dispatched from NAKATEC Co., LTD.): Mr. Shigenobu Arakawa