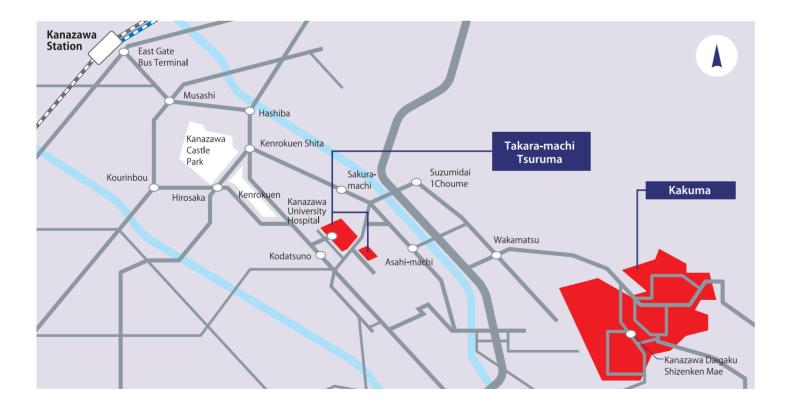
Access







Contact information

Nano Life Science Institute (WPI-NanoLSI), Kanazawa University Kakuma-machi, Kanazawa 920-1192, Japan Tel: +81-76-234-4550 Email: nanolsi-office@adm.kanazawa-u.ac.jp Web: https://nanolsi.kanazawa-u.ac.jp Facebook: https://www.facebook.com/kanazawa.univ.nanolsi/





Nano Life Science Institute Kanazawa University

See Small, Think Big.

Visualizing small things leads to big discoveries.







PROBING LIFE AT THE NANOSCALE

We aim to UNCOVER CELLULAR DYNAMICS through the development of nanoprobe technologies.

How cells function at the nanolevel remains one of the great unknowns.



Takeshi Fukuma, Director of WPI-NanoLSI

Imaging techniques currently available have limitations in terms of resolution and quality that hinder deeper exploration. The Nano Life Science Institute (WPI-NanoLSI) is dedicated to advancing this frontier by building on pioneering technologies developed at Kanazawa University and by bringing together a 'dream team' of experts in nanometrology, life science, supramolecular chemistry, and computational science.

Our goal is to bridge our expertise in nanoscience with the live cell imaging field.

Successful visualization of nanoscale dynamics—the real-time workings of proteins, metabolites and other molecular assemblies-is widely anticipated to lead to breakthroughs in both fundamental biology and medical science.

Many aspects of human development, disease and aging are just beginning to be investigated from a nanoscale perspective. Until now, our knowledge of nanoscience has mostly been applied to the fields of materials science and energy science, with great success. We are now extending our capability to explore a wider range of fundamental biological phenomena at the nanoscale.

We hope to open up a new era of life science.

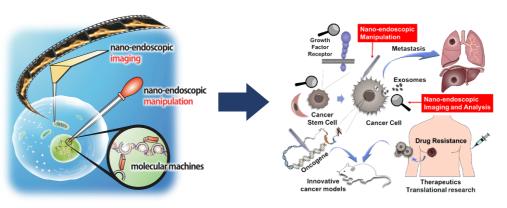
By combining the world's most advanced bio-scanning probe microscopy techniques and supramolecular chemistry, we are already developing new nanoprobe technologies. These technologies now mean scientists can go beyond the surface of cells and look deep into the interior at metabolites, nucleic acids and other building blocks of life. We would like to bring about dramatic advances in the life sciences field which will eventually lead to the establishment of a new research field, 'Nanoprobe Life Science.' NanoLSI welcomes enquiries from all those interested in delving into these unknown nanorealms.

Our Mission

Develop

"nano-endoscopic techniques"

for the direct observation. analysis and manipulation of intracellular and cell-surface nanodynamics.



Understand the nano-level mechanisms of basic cellular functions and their cancer-specific abnormalities.

Fusion of Research Fields



PIs in

Computational Science

Alexander S. Mikhailov

Satoru Okuda





Masanobu Oshima

Computational

Nano Life Science

Nanoprobe

Computational

Science







Cancer Research

Life Science

Nanoprobe Life Science

Bio-SPM

Kunio Matsumoto Rikinari Hanayama

Computation • Nanometrology

Simulation

Toshio Ando



Chemistry

Supramolecule



Miki Nakajima



Supramolecular

Nanomedicine

Supramolecular

Nanoprobe

Technology





Shigehisa Akine



Tomoki Ogoshi





Katsuhiro Maeda





Mark J.MacLachlan Satoshi Arai

I URA

Yuki Kunioka

Hideki Ikemoto

Nanometrology Life Science

PIs in

Noriyuki Kodera, Hiroki Konno, Yasufumi Takahashi, Takahiro Nakayama, Mikihiro Shibata, Shinji Watanabe, Ayumi Sumino, Hitoshi Asakawa, Keisuke Miyazawa, Kien Xuan Ngo, Yuanshu Zhou, Ayhan Yurtsever, Takehiko Ichikawa, Marcos Penedo Garcia Marina Makarova, Leonardo Puppulin, Ken' ichi Umeda, Shingo Fukuda

Takeshi Fukuma

Yuko Tadokoro, Masahiko Kobayashi, Masaya Ueno, Sha Shi, Hiroko Oshima, Mizuho Nakayama, Dong Wang, Shinji Takeuchi, Koji Fukuda, Han Xujun, Katsuya Sakai, Ryu Imamura, Hiroki Sato, Hironori Kawahara Tomoyoshi Yamano, Takeshi Yoshida, Azuma Taoka, Masaharu Hazawa, Kee Siano Lim, Tatsuki Fukami, Masataka Nakano, Fishu

Yuri F. Korchev

Supramolecular Chemistry

Kazuki Miyata

Hideki Furutachi Yoko Sakata Sk Asif Ikhal Takahiro Kakuta Tatsuva Nishimura Daisuke Hirose, Sandip Das, Satva Ranian Sarker, Lorenzo Catti

I Computational Science

Holger Flechsig, Lei Yang

Posdoc

Clemens Franz

Kazuki Shigyo, Masahiro Shimizu, Linhao Sun, Hirotatsu Imai, Takashi Sumikama

Technical Staff

Wei Weilin Hirokazu Ishida Hirotoshi Furusho