

MANA International Symposium 2025

Quantum and Thermal Materials

Ever since the founders of MANA, NIMS--short for the Research Center for Materials Nanoarchitectonics of the National Institute for Materials Science, coined the word "nanoarchitectonics" in anticipation of a new paradigm, we have thrived to be the foremost frontrunner in this emerging field.

Proudly launched in 2007 as part of the very first selections made by Japan's World Premium International Research Center Initiative (WPI) program, MANA has continued to transform itself to meet the demands of our society, while as a member of the WPI academy, it maintains to this day its hallmark as an international center designated for fundamental research. The aim of our annual MANA symposiums is to provide, as a pioneer of materials nanoarchitecture, a platform for discussing the current status and the future perspective of materials science as viewed through the scope of state-of-the-art nanotechnology.

The focus of this year's symposium encompasses two topics. "Quantum and Thermal Materials", both of which lay the basis of today's cutting-edge technologies. We hope that our participants will come away from this event with the view that these seemingly distinct subjects are in fact closely intertwined, and will likely develop in the near future into an interdisciplinary field.

We believe that MANA, armed with insights deriving from nanoarchitectonics, is in a unique position to make strong contributions to these important current trends. In addition to plenary and invited talks from distinguished speakers from around the world, Researchers from MANA will report on their latest findings, which will hopefully stimulate intensive discussions among the participants. We welcome all scientists, researchers and students interested in materials science to join us in this symposium!

DAY 1 10.16

Opening Session

09:00 **Takashi Taniguchi** Director, MANA, NIMS

09:05 **Kazuhiro Hono** President, NIMS

Plenary Talk

09:10 **Gang Chen** Carl Richard Soderberg Professor of Power Engineering, Massachusetts Institute of Technology

Group Photo & Coffee Break

10:10-11:55 Session1 / Thermal Materials I

10:10 **Ken-ichi Uchida** Distinguished Group Leader, NIMS / Professor, The University of Tokyo

10:40 **Yoshihiko Togawa** Professor, Osaka Metropolitan University

11:10 **Igor Solovyev** Principal Researcher, MANA, NIMS

11:40 **Tomohiro Takayama** Team Leader, MANA, NIMS

Lunch

13:15-15:00 Session2 / Quantum Materials I

13:15 **Yuichi Kasahara** Professor, Kyushu University

13:45 **Tadashi Machida** Senior Research Scientist, RIKEN

14:15 **Youhei Yamaji** Group Leader, MANA, NIMS

14:40 **Shuichi Iwakiri** Senior Researcher, MANA, NIMS

Coffee Break

15:15-17:00 Session3 / Advanced Characterization

15:15 **Saw-Wai Hla** Professor, Ohio University

15:45 **Ikufumi Katayama** Professor, Yokohama National University

16:15 **Ryuichi Arafune** Principal Researcher, MANA, NIMS

16:40 **Keisuke Watanabe** Researcher, MANA, NIMS

Poster Session

DAY 2 10.17

Plenary Talk

09:00 **Teruo Ono** Professor, Kyoto University

Coffee Break

09:55-11:45 Session4 / Quantum Materials II

09:55 **Oleksandr Zheliuk** PostDoctoral Researcher, Radboud University

10:25 **Takahiro Morimoto** Associate Professor, The University of Tokyo

10:55 **Koichiro Ienaga** Associate Professor, Yamaguchi University

11:25 **Satoru Ichinokura** Senior Researcher, NIMS

Lunch

13:15-15:00 Session5 / Quantum Materials III

13:15 **Kazunari Matsuda** Professor, Kyoto University

13:45 **Mikito Koshino** Professor, The University of Osaka

14:15 **Satoshi Ishii** Team Leader, MANA, NIMS

14:40 **Takuya Iwasaki** Independent Researcher, MANA, NIMS

Coffee Break

15:15-17:00 Session6 / Thermal Materials II

15:15 **Yoshinori Onose** Professor, Tohoku University

15:45 **Yuhei Miyauchi** Professor, Kyoto University

16:15 **Alexei Belik** Chief Researcher, MANA, NIMS

16:40 **Naoki Sato** Researcher, MANA, NIMS

Closing Session

Information



Host Organization

Research Center for Materials Nanoarchitectonics (MANA), NIMS

Organizing Committee (MANA, NIMS)

Takashi Uchihashi, Deputy Director

Tadaaki Nagao, Group Leader

Naoki Fukata, Deputy Director

Takao Mori, Deputy Director

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