

9. Research Enhancement Strategy Office

The Research Enhancement Strategy Office (RESO) was established on November 1, 2013, to strengthen the research activities of the Institute by planning various support programs for researchers and conducting public relations programs for making fusion science more understandable in society. Three University Research Administrators (URAs) are working in the following five Task Groups:

- (1) IR (Institutional Research)/Evaluation Task Group
- (2) Collaboration Research Enhancement Task Group
- (3) Human Resource Development Strengthening Task Group
- (4) Public Relations Enhancement Task Group
- (5) Financial Basis Strengthening Task Group

In 2023, a Self-Inspection Committee was established under the IR/Evaluation Task Group.

(1) IR/Evaluation

The task group for the IR and evaluation continued its role in making systematic analyses of the present research activities of NIFS. Statistical data of publications and scientific reports were collected using the NIFS article information system (NAIS) with complementary data obtained through SCOPUS and WoS public research resource supplying companies. Unique indicators that can demonstrate the strength of the research capabilities of NIFS were investigated.

By collaboration with the Self-Inspection Committee, the task group compiled a draft annual self-examination report for the fourth mid-term goals and assisted in compiling the materials to be submitted to the External Evaluation Committee for evaluation of the “Unit System” and the “Fusion Science Interdisciplinary Research Center, Industry-Academia-Government Coordination Section (IAGCS)”.

(2) Supporting Enhancing Collaboration Research

- 1) Promotion of Domestic and International Collaborative Research

Actively facilitated and supported both domestic and international collaborative research initiatives.

- 2) Interdisciplinary and Collaborative Research Support

Implemented support measures for interdisciplinary and collaborative research across different fields.

- 3) Support for Collaborative Research Activities

Supported collaborative research activities domestically and internationally through the National Institutes of Natural Sciences (NINS) joint usage/research teams and international collaboration teams.

(3) Supporting Young Researchers

In activities for helping young researchers, their startup research was supported to enhance basic skills. The assistance system has been updated to a Start-up Support Program for Young Researchers. In the new system, a tutor is assigned in each program, who gives suggestions in appropriate timing. The selected programs in FY2023 are as follows:

1. *Exploration of the Principles of Laser Nano-Micro Structuring Phenomenon Induced by Topological Lightwave* (Haruki Kawaguchi), (Fig. 1)
2. *Room-temperature superconductivity in correlated systems by relativistic-plasma electric fields* (Masato Ota),

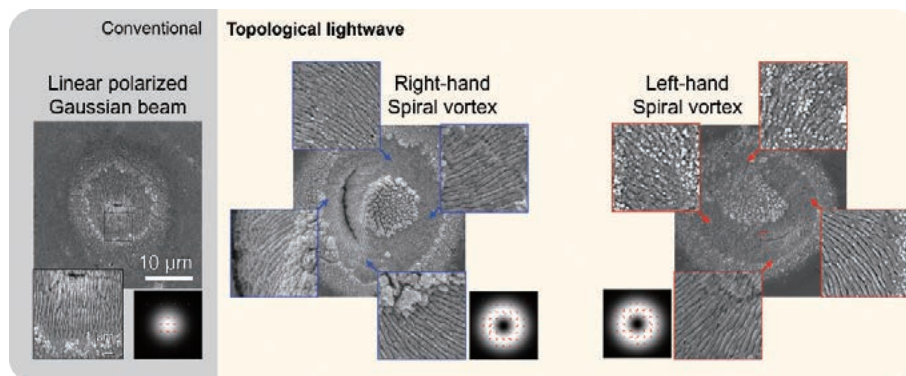


Fig. 1 Topological lightwave laser processing realized arbitrary chiral surface texturing for fusion material (tungsten), provided by H. Kawaguchi. (Reconstructed from Figs. 2 and 4 of “H. Kawaguchi *et al.*, Opt. Mater. Express **14**, 424–434, 2024”).

A debriefing meeting was held in April 2023 for the three people who received support in FY2022.

RESO also assisted the applications of young scientists to the International Research Exchange Support Program of the National Institutes of Natural Sciences.

(4) Enhancing Public Relations

The policy for public relations activities was discussed at a RESO meeting. Regarding publicity events, depending on geographical spread, (1) participation in local festivals, (2) participation in events organized by Toki City, (3) holding science events in large shopping malls and (4) the Open Campus, were organized.

Altmetric indicators of press releases made by the Institute over the past year were analyzed and a policy for future press releases was considered.

Measures to make more efficient use of the Institute’s official SNS (X and YouTube) were discussed. A decision was made to distribute the press releases on YouTube. In addition, it was decided to distribute photos of equipment on X and other media.

(5) Strengthening Financial Basis

1) Support for Securing Competitive Research Funds

Organized briefing sessions to obtain competitive research funds such as Grants-in-Aid for Scientific Research (KAKENHI), JST, and NEDO, and provided support for the preparation of application forms.

2) Support for the Operation of the Financial Base Strengthening Task Force

Provided operational support for the Financial Base Strengthening Task Force and supported activities of the Industry-Academia-Government Collaboration Headquarters.

3) Support for Industry-Academia-Government Collaboration Activities

Facilitated activities such as planning industry-academia-government collaboration projects at Open Campus events and organizing exchange meetings with companies as part of industry-academia-government collaboration efforts.

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