

**MEMORANDUM OF UNDERSTANDING
BETWEEN
TOHOKU UNIVERSITY
AND
ARGONNE NATIONAL LABORATORY
CONCERNING SYNCHROTRON SCIENCE**

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Preamble

This Memorandum of Understanding (MOU) is between Tohoku University, Sendai, Japan and UChicago Argonne, LLC, operator of Argonne National Laboratory (ANL) on behalf of the Advanced Photon Source, at Argonne, IL, United States of America, hereinafter referred to as the Participants.

This MOU does not create any legally binding obligations between the Participants, but reflects a spirit of co-operation between them. Any collaborative scientific projects are to be the subject of appropriate contractual agreements. Each Participant intends to identify collaborative research opportunities of mutual or individual interest as described below.

Section 1: Purpose

The purpose of this Memorandum is to describe a general framework of scientific collaboration in synchrotron science between the Participants with such collaboration having as its aim to:

- combine expertise to achieve scientific goals; and
- develop common specialized knowledge and effective use of facilities.

Section 2: Collaborative Activities

1. Collaborative activities between the Participants may be implemented through:

- joint meetings;
- exchange of scientific personnel; and
- exchange of publicly available technical information.

2. In particular, the Participants intend to identify specific subjects for future joint research and development, which may include:

- enhancing the use of synchrotron technology; and
- other activities deemed appropriate.

Section 3: Contact Persons

The Participants should each designate a person to be responsible for the co-ordination of scientific collaborations arising from this MOU.

Section 4: Costs

Each Participant is to be responsible for its own expenses in connection with the activities conducted under this MOU. The conduct of activities conducted under this MOU is subject to the availability of funding, personnel, and other resources.

Section 5: General Considerations, Commencement, Modification, and Discontinuation

1. Each Participant should conduct the cooperation under this MOU in accordance with applicable laws and regulations to which it is subject. Cooperative activities under this MOU may commence upon signature by the Participants and continue for a 5-year period unless discontinued in accordance with paragraph 2 of this Section.
2. The Participants may discontinue this MOU at any time in writing. A Participant that wishes to discontinue its participation in this MOU should endeavor to provide at least ninety (90) days written notice to the other Participant. This MOU may be modified in writing by mutual consent of the Participants, and may be extended for additional periods.

Signed in duplicate.

For Tohoku University

Hideo Ohno
President



Date: Feb. 17, 2020

For Argonne National Laboratory:

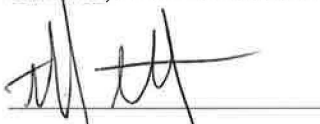
Paul Kearns
Laboratory Director



Date: 2/28/2020

And

Stephen Streiffer
Director, Advanced Photon Source



Date: 2/28/2020