北陸先端科学技術大学院大学研究室教育指針
Laboratory Education Guideline

研究室教育指針は、学則第３０条の３に基づき、研究指導の方法及び内容並びに修了までの研究指導の計画をあらかじめ明示するものです。
Based on the Article 30-3 of the general academic rules, the Laboratory Education Guideline is intended to clearly outline the methods and content of research guidance, as well as the plan for research guidance until completion.

氏名 / name： Noriyoshi Matsumi　　役職 / official position： Professor

1. 研究テーマ / Research Theme

Research on the creation of energy materials (lithium-ion secondary batteries, sodium-ion secondary batteries, lithium-air batteries, supercapacitors)

2. 修得が期待される能力 / Competencies expected to be acquired
研究室教育は必修 A 科目（先端）又は研究支援科目（融合）の一部として単位化されており、この欄はそれら科目のシラバス上の達成目標の一部となります。
Laboratory Education is accredited as a part of the Required courses A (Division of Advanced Science and Technology) or Research Support Courses (Division of Transdisciplinary Sciences), and this section constitutes a part of the course goals stated in the syllabus for such subjects.

Students will acquire the ability to design, synthesize, and characterize materials, the ability to objectively consider the meaning of experimental data, the ability to develop short-term and long-term research plans, the ability to write reports, give effective presentations, and hold discussions. Furthermore, it is also a good place to acquire practical skills for communicating in English. On a more technical point, you will acquire the skills to perform organic synthesis of various compounds/materials under anaerobic conditions and confirm their structure using NMR, evaluate ion-conducting materials using impedance measurements and evaluate their electrochemical stability, fabricate batteries and evaluate their charge-discharge performance, and electrochemically evaluate photoelectrochemical reactions.

3. 研究指導方針 / Research Guiding Principle

Based on synthetic chemistry, we boldly take on the challenge of research fields that are in high demand in society, such as lithium-ion secondary batteries and sodium-ion secondary batteries. We aim to develop well-balanced individuals who possess creative ideas, the ability to take action without fear of failure, and a sense of social contribution.
We aim to be a heterogeneous research group, so we welcome people with a variety of backgrounds. Although the scientific knowledge levels of new members will vary, our goal is for them to leave the group after two to five years with significant growth, a sense of accomplishment, and confidence, depending on their respective levels.

4. 研究室活動の内容及び方法 / Content and Methods of Laboratory Activities

□日次活動 / Daily Activities： 10:00-18:00 Core time
□週次活動 / Weekly Activities： Individual meetings (once a week)
□月次活動 / Monthly Activities： Research presentations (once a month), seminars (once a month)

□不定期活動 / Occasional Activities： Laboratory experiment training course for new members (one month in July), safety training, conference presentations, industrial collaborative research activities

5. 年間スケジュール / Annual Schedule

本学の全学共通の年間スケジュールは「履修案内」の「学位取得に至るスケジュール」を参照してください。(本学HP 参照：ホーム＞教育＞履修関係＞履修案内)

Please refer to the "Degree conferment schedule for the master's program/doctoral program" in the "Degree Completion Guide" for university-wide common schedule (JAIST website: Home >Education>Taking Courses>Degree Completion Guide)

April and July: New Student Welcome Party

May: Conference Presentation (SPSJ Annual Meeting; optional)

July: Laboratory Experimental Education Course for New Members (1 month)

September: Conference Presentation (SPSJ Fall meeting; optional)

November: Conference Presentation (Battery Symposium; optional)

February-March: Research Proposal Preparation (M1), Master's Thesis Presentation (M2)

March: Conference Presentation (Chemical Society of Japan; optional)

March: Farewell Party