Division of Material Chemistry	Research field	Theoretical Chemistry	Lab. ID MC03
Laboratory web site	http://chem.s.kanazawa-u.ac.jp/theo/index.html		

Research subjects

The study covers the static or dynamic structural investigation of materials such as the disordered crystals, hydrogen bonded crystals, and liquid crystals, by means of solid-state NMR measurements and quantum chemical calculations. We develop the analysis methods of solid-state NMR for the study of physical properties and highly-precise analysis methods of molecular dynamics. To analyze the static and dynamic properties of molecules and clusters, we are also developing new approach in quantum chemical calculation.

Master/Doctor course: Education policy, curriculum, typical activity in the laboratory

We give the student the choice of experiment group or calculation group.
Students in the experiment group study the physical properties of various materials, e.g. proton conductor, functional polymer, mesoporous material and other materials, by using mainly solid-state NMR. Other measurements, e.g. thermal measurement, electrical conductivity, are employed as necessary.
Students in the calculation group study physical properties by using quantum-chemistry calculation. The students may acquire coding to use computer.
All students in our laboratory read textbook of quantum mechanics in turns once a week.

Daily life in the laboratory, etc.

Students in our laboratory mainly perform seminars and researches.
The seminars are performed at certain time, while the researches are performed in line with life-style of each student.
We often have drinking party to exchange among the students and teachers and to raise our motivation for study. (D2)

Message or comments by the laboratory faculty staffs

In our laboratory, we hope the students to not only in line with direction by the faculties, but also in exchanging opinions with each other.
Since, it is many what are known by only those who actually perform the experiments and calculation in proceeding with the research, equal exchanges of opinions are important.
Of course, although the faculties often teach the students initially, let's develop the research themes to more interesting things by discussion with each other.

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