Division of Material Chemistry	Research field	Organic Chemistry	Lab. ID MC04
Laboratory web site	http://chem.s.kanazawa-u.ac.jp/org/index.html		

Research subjects

Development of New Synthetic Reactions:
1) Innovation in Synthesis of Heterocycles Utilizing 1,3-Dipoles
2) Elucidation of Structure and Functions of Photochrome Based on Synthesis of Phytochrome Chromophores
3) Development of Novel Synthetic Reactions Utilizing Carbene-type Chemical Species
4) Control of Reactions by Multinuclear Cooperative Systems

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

Researches are performed by accumulation on daily experiments. Based on something new you find, your research will be finally summarized as a scientific paper.

Daily life in the laboratory, etc.

Researches are performed by accumulation on daily experiments. Usually, introduction of up-to-date research papers and research seminar are conducted once a week. In addition, occasional soft ball games, attendance at symposiums, parties et al make you refresh yourself during daily life.

Message or comments by the laboratory faculty staffs

"Development of Novel Functions Based on Synthetic Organic Chemistry" is a banner of our laboratory. Daily experiments often give you undesired results. However, the windfall success after many trials will bring you fabulous bliss.

Recent Master theses in these 3 years (+ more if appropriate)

year.month	Thesis title (including English translation of Japanese thesis title)
2017.3	Development of the synthetic methods for novel heterocyclic structures utilizing isocyanides
2017.3	Development of the catalytic asymmetric reactions utilizing N-heterocyclic carbenes as organocatalysts
2016.3	Design and Synthesis of Novel Chiral Multi-Functional *N*-Heterocyclic Carbene Ligands: Application to Catalytic Asymmetric Alkylation Reactions
2016.3	Development of Organoaluminum-mediated [2+2] Cycloaddition Reaction of Cyclopropenes
2016.3	Development of Novel Ugi-Type Reactions Utilizing 1,3-Dipoles
2016.3	Creation of Trifluoromethyl-Substituted Chiral Quaternary Carbon via Cu-Catalyzed Asymmetric Conjugate Addition
2016.3	Development of Regioselective Photoaddition Reaction of Tetrahydrofurans to Allylic Alcohols
2015.3	Development of Novel Multicomponent Reaction of Isocyanides
2015.3	Development of Catalytic Asymmetric Conjugate Addition of Organometallic Reagents to Conjugated Dienones Using Multinuclear Copper Catalysts
2015.3	Development of Stereo- and Chemoselective Reactions Based on Cross-Coupling Reactions
2014.9	Development of Novel Ugi-Type Reactions Activated by Organosilicon Compounds
2014.3	Development of Functional Transformation of Pyrrole Skeletons toward the Synthesis of Sterically Locked Phytlchrome Chromophore
2014.3	Development of [n+1]Cycloaddition with Isocyanides as a C-1 Source: Synthesis of Novel Nitrogen Containing Heterocycles
2014.3	Development of Novel Carbonylation Reaction Catalyzed by Palladium-Copper Salts
2014.3	Development of Synthetic Methods toward Heterocycles Using Azomethine Ylides from Aziridines
2014.3	Asymmetric 1,3-Dipolar Cycloaddition of Azomethine Imines Utilizing Tartaric Acid Derivatives as a Chiral Auxiliary
2013.3	Strecker-Type Reaction of Nitrones Using Cyanohydrin
2013.3	Synthesis of Sterically Fixed Phytochrome Chromophore Anchored to meso-Position
2013.3	Development of Novel Organocatalytic Reactions Using N-Heterocyclic Carbenes

Recent Doctoral theses in these 3 years (+ more if appropriate)

year.month	Thesis title (including English translation of Japanese thesis title)

2017.3	Highly Enantioselective1,3-Dipolar Cycloaddition of Azomethine Imines and an Application to a Formal Total Synthesis of Manzacidin C
2015.3	Synthetic Study on Sterically Locked Phytochrome Chromophores Based on Oxidative Functionalization of Pyrrole Compounds
2015.3	Development of Novel Tandem Reactions via Ring-Opening of Cyclopropenes
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