

Division of Material Chemistry	Research field	Coordination Chemistry	Lab. ID MC02
Laboratory web site	http://chem.s.kanazawa-u.ac.jp/coord/index_e.html		
Research subjects			
<p>One of the important features of metal complexes is reversibility of metal–ligand coordination bonds. This enables the spontaneous formation of supramolecular structures and the dynamic conversions in response to external stimuli. In order to make and convert large–sized supramolecular structures in a desired fashion, it is important to place appropriate metal ions and organic ligand moieties in a suitable arrangement. Therefore, we need to select suitable metal ions and need to finely design organic molecules with appropriate ligating moieties. Our group aims to develop novel dynamic functional metal complexes and responsive supramolecules by utilizing dynamic feature of metal ions and fine design of organic frameworks.</p>			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
<p>Research interests of our group are to develop various kinds of responsive supramolecules and functional metal complexes that enable unprecedented molecular motions and chemical conversions based on unique ideas. The research plans are determined through discussions among professors and students, and the students do their researches under supervision of the professors. Our group has weekly seminars in which the students report their research plans and results, introduce recent topics reported in top journals, and study coordination chemistry with textbooks. Also, many students attend domestic and international symposiums to present their researches.</p>			
Daily life in the laboratory, etc.			
<p>You will enjoy your research activities in the lab on the basis of your own ideas and through discussions with professors or senior students, although the lab life is sometimes busy preparing for experimental works, seminar reports, etc. Many students feel so comfortable to spend a lot of time in our lab that they sometime remain in the lab to do their work. We have a relatively large student room, in which we have discussions about our researches with colleagues or just take a coffee or tea break. Beside the research activities, we fully enjoy drinking parties and BBQ parties which are held occasionally.</p>			
Message or comments by the laboratory faculty staffs			
<p>Our group aims to develop novel molecular systems with new ideas and designs, which enable unprecedented dynamic motions and novel functions. In researches on developing new molecular systems, it is important to generate new ideas, to make a creative effort to realize them, and to think logically the experimental results with an open mind. During researches, you will achieve the development of target molecular systems and sometimes you will find new ideas from serendipitous results. Such experiences will make you feel exciting. Let's make new molecules based on your new ideas and concepts!</p>			
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 novel macrocyclic cobalt dinuclear metallohosts having exchangeable axial ligands and their application to function tuning		
2017.3	Synthesis of novel 24-crown-8-like macrocyclic metallohosts and the construction of supramolecular structures		
2016.3	Functional model study of particulate methane monooxygenase		
2016.3	Functional model study of toluene/ <i>o</i> -xylene monooxygenase		
2015.3	Synthesis and Oxidation Reactivity of (Peroxo)diiron(III) Complexes with Dinucleating Ligand Having Fluoro Groups		
2015.3	Synthesis and Properties of Ruthenium(II) Complexes with Tetradentate Ligands Having Thiolate Donor		
2015.3	Study of C-H Bond Activation by Dinuclear Bis(μ -oxo)Ni(III) Complex		
2015.3	Studies on Synthesis and Oxidation Reactivity of (μ -Peroxo)diiron(III) Complexes with Tridentate Ligand		
2014.3	Syntheses and Properties of Mononuclear and Dinuclear Nickel(II) Complexes Having the Thiolate Ligands		
2014.3	Synthesis and Oxidation Reactivity of (μ -Peroxo)diiron(III) Complex Having Unsymmetric Dinucleating Ligand		
2014.3	The Study of Synthesis and Oxidation Reactivity of a Peroxodiiron(III) Complex with Chloride Ions		
2014.3	Oxidation Reactivity of (μ - η^2 : η^2 -Peroxo)dicopper(II) Complexes		
2013.3	Syntheses and Properties of Iron and Ruthenium Complexes Having the Thiolate Ligands		
2013.3	Synthesis and Reactivity of Diiron Complexes with Active-oxygen Species		
2013.3	Synthesis and Oxidation Reactivity of Dicopper Complexes with Active Oxygen Species		
2013.3	Synthesis and Oxidation Reactivity of Dinuclear Bis(μ -oxo)Ni(III) Complexes		

2013.3	Oxidation Reactivity of (μ -Peroxo)diiron(III) Complex
Recent Doctoral theses in these 3 years (+ more if appropriate)	
year.month	Thesis title (including English translation of Japanese thesis title)
2015.3	Synthesis and Oxidation Reactivity of Non-heme Type Iron(III) Complexes
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