

Division of Material Chemistry	Research field	Radiochemistry	Lab. ID MC07
Laboratory web site	http://risite.s.kanazawa-u.ac.jp/radchem/index.html		
Research subjects			
Radiochemistry originally stands for the chemistry of radioactivity. Recently, it covers a wide range of research fields based on the techniques of spectroscopy of radioactive elements and compounds. This laboratory are engaged in nuclear chemistry treating chemical aspects of the fundamental nuclear physical properties of radionuclides, and materials science with nuclear probes such as perturbed angular correlation spectroscopy, Mössbauer spectroscopy, and positron annihilation lifetime spectroscopy.			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
All the students in lab. both in undergraduate and graduate courses participate in a seminar of reading texts in turn and mutual learning, and a meeting for introduction of academic journals and their own researches. Graduate students have opportunities to give presentations in an academic symposium of radiochemistry.			
Daily life in the laboratory, etc.			
All the students in the laboratory are supposed to come by 10 in the morning. However, how the rule should be interpreted seems to depend on the student; they come just on time on average showing Poisson distribution in time. Some students work really hard until late at night, and go home even after midnight. They have an advantage in enough room for their lab because a nearby RI facility is also available.			
Message or comments by the laboratory faculty staffs			
Our group has facilities for researches on radioactivity and radiation, especially for experiments in which you can deal with unsealed radioactive isotopes as well as sealed ones. Considering a recently growing global concern over radioactivity, now it is time to acquire various knowledge about radiation and radioactivity. We would welcome you students motivated to work on basic and applied radiochemistry and nuclear chemistry.			
Recent Master theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	A rapid determination method of radiostrontium in case of a nuclear emergency with an extractive scintillator		
2017.3	Temperature-dependent thermal behavior of impurity hydrogen trapped in vacancy-type defects in single crystal ZnO		
2017.3	Chemical Classification of Chondrites by Mössbauer Spectroscopy		
2016.3	Improvement of rapid analytical method for plutonium and americium in soil in a nuclear emergency		
2016.3	Cross section measurements of (p, γ) reactions and a model calculation for an investigation of the synthesis process to a p-nucleus of ^{144}Sm		
2016.3	Measurement of TTA extraction behavior of a cationic fluoride complex with Rutherfordium and its speciation		
2016.3	Measurement of hyperfine fields at In impurity sites in Fe_3O_4		
2015.3	Experimental measurement of (p, γ) reactions with cerium isotopes and model calculation of p-processes via proton capture reaction		
2015.3	Complex formation of a cationic rutherfordium ^{104}Rf fluoride in HF/HNO_3 solutions studied by means of a TTA extraction chromatography		
2015.3	Study of the chemical form of astatine through the several nuclear synthetic processes by means of solvent extraction		
2015.3	Rapid analysis of radiostrontium in seawater through the use of liquid scintillation methods		
2015.3	Study on reaction rates of solvent extraction with group IV elements for a chemical study of superheavy element		
2015.3	Measurements of hyperfine field in ZnO codoped with Co and Mn by means of emission Mössbauer spectroscopy		
2014.3	Speciation of Pu in soil released from Fukushima Daiichi nuclear power plant accident		
2014.3	Measurement of excitation function for isotope production and development of wet-chemical separation for the ^{211}Rn - ^{211}At generator		
2014.3	Preparation dependence of concentration of vacancy-type defects produced in zinc oxide		
2014.3	Development of an online perturbed angular correlation measurement system for the determination of the quadrupole moment of ^{19}F on the 197-keV excited state		

2013.3	Dependence on entrance channel for fusion reactions through the compound nucleus of Ir-185
2013.3	Irradiation effect on local magnetism in zinc oxide
2013.3	Evaluation of defects in He-ion-irradiated Fe-Cr alloys by positron annihilation lifetime spectroscopy
2013.3	Dynamics of ^{111}Ag in a superionic conductor silver iodide
Recent Doctoral theses in these 3 years (+ more if appropriate)	
year.month	Thesis title (including English translation of Japanese thesis title)
2015.3	Thermal Behavior of Al and In Impurities Doped in ZnO Studied by Means of Perturbed Angular Correlation Spectroscopy
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