English-based Program												
Department	Research Area		Research Instruction	Application Code		Main Supervisor				Vice Supervisor		
				Master	Doctor							
Department of Nanoscience and Nanoengineering	Nanoelectronics	Research on Nanodevices	Nano-devies are going to be deployed not only to information technology, but also to environmental and bio application. In this vision, nanoelectronics based on nano-carbon materials such as nano-diamond, carbon nanotube, graphene or gate stack materials involving high-k dielectric and metal gate have been investigated. We are developing biosensors with biocompatibility and chemical functionality, nano scaled Si deivce, high power high frequency transistors and superconducting functional devices.	Q03	Q53	Professor	Doctor of Engineering (Waseda University)	KAWARADA, Hiroshi	kawarada@waseda.jp			
Department of Nanoscience and Nanoengineering	Nanoelectronics	Research on Microsystem	Microsensors, microactuators, micro flow devices and microsystems are studied and developed by nanotechnologies and micromachinings based on semiconductor integrated circuit fabrication technologies. These micro devices and microsystems are applied for chemical, biochemical, cell biology, medical, environmental and space applications.	Q04	Q54	Professor	Doctor of Engineering (Tohoku University)	SHOJI, Shuichi	shojis@waseda.jp			
Department of Nanoscience and Nanoengineering	Nanoelectronics	Research on Nano Materials Infomatics	Nano-scaled structures and chemical reactions in the fabrication processes are investigated in atomic and molecular levels, by means of virtualized experiments provided by computer simulation techniques. Classical molecular dynamics, quantum chemical calculation methods, Monte Carlo methods etc. are employed for theoretical studies on unsolved problems with respect to electronics materials, organic materials including bio-molecules, and their hybrid systems.	Q06	Q56	Professor	Doctor of Engineering (Waseda University)	WATANABE, Takanobu	watanabe-t@waseda.jp			
Department of Nanoscience and Nanoengineering	Nanoelectronics	Research on Study for Nanobiomaterials	Living cells show specific response against various stimulations, suggesting that living cells could be utilized to develop a device for high-sensitive assay. Our group develop high-sensitive cytotoxic detection system using nano-biotechnology.	Q35	Q85	Professor	Doctor of Pharmacology (Toho University)	TANIGUCHI, Akiyoshi	taniaki@aoni.waseda.jp			
Department of Nanoscience and Nanoengineering	Nanoelectronics	Research on Molecular Nano-engineering	Students will study both the conventional top-down processes and the emerging bottom-up processes, and integrate them into a novel process for the fabrication of single-atom transistors, single-photon emitters and single molecule biochips.	Q24	Q74	Professor	Doctor of Engineering (Waseda University)	TANII, Takashi	tanii@waseda.jp			

English-based Program												
Department	Research Area	Research Instruction		Application Code		Main Supervisor				Vice Supervisor		
				Master	Doctor							
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Electrochemical Nano-systems	Applied electrochemistry and surface finishing chemistry for electronic materials, with the approaches from nanotechnology. Nanotechnological studies on high-density battery materials, nanobiotechnology, chemical sensors, high density magnetic recording materials, high density electronic packaging materials.	Q25	Q75	Professor	Doctor of Engineering (Waseda University)	MOMMA, Toshiyuki	momma@waseda.jp			
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Nano-structured Crystal Chemistry	Preparation and properties of functional inorganic crystals are studied. On the basis of inorganic materials chemistry, inorganic solid-state science, crystal chemistry, and crystal engineering, researches ranging from nano-scaled crystal structure design to structural analysis and properties assessment are performed for various inorganic materials, including wide band-gap semiconductors and photonic materials.	-	Q77	Professor	Doctor of Science (Waseda University)	ASAHI, Toru	tasahi@waseda.jp	Professor	Doctor of Science (Tohoku University)	SHIMAMURA, Kiyoshi
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Surface Chemistry of Nanostructured Materials	Theoretical and experimental analyses on the elemental reactions at solid/liquid interfaces and their control to design novel nanofabrication processes and functional nanostructures. Development of silicon wet processes to nano/micro fabrication and their application to fabricate integrated sensing devices and micro reactors.	Q29	Q79	Professor	Doctor of Engineering (Waseda University)	HOMMA, Takayuki	t.homma@waseda.jp			
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Physical Chemistry of Surfaces and Interfaces	One of our main goals is to elucidate the relationship between structure and properties of materials by analyzing their surfaces and interfaces. For this purpose, we develop prediction models of their changes in properties and performance caused by reactions at surfaces and interfaces such as oxidation or hot corrosion. These modes will contribute to developing novel materials and coatings.	Q41	Q91	Professor	Doctor of Engineering (The University of Tokyo)	MURAKAMI, Hideyuki	murakami.h@aoni.waseda.jp			
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Bioanalysis	New analytical methods are developed for understanding biochemical and mechanical regulation of cellular functions. The research covers the development of not only measurement techniques but also materials to perturb cellular activities.	Q40	Q90	Professor	Doctor of Science (University of Tokyo)	NAKANISHI, Jun	nakanishi.jun@aoni.waseda.jp			

English-based Program												
Department	Research Area	Research Instruction		Application Code		Main Supervisor				Vice Supervisor		
				Master	Doctor							
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Nano-Magnetic Materials	To realize energy saving magnetic devices, we control the microstructure and magnetic dynamics in the magnetic materials for magnetic recording, permanent magnet and spintronics devices.	-	Q92	Professor	Doctor of Engineering (Tohoku University)	TAKAHASHI, Yukiko	graduate@sci.waseda.ac.jp	Professor	Doctor of Engineering (Waseda University)	HOMMA, Takayuki
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Computational Electrochemistry	Computational research of electrochemical and interfacial processes in batteries, solar cells and catalysts, based on quantum mechanics and statistical physics. Theoretical exploration for fusion of electronics and ionics as well as design of energy and environmental devices.	-	Q93	Professor	Doctor of Science (The University of Tokyo)	TATEYAMA, Yoshitaka	tateyama@aoni.waseda.jp	Professor	Doctor of Engineering (Waseda University)	MOMMA, Toshiyuki
Department of Nanoscience and Nanoengineering	Nanochemistry	Research on Chemistry of Low-dimensional Nanomaterials	Exploration of 1D nanotubes and 2D nanosheets are studied from the viewpoint of nanomaterial chemistry. By further assembling and integrating these nanoscale building blocks, we are striving to achieve novel multi-functions for applications including battery materials, ion conducting materials and catalysts.	-	Q94	Professor	Doctor of Engineering (Tsinghua University)	MA, Renzhi	ma.renzhi@aoni.waseda.jp	Professor	Doctor of Engineering (Waseda University)	SUGAHARA, Yoshiyuki
Department of Nanoscience and Nanoengineering	Solid-state Nanoscience	Research on Nano-chiral Science	Physical and chemical properties in organic or inorganic chiral materials are investigated based on nano-chiral sciences. Chiroptical properties, optical activity and circular dichroism, in solids are investigated using the High Accuracy Universal Polarimeter (HAUP) from an interdisciplinary scientific viewpoint.	-	Q65	Professor	Doctor of Science (Waseda University)	ASAHI, Toru	tasahi@waseda.jp			
Department of Nanoscience and Nanoengineering	Solid-state Nanoscience	Research on Semiconductor Quantum Physics	Studies about semiconductor quantum physics, including application oriented experimental researches.	-	-	Professor	Doctor of Science (Osaka University)	TAKEUCHI, Atsushi	atacke@waseda.jp			

English-based Program												
Department	Research Area	Research Instruction		Application Code		Main Supervisor				Vice Supervisor		
				Master	Doctor							
Department of Nanoscience and Nanoengineering	Solid-state Nanoscience	Research on Electrochemical Computing	Electrochemical devices, in which diffusion of ions and/or their reduction /oxidation processes are controlled, and their applications such as to neural computing systems are investigated. Atomic-scale observation of physical and chemical phenomena occurred in the device operations, fabrication and characterization of the electrochemical devices, and neural network designing are carried out in the research.	Q37	Q87	Professor	Doctor of Science (Tokyo Institute of Technology)	HASEGAWA, Tsuyoshi	thasega@waseda.jp			
Department of Nanoscience and Nanoengineering	Solid-state Nanoscience	Research on Nano-structure Control	Designing and preparing nano-structured inorganic materials and inorganic/organic composites are studied for functionality and reliability. Mechanism for controlling the nano-structure are investigated and applied to various materials, such as piezoelectric materials and battery materials.	Q39	Q89	Professor	Doctor of Engineering (Waseda University)	SUZUKI, Tohru	tohru.s.suzuki@aoni.waseda.jp			