

Division of Electrical Engineering and Computer Science	Research field	Thin Film Electronics	Lab. ID EC16
Laboratory web site	<a href="http://www.tf.ee.t.kanazawa-u.ac.jp/">http://www.tf.ee.t.kanazawa-u.ac.jp/</a>		
Research subjects			
<p>A thin-film deposition technology supports a recent advanced semiconductor integration technology and a development of electronic and optical devices with additional value, and a development of the thin-film materials with new functions realizes new devices. We study about the deposition of silicon- and carbon-based semiconductor thin-films (single-, poly-, and nano-crystals) and insulator thin-films (amorphous and organic substance), the elucidation of their electronic and optical properties, and their device application.</p>			
Master/Doctor course: Education policy, curriculum, typical activity in the laboratory			
<p>Master and doctor courses:</p> <p>Students introduce a paper published in an international journals related each research theme and report each experimental and calculation results in a weekly labo-meeting.</p> <p>Students make a presentation of each research results in a conference and journal actively.</p> <p>Doctor course:</p> <p>It is necessary for submitting a doctoral thesis that a paper is published in an international journal.</p>			
Daily life in the laboratory, etc.			
<p>The laboratory has a discourse space for laboratory members, it is used as the forum for lively discussion and the rest. (M1)</p> <p>The laboratory supplies one PC per one person, it supports our research activities more smoothly. (M1)</p> <p>The activity in the laboratory is free time except for seminar and we can conduct research at our pace. (M1)</p> <p>Laboratory activities is held regularly, it deepens the friendship of the member. (M2)</p>			
Message or comments by the laboratory faculty staffs			
<p>The policy of research guidance for the students in our laboratory is basically intended to respect student's own autonomy. This is because the students themselves should take initiative to their own research subject, and know the interest to proceed the research subjects with ingenuity and the sense of accomplishment as a result. We are ready to support the student as much as possible for that.</p> <p>Currently, most student who finished Master's Program get their places for employment mainly in manufacturing and power company. We hope the students go to the doctoral program increases.</p>			
Recent Master theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2017.3	Fabrication of freestanding diamond films by self-separation		
2017.3	Development of crystal growth technology for realization of diamond ingot		
2017.3	Growth control of diamond (111) films by microwave plasma CVD		
2016.3	Electrical characterization of diamond (111) MOS structure using Al <sub>2</sub> O <sub>3</sub> gate insulator		
2016.3	Development of free-standing boron-doped diamond (100) substrates		
2016.3	Development of diamond etching process by thermochemical reaction of carbon to nickel		
2016.3	Electrical characterization of interfaces of metals/ $\delta$ -doped diamond (111) films		
2016.3	Fabrication of Schottky-pn diodes using nitrogen doped diamond films		
2016.3	High-rate homoepitaxial growth of diamond (100) films		
2015.3	Dependence of the electric properties on surface nanostructures in thermally grown oxide layers on SiC.		
2015.3	Effects of surface arrangement on the fabrication on PMMA microsphere resonators		
2015.3	Surface and interface control of graphene-on-diamond structure		
2015.3	Interface control for realization of low-loss diamond FET		
2014.3	Development of the fabrication technique for microsphere resonators		
2014.3	Leakage current characteristics of metal-diamond semiconductor contacts		
2014.3	Growth mode control of homoepitaxial diamond films by microwave plasma CVD		
2013.3	Optical properties of dye-doped PMMA films		
2013.3	Control of surface plasmon resonance by periodic structures of Au rods		
2013.3	Structure control of oxygen-terminated diamond surfaces		
Recent Doctoral theses in these 3 years (+ more if appropriate)			
year.month	Thesis title (including English translation of Japanese thesis title)		
2014.3	Computational studies on adsorption behavior of hydrogen-and oxygen-related species on diamond(111) surfaces		

Laboratory mail address

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