Program

OIST Diamond Workshop 2017

Sunday, October 29

				Start	Finish
Bus transfer from Omoromachi mono-rail station to SHURI Castle, Sea Side House OIST				**9:45**	**12:00**
Check-in					
Lunch				12:30	13:20
Opening remarks		**Chair: Julien PERNOT**		**13:20**	**13:40**
	Satoshi KOIZUMI	NIMS	Opening remarks	13:20	13:30
				13:30	13:40
Session 1. Review 1		**Chair: Julien PERNOT**		**13:40**	**15:10**
1-1	Hiromichi OHASHI	NPERC-J	Silicon and WBG Power Devices, Now and Future	13:40	14:10
1-2	Etienne GHEERAERT	Néel Institute	Status of Greendiamond European project	14:10	14:40
1-3	Satoshi YAMASAKI	AIST	Strategies for diamond power device applications	14:40	15:10
Coffee break				15:10	15:40
Session 2. Devices 1		**Chair: Etienne GHEERAERT**		**15:40**	**17:10**
2-1	David EON	Néel Institute	Schottky diodes, the bridge between performance and growth	15:40	15:55
2-2	Shinya OHMAGARI	AIST	Growth and characterization of freestanding p+ diamond (100) substrates prepared by hot-filament chemical vapor deposition	15:55	16:10
2-3	Juliette LETELLIER	Néel Institute	In situ temperature measurement of high power diamond Schottky diodes	16:10	16:25
2-4	Yuki KATAMUNE	Kyushu Institute of Technology	Formation of diamond films using organic phosphorous solution by hot filament chemical vapor deposition	16:25	16:40
2-5	Cédric MASANTE	Néel Institute	Deep-depletion mode boron doped monocrystalline diamond MOSFET: transistor design and performances	16:40	16:55
2-6	Aurélien MARÉCHAL	G2Elab	Simulation of Diamond power devices	16:55	17:10
Coffee break				17:10	17:40
Session 3. Devices 2		**Chair: Ken HAENEN**		**17:40**	**18:10**
3-1	Hitoshi UMEZAWA	AIST	The way to reach ideal breakdown of diamond	17:40	17:55
3-2	Oluwasayo LOTO	Néel Institute	Preliminary Studies on the Stability of Diamond p-type MOS capacitors	17:55	18:10
Welcome party/dinner			**Reception at Chura Hall, Sea Side House**	**19:00**	**22:00**

Monday, October 30

				Start	Finish
Breakfast				7:30	8:30
Session 4. Doping		**Chair : Toshiharu MAKINO**		**9:00**	**10:00**
4-1	Hiromitsu KATO	AIST	Growth and characterization of n-type diamond films by ultra-lightly phosphorus doping	9:00	9:15
4-2	Julien BARJON	GEMaC - Université de Versailles St Quentin	New process for electrical contacts on (100) n-type diamond	9:15	9:30
4-3	Ovidiu BRINZA	LSPM-CNRS	Thick heavily boron doped CVD diamond films homoepitaxially grown on (111)-oriented substrates	9:30	9:45
4-4	Alexandre FIORI	NIMS	Electrical properties of Schottky diodes formed on boron-doped diamond multilayers	9:45	10:00
Coffee break				10:00	10:30
Session 5. Devices 3		**Chair : Richard JACKMAN**		**10:30**	**12:00**
5-1	Meiyong LIAO	NIMS	Ultra-high quality factor single crystal diamond MEMS resonators	10:30	10:45
5-2	Takahide YAMAGUCHI	NIMS	Low temperature charge transport at the diamond surface	10:45	11:00
5-3	Verena ZURBIG	IAF Fraunhoffer	High Power Schottky-Diodes based on p-doped Diamond	11:00	11:15
5-4	Toshiharu MAKINO	AIST	Diamond pin junction diodes	11:15	11:30
5-5	Yasunori TANAKA	AIST	Social Implementation of SiC Power Devices in Japan	11:30	12:00
Lunch, free time				12:00	15:30
Session 6. Growth and characterizations		**Chair : Tokuyuki TERAJI**		**15:30**	**16:45**
6-1	Takehiro SHIMAOKA	NIMS	Mobility-lifetime products of intrinsic-layer in diamond vertical pin diode	15:30	15:45
6-2	Thu Nhi TRAN THI	ESRF	New aspects of diffraction topography at the ESRF: application to the characterisation of diamond crystals	15:45	16:00
6-3	Daniel ARAUJO	Universidad de Cádiz	Crystalline defects in diamond 3D overgrowth on patterned MPCVD homoepitaxial structures by TEM	16:00	16:15
6-4	Jean-Charles ARNAULT	CEA LIST	Heteroepitaxial growth of thick diamond films on Ir/SrTiO3 (001) and Ir/SrTiO3/Si (001) substrates	16:15	16:30
6-5	Samuel SAADA	CEA-LIST	Heteroepitaxial diamond films on Ir/ SrTiO3/Si: from domains to templates	16:30	16:45
Coffee break				16:45	17:15
Session 7. Growth		**Chair : Yoshiaki MOKUNO**		**17:15**	**18:30**
7-1	Seongwoo KIM	Namiki Precision Jewel Co., Ltd.	New concept toward freestanding diamond substrate -Overgrowth of bulk diamond on diamond microneedles-	17:15	17:30
7-2	Jon DE VECCHY	CEA LETI	Diamond layer transfer and blistering by ion implantation	17:30	17:45
7-3	Tokuyuki TERAJI	NIMS	High Purity Diamond Films Growth for Electronic Device Application	17:45	18:00
7-4	Ken HAENEN	Hasselt University	Properties of polycrystalline diamond / GaN HEMT hetero-structures	18:00	18:15
7-5	Kazuo TSUGAWA	Cornes Technologies Ltd.	Stable long time growth of diamond with height and temperature control	18:15	18:30
Workshop dinner			**at Chura Hall, Sea Side House**	**19:00**	**21:00**

Tuesday, October 31

				Start	Finish
Breakfast				7:30	8:30
Session 8. Devices 4		**Chair : Hitoshi UMEZAWA**		**9:00**	**10:15**
8-1	Norio TOKUDA	Kanazawa University	Anisotropic diamond etching for device fabrication process	9:00	9:15
8-2	Jocelyn ACHARD	LSPM-CNRS	Ohmic metal-graphite contacts on single crystal diamondproduced by He implantation	9:15	9:30
8-3	Richard JACKMAN	University College London	New approaches to make diamond diodes and field effect transistors based on diamond nanostructures	9:30	9:45
8-4	Robert NEMANICH	Arizona State University	Diamond High Temperature Electronics: Growth and Process Related Defects and their Impact	9:45	10:15
Coffee break				10:15	10:45
Session 9. Devices 5		**Chair : David EON**		**10:45**	**12:00**
9-1	Yasuo KOIDE	NIMS	Depletion/Enhancement-modes control of H-diamond MOSFETs and logic circuit demonstration	10:45	11:00
9-2	Tsubasa MATSUMOTO	Kanazawa University	The state of the art for inversion channel diamond MOSFETs	11:00	11:15
9-3	Takuya MUROOKA	Tokyo Institute of Technology	High Performance Diamond JFET for Next Generation Power Semiconductor Devices	11:15	11:30
9-4	Masataka IMURA	NIMS	Microstructure and electrical property of AlN/Diamond (111) heterojunction	11:30	11:45
9-5	Yauhen PANIADZELCHANKA	New Diamond Technology	New Diamond Technology – the largest high-purity HPHT diamonds for jewelry and scientific applications	11:45	12:00
Lunch				12:00	14:00
Session 10. Doping and novel process		**Chair : Yasuo KOIDE**		**14:00**	**15:45**
	Robert Baughman	OIST	Introduction of OIST	14:00	14:15
10-1	Gauthier CHICOT	Néel Institute, DiamFab	p-type diamond epitaxial layers growth for power electronics, ready for industry !	14:15	14:30
10-2	Taisuke KAGEURA	Waseda University	Heavily boron-doping for power electronics and superconductivity	14:30	14:45
10-3	Satoshi FUJII	NIT, Okinawa college	Study on fabrication process of SAW resonators using Minimal-Fab	14:45	15:00
10-4	Tsuyoshi YOSHITAKE	Kyushu University	Application of laser-induced doping in liquids containing dopants to diamond	15:00	15:15
10-5	Satoshi TAKEICHI	Kyushu University	Thermal conductivities of ultrananocrystalline diamond/amorphous carbon composite films prepared by coaxial arc plasma deposition	15:15	15:30
10-6	Alex PAKPOUR-TABRIZI	University College London	Novel Lateral Diamond Nanowires with exceptionally high current density and emergent devices. Enabling diamond quantum technologies	15:30	15:45
Excursion			**University Tour**	**16:00**	**17:30**
Wine tasting & Banquet			**BBQ at Sea Side House**	**18:00**	**21:00**

Wednesday, November 1

				Start	Finish
Breakfast				7:30	8:30
Session 11. Think the future		**Chair : Satoshi YAMASAKI**		**9:30**	**10:45**
11-1	Yoshiaki MOKUNO	AIST	Current status and challenges of diamond wafer development	9:30	10:00
11-2	Satoshi KOIZUMI	NIMS	Resistivity of phosphorus doped diamond thin films grown on {111} substrates	10:00	10:15
11-3	Hiroshi KAWARADA	Waseda University	Vertical Diamond MOSFETs, present characteristics and future perfomance	10:15	10:30
11-4	Julien PERNOT	Néel Institute	Deep depletion concept for high mobility diamond MOSFET	10:30	10:45
Closing remarks				**10:45**	**10:55**
	Julien PERNOT	Néel Institute	Closing remarks	10:45	10:55
Bus transfer from Seaside House to Naha airport				**11:00**	**12:30**