



## Programme Schedule

Sunday 4 <sup>th</sup> September 2011	
12:00	Registration
	Tutorials/Workshops
14:00	<b>Synthesis and Applicatios of Graphene</b> Kian Ping Loh, <i>National University of Singapore, Singapore</i>
16:00	<b>Single Defects and Quantum States in Diamond</b> Jörg Wrachtrup, <i>University Stuttgart, Germany</i>
Monday 5 <sup>th</sup> September 2011	
	<b>Plenary Session (1)</b> Chair: C. E. Nebel, <i>Fraunhofer Institute of Applied Solid State Physics, Germany</i>
08:30	Chairmen Welcome
08:40	<b>Keynote Presentation: <u>Recent Progress in Diamond Nano-Particles</u></b> Marko Loncar; <i>Harvard University, USA</i>
09:10	<b>Keynote Presentation: <u>Diamond Nanoparticles: Purification, Deagglomeration and Functionalization</u></b> Yury Gogotsi; <i>Drexel University, USA</i>
09:40	<b>Keynote Presentation: <u>Retina implants from diamond</u></b> Steven Prawer; <i>University of Melbourne, Australia</i>
10:10	Refreshment Break
	<b>Session (2): Growth and properties</b> Chair: A. Sawabe, <i>Aoyama Gakuin University, Japan</i>
10:40	<b>Keynote Presentation: <u>Diamond/B-SiC Composite Films: Deposition, Characterization and Properties</u></b> Xin Jiang; <i>Institut für Werkstofftechnik, Germany</i>
11:10	<b>Formation of Intrinsic Stress in Epitaxial Diamond Films</b> C. Stehl*, M. Fischer, S.Gsell, M.Schreck, B. Stritzker; <i>University of Augsburg, Germany</i>
11:30	<b>Defects, Trapping and Origin of Brown Colouration in CVD Single Crystal Diamond</b> R.U.A.Khan* <sup>1</sup> , P.M.Martineau <sup>1</sup> , J.Samartseva <sup>1</sup> , S.J.Sibley <sup>1</sup> , D.J.Twitchen <sup>2</sup> , H.K.Dhillon <sup>2</sup> ; <sup>1</sup> De Beers UK Ltd, <sup>2</sup> Element Six Ltd, UK
11:50	<b>Fracture strength of optical quality and black polycrystalline CVD diamonds</b> V.G.Ralchenko* <sup>1</sup> , E.Pleuler <sup>2</sup> , F.X.Lu <sup>3</sup> , D.N.Sovyk <sup>1</sup> , A.P.Bolshakov <sup>1</sup> , S.B.Guo <sup>3</sup> , et al; <sup>1</sup> A.M. Prokhorov Institute of General Physics, Russia, <sup>2</sup> Fraunhofer Institute of Solid State Physics, Germany, <sup>3</sup> University of Science and Technology Beijing, China
12:10	<b>CVD diamond nucleation and the role of Ti/TiO2 studied by electron microscopy and spectroscopy</b> K. Haenen* <sup>2,3</sup> , S.D. Janssens <sup>2</sup> , M.K. Van Bael <sup>2,3</sup> , G. Degutis <sup>2</sup> , J. Verbeeck <sup>1</sup> , Y. Lu <sup>1</sup> ; <sup>1</sup> University of Antwerp, Belgium, <sup>2</sup> Hasselt University, Belgium, <sup>3</sup> IMEC vzw, Belgium
12:30	<b>Carbon nanotube growth inside diamond</b> C. Hébert* <sup>1,3</sup> , S.Ruffinatto <sup>2,1</sup> , D.Eon <sup>1,3</sup> , F. Omnès <sup>1</sup> , P. Mailley <sup>3,2</sup> ; <sup>1</sup> Neel Institute (CNRS), France, <sup>2</sup> CEA Grenoble, France, <sup>3</sup> Joseph Fourier University, France
12:50	Lunch ( <i>lunch not provided</i> )
	<b>Focussed Session (3): Spintronics 1</b> Chair: J. Wrachtrup, <i>University Stuttgart, Germany</i>
14:00	<b>Keynote Presentation: <u>Diamond nanostructures and isotopic superlattices</u></b> Kohei M. Itoh; <i>Keio University, Japan</i>
14:30	<b>Quantum measurement in living cells: diamond nanocrystals for biology</b> D.A. Simpson*, L.P. McGuinness, Y.Yan, F. Caruso, R.E. Scholten, L.C.L. Hollenberg; <i>University of Melbourne, Australia</i>
14:50	<b>High sensitivity magnetic imaging using an array of NV spins in diamond and multiplexed CCD camera detection</b> S. Steinert*, B.Naydenov, G.Balasubramanian, F.Jelezko, J.Wrachtrup; <i>University Stuttgart, 3rd Institute of Physics, Germany</i>

<b>15:10</b>	<b>Generation of Single Crystal Diamond Membrane for Nano-photonics</b> J-C. Lee* <sup>1</sup> , A-P. Magyar <sup>1</sup> , F. Rol <sup>1</sup> , I. Aharonovich <sup>1</sup> , A-M. Limarga <sup>1</sup> , E-L. Hu <sup>1</sup> , <i>1School of Engineering and Applied Sciences Harvard University, USA, 2College of Nanoscale Science and Engineering, State University of New York at Albany, USA</i>
<b>15:30</b>	<b>High magnetic field investigation of the 1.4eV Ni colour centre in synthetic diamond</b> P. Plochocka* <sup>1</sup> , P. Kossacki <sup>1</sup> , O. Portugal <sup>2</sup> , G.L.J.A. Rikken <sup>2</sup> , E. Gheeraert <sup>3</sup> , H. Kanda <sup>4</sup> , <i>1LNCMI, CNRS-UJF-UPS-INSA, 25 rue des Martyrs 38042 Grenoble, France, 2LNCMI, CNRS-UJF-UPS-INSA, 143, avenue de Rangueil, 31400 Toulouse, France, 3Institut Néel, CNRS and Université Joseph Fourier, 25 rue des Martyrs 38042 Grenoble, France, 4National Institute for Materials Science, 1-1 Namiki, 305-0044 Tsukuba, Japan</i>
<b>15:50</b>	<b>Refreshment Break</b>

	<b>Session (4): Doping and Superconductivity</b> <b>Chair: M. Schreck, University Augsburg, Germany</b>	
16:20	<b>Keynote Presentation: <u>Superconducting diamond is still in progress</u></b> Hiroshi Kawarada; <i>Waseda University, Japan</i>	
16:50	<b>Effects of the dopant precursor nature on the crystalline quality and transport properties of (100) boron doped diamond films: TMB or diborane ?</b> P-N. Volpe*1, J-C. Arnault1, N. Tranchant1, G. Chicot2, J. Pernot2, F. Jomard3, <i>1CEA-LIST, Diamond Sensors Laboratory, Gif sur Yvette, F-91191 France, France, 2Institut Néel-CNRS &amp; Université Joseph Fourier, 25 avenue des martyrs, 38042 Grenoble, France, France, 3GEMaC-CNRS, - Campus du CNRS de Meudon, 1 place Aristide Briand, 92195 Meudon, France, France</i>	
17:10	<b>Phosphorus donors in (100) homoepitaxial diamond: model of incorporation</b> M-A. Pinault-Thaury*1, T. Tillocher1, D. Kobor2, N. Habka1, F. Jomard1, J. Chevallier1, <i>1CNRS - GEMaC - UVSQ, France, 2LCPM - Université de Ziguinchor, Senegal</i>	
17:30	<b>Electrical property of extremely low Ohmic contact of n-type single-crystal diamond</b> T. Matsumoto*1,2, H. Kato2,3, H. Okushi2,3, S. Yamasaki1,2, <i>1Graduate School of Pure and Applied Sciences, University of Tsukuba, Japan, 2Energy Technology Research Institute, AIST, Japan, 3CREST/JST, c/o AIST, Japan</i>	
17:50	<b>Poster Session 1 and Drinks Reception</b> <b>Chairs: A. Garrido, TU-Munich, Germany and M. Kasu, NTT, Japan</b>	
<b>Tuesday 6<sup>th</sup> September 2011</b>		
	<b>Plenary Session 2 (5)</b> <b>Chair: J. Robertson, University Cambridge, UK</b>	
08:30	<b>Keynote Presentation: <u>Properties and structure of Graphene</u></b> Andrea Ferrari; <i>University of Cambridge, UK</i>	
09:00	<b>Keynote Presentation: <u>Cw-EPR and pulsed EPR Studies of the NV center in diamond</u></b> Junichi Isoya; <i>Tsukuba University, Japan</i>	
09:30	<b>Keynote Presentation: <u>Bio-and electrochemical sensing using diamond</u></b> Greg M. Swain; <i>Michigan State University, USA</i>	
10:00	<b>Refreshment Break</b>	
	<b>Session (6): Bio- and Electrochemistry</b> <b>Chair: R. J. Hamers, University of Wisconsin-Madison, USA</b>	
10:30	<b>Keynote Presentation: <u>Diamond and graphene: advanced carbon materials for bioelectronics and biosensing</u></b> Jose A. Garrido; <i>Technische Universitaet Muenchen, Germany</i>	
11:00	<b>Diamond for bioapplications: Properties of saccharide-modified nanodiamond</b> P. Betz, Y. Sun, G. Jarre, A. Krueger*, <i>Wuerzburg University, Germany</i>	
11:20	<b>SiC and Diamond Electrochemical Grafting for Biosensing Applications</b> N. Yang*1, H. Zhuang2, R. Hoffmann1, <i>1Fraunhofer Institute for Applied Solid State Physics, Germany, 2University of Siegen, Germany</i>	
11:40	<b>The immune responses of nanodiamond in blood system in the cellular model</b> C-Y. Lee1, S-F. Hung2, J-Y. Lin2, E. Perevedentseva1, K-J. Huang2, C-L. Cheng*1, <i>1Department of Physics, National Dong Hwa University, Taiwan, 2Department of Life Science, National Dong Hwa University, Taiwan</i>	
12:00	<b>Electrochemical Detection Of DNA Hybridization By A Zirconia-Modified Diamond Electrode</b> J.S. Foord*1, J. Hu1, B. Liu2, <i>1Oxford University, UK, 2East China University, China</i>	
12:20	<b>Boron-delta-doped Channel Diamond SGFET for Single Mismatched DNA Detection</b> S. Ibori*, Y. Ishiyama, K. Tanabe, T. Ono, Y. Ishii, H. Kawarada, <i>Waseda University, Japan</i>	
12:40	<b>Lunch (lunch not provided)</b>	
	<b>Focussed Session (7): Graphene 1</b> <b>Chair: K.-P. Loh, National University of Singapore, Singapore</b>	<b>Session (9): Nanodiamond 1</b> <b>Chair: J. Rabeau, Macquarie University, Australia</b>
14:00	<b>Keynote Presentation: <u>Band-gap engineering by electric field in bilayer graphene</u></b> Kazuhiro Tsukagoshi; <i>National Institute for Materials Science (NIMS), Japan</i>	<b>The effects of size and surface on nitrogen-vacancy centres in nanodiamond</b> C. Bradac*, T. Gaebel, J-R. Rabeau, <i>Macquarie University, Australia</i>
14:30	<b>Wafer-scale epitaxial graphene on the Si- and C- face of SiC for high frequency applications</b> A. Grill*, T. McArdle, Y.M. Lin, Z. Liu, K. Jenkins, P. Avouris, <i>IBM Research, USA</i>	<b>Microwave driven spin states in multishell nanographites enriched by guest oxygen molecules</b> A. Shames*1, V. Osipov2, T. Enoki3, K. Takai3, A. Vul'2, <i>1Department of Physics, Ben-Gurion University of the Negev, Be'er-Sheva, Israel, 2Ioffe Physical-Technical Institute, Ioffe Physical-Technical Institute, St. Petersburg, Russia, 3Department of Chemistry, Tokyo Institute of Technology, Tokyo Ookayama, Meguro-ku, Tokyo, Japan</i>

14:50	<b>Macroscopic Graphene Growth with Atomic-Layer Thickness Control on Ru Single Crystals and Epitaxial Thin Films</b> E. Sutter, P. Sutter*, <i>Center for Functional Nanomaterials, USA</i>	<b>Giant concentrations of fluorescent nitrogen-vacancy defects fabricated by sintering of detonation nanodiamonds</b> A-A. Soltamova, P-G. Baranov*, R-A. Babunts, S-V. Kidalov, F-M. Shakhov, A-Y. Vul', <i>Ioffe Physical-Technical Institute, Russia</i>	
15:10	<b>Development of high-performance graphene-on-diamond devices</b> J. Yu <sup>2</sup> , G. Liu <sup>2</sup> , A. Sumant* <sup>1</sup> , A. Balandin <sup>2</sup> , <i>1Center for Nanoscale Materials, Argonne National Laboratory, USA, 2Department of Electrical Engineering and Materials Science and Engineering Program, University of California, Riverside, USA</i>	<b>Three-dimensional electrical characterization of carbon nanotube-based interconnects at the nanometer-scale</b> A. Schulze <sup>1,2</sup> , T. Hantschel* <sup>1</sup> , N. Chiodarelli <sup>1,3</sup> , P. Eyben <sup>1</sup> , W. Vandervorst <sup>1,2</sup> , <i>1imec, Kapeldreef 75, B-3001 Leuven, Belgium, 2KU Leuven, Department of Physics and Astronomy, Celestijnenlaan 200D, 3001 Leuven, Belgium, 3KU Leuven, Department of Electrical Engineering, Kasteelpark Arenberg 1, 3001 Leuven, Belgium</i>	
15:30	<b>Refreshment Break</b>	<b>Electronic structure and phase purity in nanocrystalline diamond: A comparative study based on linear antenna and resonance cavity MW PE CVD</b> M. Nesládek* <sup>1,2</sup> , S.D. Janssens <sup>1</sup> , A. Taylor <sup>3</sup> , J. Politerova-Vejpravova <sup>3</sup> , V. Petráková <sup>3</sup> , K. Haenen <sup>1,2</sup> , <i>1Hasselt University, Belgium, 2IMEC vzw, Belgium, 3Academy of Sciences of the Czech Republic v.v.i., Czech Republic, 4Pardubice University, Czech Republic</i>	
15:50		<b>Refreshment Break</b>	
	<b>Focussed Session (8): Graphene 2</b> Chair: A. Ferrari, Cambridge University, UK	<b>Session (10): Surfaces and Defects</b> Chair: M. Nesládek, Hasselt University, Belgium	
16:20	<b>Keynote Presentation: <u>Optoelectronic properties of graphene oxide</u></b> Manish Chhowalla; <i>The State University of NJ, USA</i>	16:20	<b>Photo Emission Electron Microscopy and Thermionic Electron Emission Microscopy of Nitrogen Doped Diamond Films</b> N. Neugebohrn*, G. Hembree, T. Sun, F.A.M. Koeck, R.J. Nemanich, <i>Arizona State University, USA</i>
16:50	<b>Graphene-Boron Nitride Heterostructures</b> P. Sutter*, E. Sutter, <i>Brookhaven National Laboratory, USA</i>	16:40	<b>Si Terminated Diamond: Ideal Platform For Diamond Surface Engineering</b> T. Kobayashi*, S. Sato, T. Ono, T. Tsuno, H. Kawarada, <i>Waseda University, Japan</i>
17:10	<b>Nanomechanical Resonators: Graphene versus Single Crystal Diamond</b> M. Zalalutdinov*, J. Robinson, M. Ray, B. Pate, E. Snow, B. Houston, <i>Naval Research Laboratory, USA</i>	17:00	<b>The importance of diamond surface termination for novel applications based on diamond/water adlayer interfaces</b> K. Larsson*, S. Yang, M. Hassan, <i>Uppsala University, Sweden</i>
17:30	<b>The Interface Between SiC(0001) and Epitaxial Graphene: Rotation and Stability of the Carbon Buffer Layer</b> G. Sclauzero*, A. Pasquarello, <i>EPFL, Switzerland</i>	17:20	<b>Surface induced molecular charge transfer from phosphorus doped diamond films</b> F.A. Koeck* <sup>1</sup> , J. Sharp <sup>2</sup> , R.J. Nemanich <sup>1</sup> , <i>1Arizona State University, USA, 2Marlow Industries, USA</i>
17:50	<b>Lithium Storage Properties of Graphene Nanoribbons</b> J. Lee* <sup>1</sup> , H. Kim <sup>1</sup> , P. John <sup>2</sup> , <i>1Korea Institute of Science and Technology, Republic of Korea, 2Heriot-Watt University, UK</i>	17:40	<b>Surface conducting diamond: doping and non-doping C60F48 on C(100):H</b> M.T. Edmonds <sup>1</sup> , M. Wanke <sup>1</sup> , A. Tadich <sup>2</sup> , P. Sharp <sup>3</sup> , L. Ley <sup>4</sup> , C.I. Pakes* <sup>1</sup> , <i>1La Trobe University, Australia, 2Australian Synchrotron, Australia, 3University of Nottingham, UK, 4Universitat Erlangen, Germany</i>
		18:00	<b>Vacancy Clusters in Brown Diamonds: The Result of Dislocation Dipole Annihilation?</b> J. Rabier*, L. Pizzagalli, <i>Institut P', CNRS, University of Poitiers, France</i>

Wednesday 7 <sup>th</sup> September 2011			
	<b>Focussed Session (11): Nanodiamond 2</b> Chair: Y. Gogotsi, Drexel University, USA	<b>Session (14): Carbon Nanotubes (CNT) 1</b> Chair: Y. Yamazaki, Toshiba Corporation, Japan	
08:30	<b>Keynote Presentation: <u>Recent Progress in Diamond Nano-Particles</u></b> Eiji Osawa; <i>Textile Science and Technology Shinshu University, Japan</i>	<b>Keynote Presentation: <u>CNT growth and properties</u></b> A.R. Harutyunyan; <i>Honda Research Institute USA Inc.</i>	
09:00	<b>Plasmon-enhanced photoluminescence from bioconjugated gold nanoparticle and nanodiamond assembly</b> K.W. Sun*, Y.L. Liu, Department of Applied Chemistry, National Chiao Tung University, Taiwan	<b>Ferromagnetic interaction of defect spins in single walled carbon nanotubes</b> M. Havlicek* <sup>1</sup> , H. Kuzmany <sup>2</sup> , F. Simon <sup>1</sup> , K. Yamagi <sup>3</sup> , M. Rümeli <sup>4</sup> , W. Jantsch <sup>1</sup> , <sup>1</sup> Institute of Semiconductor Physics, Johannes Kepler Linz Universität, Altenbergerstr. 69, A-4040 Linz, Austria, <sup>2</sup> Fakultät für Physik, Universität Wien, Strudlhofgasse 4, A-1090 Wien, Austria, <sup>3</sup> Nanotechnology Research Institute (NRI), National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1 Higashi, Tsukuba 305-8562, Japan, <sup>4</sup> Leibniz Institut für Festkörper- und Werkstofforschung, D-1069 Dresden, Germany	
09:20	<b>Mechanism of deagglomeration of Detonation Nanodiamond</b> A.E. Aleksenskii* <sup>1</sup> , A.Y. Vul'1, A.T. Dideikin <sup>1</sup> , A.V. Shvidchenko <sup>2</sup> , <sup>1</sup> Ioffe Physical-Technical Institute of the Russian Academy of Sciences, Russia, <sup>2</sup> Academical Physical Technological University, St. Petersburg, Russia	<b>Control of wettability on carbon-nanofiber surfaces: from hydrophilicity to superhydrophobicity</b> H. Nair*, R.M. Tiggelaar, A. van Houselt, L. Lefferts, <i>University of Twente, Enschede, The Netherlands</i>	
09:40	<b>Nanodiamond-gadolinium conjugates as a novel contrast agent for medical diagnosis detected by a clinical magnetic resonance imaging (MRI) apparatus</b> H. Yabuno <sup>1</sup> , R. Kasai <sup>2</sup> , T. Nakamura <sup>3</sup> , A. Hotta <sup>1</sup> , T. Suzuki <sup>1</sup> , T. Hasebe* <sup>1,2</sup> , <sup>1</sup> Keio University, Japan, <sup>2</sup> Toho University Sakura Medical Center, Japan, <sup>3</sup> National Institute of Advanced Industrial Science and Technology (AIST), Japan	<b>Gecko-foot-mimetic adhesive properties of carbon nanotube forests</b> B. Chen*, S. John, T. Shean, M-L. Oyen, S. Hofmann, J. Robertson, <i>University of Cambridge, UK</i>	
10:00	<b>Electrostatic Self Assembly of Diamond Nanoparticles</b> J.J. Hees <sup>1</sup> , A. Kriele <sup>1</sup> , O.A. Williams* <sup>1,2</sup> , <sup>1</sup> Fraunhofer IAF, Germany, <sup>2</sup> Cardiff University, UK	<b>Wide-angle X-ray scattering as a quality test for carbon nanotubes</b> A. Burian* <sup>1</sup> , L. Hawelek <sup>1</sup> , A. Brodka <sup>1</sup> , J.C. Dore <sup>2</sup> , V. Honikmaki <sup>3</sup> , Y. Ando <sup>4</sup> , <sup>1A. Chelkowski Institute of Physics, University of Silesia, Poland, <sup>2</sup>School of Physical Science, University of Kent, UK, <sup>3</sup>European Synchrotron Radiation Facility, France, <sup>4</sup>Department of Materials Science and Engineering, Meijo University, Japan</sup>	
10:20	<b>Refreshment Break</b>	<b>Refreshment Break</b>	
	<b>Focussed Session (12): Nitrides on Diamond</b> Chair: M. Stutzmann, TU-Munich, Germany	<b>Session (15): Carbon Nanotubes (CNT) 2</b> Chair: A.R. Harutyunyan, Honda Research Institute, USA	
10:50	<b>Keynote Presentation: High Mobility AlGa<sub>N</sub>/Ga<sub>N</sub> Two-Dimensional Electron Gas Heterostructure Grown on Diamond Substrate</b> Nicolas Grandjean; EPFL IPEQ LASPE, Switzerland	10:50	<b>Keynote Presentation: <u>CNT Interconnects</u></b> Yuichi Yamazaki;
11:20	<b>III-nitride growth on diamond by plasma-assisted molecular beam epitaxy</b> O. Weidemann* <sup>1</sup> , F. Furtmayr <sup>1</sup> , F. Schuster <sup>1</sup> , M. Stutzmann <sup>1</sup> , M. Eickhoff <sup>1,2</sup> , <sup>1</sup> Walter Schottky Institut, Technische Universität München, 85748 Garching, Germany, <sup>2</sup> Physikalisches Institut JLU-Gießen, 35392 Gießen, Germany	11:20	<b>Three-dimensional electrical characterization of carbon nanotube-based interconnects at the nanometer-scale</b> A. Schulze <sup>1,2</sup> , T. Hantschel* <sup>1</sup> , N. Chiodarelli <sup>1,3</sup> , P. Eyben <sup>1</sup> , W. Vandervorst <sup>1,2</sup> , <sup>1</sup> imec, Kapeldreef 75, B-3001 Leuven, Belgium, <sup>2</sup> KU Leuven, Department of Physics and Astronomy, Celestijnenlaan 200D, 3001 Leuven, Belgium, <sup>3</sup> KU Leuven, Department of Electrical Engineering, Kasteelpark Arenberg 1, 3001 Leuven, Belgium
11:40	<b>Development of Diamond Field Effect Transistors by AlN / Diamond Heterostructure</b> M.I. Imura* <sup>1</sup> , R.H. Hayakawa <sup>1</sup> , H.O. Oosato <sup>1</sup> , E.W. Watanabe <sup>1</sup> , D.T. Tsuya <sup>1</sup> , M.L. Liao <sup>1</sup> , <sup>1</sup> National Institute for Materials Science (NIMS), Japan, <sup>2</sup> Nagoya University, Japan	11:40	<b>Carbon nanotubes for advanced interconnects</b> J. Robertson*, G. Zhong, C. Esconjauregui, B. Bayer, M. Fouquet, C. Zhang, <i>Cambridge University, UK</i>

12:00	<b>Fabrication and performance evaluation of solution synthesized zno nanorod/gan heterojunction uv leds</b> S. Jha, O. Kutsay, S.T. Lee*, I. Bello, <i>City University of Hong Kong, Hong Kong</i>	12:00	<b>Self-aligned Catalyst Formation Process for Carbon Nanotube Synthesis</b> C. Zhang*, F. Yan, B. Bayer, B. Chen, R. Xie, G. Zhong, <i>Cambridge University, UK</i>
12:20	<b>Keynote Presentation: Nitride/ Diamond Heterostructures- from Growth to Devices</b> Makoto Kasu; <i>NTT Basic Research Laboratories, Japan</i>	12:20	<b>How to improve the bottom contact resistance to achieve high performance advanced CNT interconnects</b> J. Dijon* <sup>1</sup> , H. Okuno <sup>1</sup> , H. Lepoche <sup>1</sup> , A. Fournier <sup>1</sup> , E. De Vito <sup>2</sup> , <i>1CEA LITEN DTNM, France, 2CEA LITEN-Minatec, France</i>
12:50	<b>Lunch (lunch not provided)</b>		
	<b>Session (13): Devices 1</b> Chair: P. Bergonzo, CEA, France		<b>Session (16): Diamond Like Carbon (DLC)</b> Chair: X. Jiang, University Siegen, Germany
14:00	<b>Electrical characterization of diamond Schottky m-i-p+ diodes</b> M. Suzuki* <sup>1,2</sup> , T. Sakai <sup>1</sup> , T. Makino <sup>2,3</sup> , H. Kato <sup>2,3</sup> , T. Takeuchi <sup>2,3</sup> , H. Okushi <sup>2,3</sup> , S. Yamasaki <sup>2,3</sup> , <i>1Toshiba Corporation, Japan, 2National Institute of Advanced Industrial Science and Technology (AIST), Japan, 3Core Research for Evolutional Science and Technology (CREST), Japan</i>	14:00	<b>Keynote Presentation: Lubricant-Compliant Superhard Carbon Coatings for Green Lubrication</b> Maria Isabel De Barros Bouchet; <i>Ecole Centrale de Lyon, France</i>
14:20	<b>Bipolar transistor device provided with phosphorus-doped n-type diamond base layer</b> H. Kato* <sup>1,2</sup> , K. Oyama <sup>1,4</sup> , T. Makino <sup>1,3</sup> , M. Ogura <sup>1,3</sup> , S. Yamasaki <sup>1,3</sup> , <i>1AIST, Japan, 2NIMS, Japan, 3CREST, Japan, 4Univ. of Tsukuba, Japan</i>	14:30	<b>Diamond-like carbon films as piezoresistors in highly sensitive force sensors</b> M. Petersen* <sup>1</sup> , R. Bandorf <sup>2</sup> , G. Bräuer <sup>1,2</sup> , C-P. Klages <sup>1,2</sup> , <i>1TU Braunschweig - Institut für Oberflächentechnik, Germany, 2Fraunhofer Institute for Surface Engineering and Thin Films, Germany</i>
14:40	<b>High-RF-output-power H-terminated diamond FET with hole concentration increased by NO<sub>2</sub> adsorption</b> M. Kasu*, M. Kubovic, H. Sato, <i>NTT Basic Research Laboratories, Japan</i>	14:50	<b>Self-assembly of amorphous carbon nanorods into nanotubes</b> I. Suarez-Martinez*, N.A. Marks, <i>Curtin University, Australia</i>
15:00	<b>Imperfections for diamond Schottky diodes</b> T. Teraji* <sup>1</sup> , A. Fiori <sup>1</sup> , N. Kiritani <sup>2</sup> , S. Tanimoto <sup>2</sup> , S. Ohmagari <sup>3</sup> , Y. Koide <sup>1</sup> , <i>1National Institute for Materials Science, Japan, 2Nissan Motor Co. Ltd, Japan, 3Kyushu University, Japan</i>	15:10	<b>Diamond-like carbon films as piezoresistors in highly sensitive force sensors</b> L. Pastewka*, P. Gumbsch, M. Moseler, <i>Fraunhofer Institute for Mechanics of Materials IWM, Germany</i>
15:20	<b>Unique trapping and recombination processes of electron-hole pairs in diamond</b> T. Makino* <sup>1,2</sup> , S. Kanno <sup>1</sup> , H. Okushi <sup>1,2</sup> , S. Yamasaki <sup>1,2</sup> , <i>1AIST, Japan, 2CREST/JST c/o AIST, Japan</i>	15:30	<b>Adhesion enhancement of polyolefins by diamond like carbon coating and photografting polymerization</b> J. Takahashi*, A. Hotta, <i>Keio university, Japan</i>
15:40	<b>1-D multistrip photodiodes based on synthetic single crystal diamond</b> C. Verona* <sup>1</sup> , G. Verona Rinati <sup>1</sup> , G. Prestopino <sup>1</sup> , N. Tartoni <sup>3</sup> , G. Faggio <sup>4</sup> , M. Pillon <sup>2</sup> , <i>1Dip. di Ing. Meccanica, Università di Roma "Tor Vergata", Italy, 2Associazione EURATOM-ENEA sulla Fusione, Italy, 3Diamond Light Source, Harwell Science and Innovation Campus, UK, 4Dip. Di Meccanica e Materiali, Università di Reggio Calabria, Italy</i>	15:50	<b>Carbon materials as hosts to basic <math>\pi</math>-conjugated polymers and sp<sup>1</sup> nanowires</b> M.R. Rybachuk <sup>1,2</sup> , <i>1Queensland University of Technology, Australia, 2INRS-EMT, Université du Québec, Canada</i>
16:00	<b>Synthetic single crystal diamond detectors in narrow clinical radiation therapy beams</b> I. Ciancaglioni, C. Di Venanzio, M. Marinelli*, E. Milani, G. Prestopino, C. Verona, <i>Università di Roma "Tor Vergata", Italy</i>	16:10	<b>Nuclear spin-lattice relaxation and paramagnetic defects in carbon nanostructures</b> A. Panich, <i>Department of Physics, Ben-Gurion University of the Negev, P.O.Box 653, Be'er Sheva 84105, Israel</i>
16:20	<b>Evaluation of CVD freestanding boron doped diamond as substrate for high power electronic devices</b> R. Issaoui* <sup>1</sup> , J. Achard <sup>1</sup> , F. Silva <sup>1</sup> , A. Tallaire <sup>1</sup> , M-A. Pinault <sup>2</sup> , A. Gicquel <sup>1</sup> , <i>1LSPM, CNRS - Université Paris 13, Paris, France, France, 2GEMaC-CNRS - Université Versailles St Quentin,</i>		

	Meudon, France, France		
16:40	<b>Poster Session 2 and Drinks Reception</b> Chairs: K.M Itoh, Keio University, Japan and G. Swain, Michigan State University, USA		
19:00	<b>Conference Dinner</b>		
<b>Thursday 8<sup>th</sup> September 2011</b>			
	<b>Session (17): Bio- and Electrochemistry</b> Chair: H. Kawarada, Waseda University, Japan		
08:30	<b>Diamond micro-cantilevers for direct DNA sensing: a study of the contribution of molecular interactions</b> A. Bongrain* <sup>1,2</sup> , C. Agnès <sup>1</sup> , L. Rousseau <sup>2</sup> , E. Scorsone <sup>1</sup> , J-C. Arnault <sup>1</sup> , S. Ruffinatto <sup>3,4</sup> , <sup>1</sup> CEA, LIST, France, <sup>2</sup> ESIEE – ESYCOM University Paris Est, France, <sup>3</sup> Institut Néel, France, <sup>4</sup> CEA, INAC, France		
08:50	<b>Effective strategy of surface functionalizations for blocking the nonspecific adsorption on boron doped nanocrystalline diamond biosensor</b> X. Wang* <sup>1</sup> , A. Ruslinda <sup>1</sup> , K. Tsugawa <sup>2</sup> , M. Hasegawa <sup>2</sup> , H. Kawarada <sup>1</sup> , <sup>1</sup> Waseda University, Japan, <sup>2</sup> National Institute of Advanced Industrial Science and Technology, Japan		
09:10	<b>Biomimetic Diamond Surface for Protein Immobilization with fast Electron Transfer</b> R. Hoffmann*, A. Kriele, H. Obloh, E. Kays, N. Yang, C.E. Nebel, <i>Fraunhofer-Institute for Applied Solid State Physics (IAF), Germany</i>		
09:30	<b>Surface-sensitive electrochemistry on diamond nanoelectrode arrays</b> J. Hees* <sup>1</sup> , R. Hoffmann <sup>1</sup> , A. Kriele <sup>1</sup> , N. Yang <sup>1</sup> , O.A. Williams <sup>2</sup> , C.E. Nebel <sup>1</sup> , <sup>1</sup> Fraunhofer Institute of Applied Solid State Physics IAF, Germany, <sup>2</sup> Cardiff School of Physics and Astronomy, Cardiff University, UK		
09:50	<b>Three-dimensional nanocrystalline diamond bio-transistor</b> M. Krátká*, A. Kromka, B. Rezek, <i>Institute of Physics AS CR, v. v. i., Czech Republic</i>		
10:10	<b>Fabrication of Heteroepitaxial Boron-doped Diamond Electrode for Electrochemical Analysis</b> E. Berdermann* <sup>1</sup> , M. Ciobanu <sup>1</sup> , M. Schreck <sup>2</sup> , C. Stehl <sup>2</sup> , M-S. Rahman <sup>1</sup> , M. Traeger <sup>1</sup> , <sup>1</sup> GSI Helmholtz Zentrum für Schwerionenforschung, Germany, <sup>2</sup> Universität Augsburg, Germany		
10:30	<b>Refreshment Break</b>		
	<b>Focussed Session (18): Spintronics 2</b> Chair: J. Isoya, Tsukuba University, Japan		
11:00	<b>Keynote Presentation: <u>Optical detection of NV-centers in diamond nano-particles: Fundamental science and applications above room temperatures</u></b> Taras Plakhotnik; <i>The University of Queensland, Australia</i>		
11:30	<b>Two-dimensional arrangements of periodic diamond wires for photonic applications</b> <i>H. Mohamad, W. Smirnov*, M. Wolfer, C.E. Nebel, Fraunhofer Institute for Applied Solid State Physics, Germany</i>		
11:50	<b>1D and 2D Photonic Crystal Micro-Cavities in Quasi Single Crystal Diamond</b> J. Riedrich-Moeller* <sup>1</sup> , L. Kipfstuhl <sup>1</sup> , M. Fischer <sup>2</sup> , S. Gsell <sup>2</sup> , M. Schreck <sup>2</sup> , C. Becher <sup>1</sup> , <sup>1</sup> Universitaet des Saarlandes, Experimentalphysik (FR 7.2), 66123 Saarbruecken, Germany, <sup>2</sup> Universitaet Augsburg, Experimentalphysik IV, 86159 Augsburg, Germany		
12:10	<b>Diamond Quantum Emitters Embedded in Tellurite Glass Optical Fibre</b> B-C. Gibson* <sup>1</sup> , M-R. Henderson <sup>2</sup> , H. Ebdorff-Heidepriem <sup>2</sup> , T-M. Monro <sup>2</sup> , S. Prawer <sup>1</sup> , A-D. Greentree <sup>1</sup> , <sup>1</sup> The University of Melbourne, Australia, <sup>2</sup> The University of Adelaide, Australia		
12:30	<b>Dynamical decoupling of nitrogen-vacancy centre electron spins and its application in atomic-scale magnetometry</b> N. Zhao*, R.B. Liu, <i>The Chinese University of Hong Kong, Hong Kong</i>		
12:50	<b>Ferromagnetic Schottky junctions using diamond semiconductors</b> K. Ueda*, T. Soumiya, K. Tozawa, H. Asano, <i>Nagoya University, Japan</i>		
13:10	<b>Lunch break (lunch not provided)</b>		
	<b>Session (19): Devices 2</b> Chair: S. Prawer, University of Melbourne, Au		
14:00	<b>Keynote Presentation: <u>Diamond X-ray Optics for future Light Sources</u></b> Yuri Shvydkv; <i>Advanced Photon Source, USA</i>		
14:30	<b>Fabrication of high-power, planar refractive X-ray lenses from nanocrystalline diamond</b> L. Alianelli <sup>1</sup> , K.J.S. Sawhney <sup>1</sup> , A. Malik <sup>1</sup> , O.J.L. Fox <sup>2</sup> , P.W. May* <sup>2</sup> , R. Stevens <sup>3</sup> , <sup>1</sup> Diamond Light Source Ltd, UK, <sup>2</sup> University of Bristol, UK, <sup>3</sup> STFC Micro-nano-technology centre, UK		
14:50	<b>Investigations of microwave absorption of surface modified CVD diamond disks for fusion applications</b> T.A. Scherer* <sup>1</sup> , D. Strauss <sup>1</sup> , S. Schreck <sup>1</sup> , A. Meier <sup>1</sup> , W. Müller-Sebert <sup>2</sup> , C. Nebel <sup>2</sup> , <sup>1</sup> Karlsruhe Institute of Technology KIT, Germany, <sup>2</sup> Fraunhofer Institut für Angewandte Festkörperphysik IAF, Germany		
15:10	<b>Development of Heteroepitaxial Single-Crystal Diamond Detectors for FAIR</b> E. Berdermann* <sup>1</sup> , M. Ciobanu <sup>1</sup> , M. Schreck <sup>2</sup> , C. Stehl <sup>2</sup> , M-S. Rahman <sup>1</sup> , M. Traeger <sup>1</sup> , <sup>1</sup> GSI Helmholtz Zentrum für Schwerionenforschung, Germany, <sup>2</sup> Universität Augsburg, Germany		

15:30	<p><b>Fabrication with ion beam lithography and IBIC characterization of a particle detector in single-crystal diamond with integrated graphitic micro-electrodes</b></p> <p>J. Forneris*<sup>1</sup>, L. La Torre<sup>2</sup>, A. Lo Giudice<sup>1</sup>, P. Olivero<sup>1</sup>, M. Marinelli<sup>3</sup>, E. Vittone<sup>1</sup>, <i>1Experimental Physics Department – NIS Centre of Excellence, University of Torino and INFN - sez. Torino, Italy, 2INFN - Laboratori Nazionali di Legnaro, Italy, 3Dipartimento di Ingegneria Meccanica, Università di Roma “Tor Vergata”, Italy</i></p>
15:50	<p><b>Novel 3D micro-structuring of diamond for radiation detector applications: enhanced performances evaluated under particle and photon beams</b></p> <p>B. Caylar*<sup>1</sup>, M. Pomorski<sup>1</sup>, J. Alvarez<sup>2</sup>, A. Oh<sup>3</sup>, T. Wengler<sup>4</sup>, P. Bergonzo<sup>1</sup>, <i>1CEA, LIST, Diamond Sensors Laboratory, Gif-sur-Yvette, F-91191, France, 2Laboratoire de génie électrique de Paris (LGEP), Gif-sur-Yvette, F-91191, France, 3University of Manchester, School of Physics and Astronomy, Manchester, UK, 4CERN, 1211 Geneva 23, Switzerland</i></p>
16:10	<p><b>Single diamond-on-sapphire ultra-microelectrode with pA background current</b></p> <p>Z. Gao*<sup>1</sup>, C. Pietzka<sup>1</sup>, E. Colombo<sup>2</sup>, E. Carbone<sup>2</sup>, A. Pasquarelli<sup>1</sup>, E. Kohn<sup>1</sup>, <i>1Inst. of Electron Devices and Circuits, Ulm University, Germany, 2Department of Neuroscience, NIS Centre, Italy</i></p>
16:30	<p><b>Closing session</b></p>