



Diamond 2009 Oral Programme

Sunday 6th September	
16.30 – 19.00	Conference registration
Monday 7th September	
09.00	Welcome from the organising committee
Session 1 – Plenary 1	
Chairs: C. Nebel, <i>Fraunhofer Institut für Angewandte Festkörperphysik (IAF), Germany</i> , J. Robertson, <i>University of Cambridge, UK</i>	
09.10	INVITED PRESENTATION 1 Diamond in electronics and MEMS, E. Kohn; <i>University of Ulm, Germany</i>
09.40	INVITED PRESENTATION 2 Extended defects in single crystal CVD diamond, P. Martineau; <i>DTC, UK</i>
10.10	INVITED PRESENTATION 3 Fabrication strategies for diamond based quantum devices, S. Prawer; <i>University of Melbourne, Australia</i>
10.40	Refreshment break
Session 2 (Focus Session) - Diamond for quantum computing	
Chair: J. Wrachtrup, <i>Stuttgart University, Germany</i>	
11.10	INVITED PRESENTATION 4 Single spins in diamond: Quantum computing and magnetometry, F. Jelezko; <i>University of Stuttgart, Germany</i>
11.40	O01 - Coherence control of single spins in diamond , N. Mizuochi ^{1,2} , K. Nakamura ⁴ , H. Watanabe ⁵ , S. Yamasaki ⁶ , F. Jelezko ³ , J. Wrachtrup ³ , et al; ¹ Tsukuba University, Japan, ² JST PRESTO, Japan, ³ Universität Stuttgart, Germany, ⁴ Tokyo Gas Co., Ltd., Japan, ⁵ Diamond Research Center, AIST, Japan, ⁶ Nanotechnology Research Institute AIST, Japan
12.00	O02 - Understanding the behaviour of colour centres in nano-scale diamonds , J.R. Rabeau ¹ , C. Bradac ¹ , T. Gaebel ¹ , A.S. Barnard ² ; ¹ Macquarie University, Australia, ² CSIRO Virtual Nanoscience Laboratory, Materials Science & Engineering, Australia
12.20	O03 - Towards bright diamond based single photon source , I. Aharonovich ¹ , S. Castelletto ¹ , A.D. Greentree ¹ , J.F. Roch ³ , F. Treussart ³ , S. Prawer ^{1,2} , et al; ¹ University of Melbourne, Australia, ² Quantum Communication Victoria, Australia, ³ Laboratoire de Photonique Quantique et Moléculaire, France
12.40	Lunch break – Lunch not provided
Session 3 - Diamond biochemistry	
Chair: TBC	
14.00	INVITED PRESENTATION 5 Biomolecule conjugated nanodiamonds and their interaction with cells, C.-L. Cheng, <i>National Dong Hwa University, Taiwan</i>
14.30	O04- Nanodiamond ultra-microelectrode arrays for bio-analytical applications: Effect of array size and distribution , S. Raina, W.P. Kang*, J.L. Davidson; <i>Vanderbilt University, USA</i>
14.50	O05 - Controlling the drug release rate from biocompatible polymers with micro-patterned Diamond-Like Carbon (DLC) coating , K. Enomoto ^{*1} , T. Hasebe ² , A. Kamijo ³ , T. Suzuki ¹ , K. Takahashi ⁴ , A. Hotta ¹ , et al; ¹ Keio University, Japan, ² Toho University Sakura Medical Center, Japan, ³ Yokohama City University Hospital, Japan, ⁴ The University of Tokyo Hospital
15.10	O06 - In vivo nerve recording in freely-behaving <i>aplysia californica</i> with diamond hook electrodes , J.M. Halpern*, M.J. Cullins, H.J. Chiel, H.B. Martin; <i>Case Western Reserve University, USA</i>
15.30	Refreshment break
Session 4 – Nanodiamond	
Chair: O. Auciello, <i>Argonne National Laboratory, USA</i>	
16.00	INVITED PRESENTATION 6 Study of structure, electronic properties and applications of detonation nanodiamonds, A. Vul; <i>Ioffe Institute, Russia</i>
16.30	O07 - Structure and electronic properties of diamond nano particle films , W. Zhang, J. Ristein*; <i>University of Erlangen, Germany</i>
16.50	O08 - Nanodiamond growth for microelectromechanical systems , O.A. Williams ^{*1} , A. Kriele ¹ , M. Wolfer ¹ , E. Sillero ^{1,2} , E. Wörner ¹ , W. Müller-Sebert ¹ , et al; ¹ Fraunhofer IAF, Germany, ² Ciudad Universitaria, Spain
17.10	O09 - Raman and luminescence imaging of treated nanodiamond , A. Taylor ¹ , I. Kratochvilova ¹ , A. Krueger ² , S. Janssens ³ , F. Fendrych ¹ , M. Nesladek ^{*3} , et al; ¹ Institute of Physics ASCR v.v.i., Czech Republic, ² Julius-Maximilian-Universität, Germany, ³ Hasselt University, Belgium
17.30	Poster session 1 & reception
Tuesday 8th September	
Session 5 – Plenary 2	
Chair: P. Bachmann, <i>Philips Research Labs, Germany</i>	
08.30	INVITED PRESENTATION 7 New principle electronic devices using unique properties of diamond, S. Yamasaki; <i>AIST, Japan</i>
09.00	INVITED PRESENTATION 8 Science and technology of ultrananocrystalline diamond (UNCD) films and application to multifunctional devices, O. Auciello; <i>Argonne National Laboratory, USA</i>

09.30	INVITED PRESENTATION 9 Theory of nanotube growth and structural relaxation , B.I. Yakobson; <i>Rice University, USA</i>	
10.00	<i>Refreshment break</i>	
Session 6A - Diamond electrochemistry Chair: K. Haenen, <i>Hasselt University, Belgium</i>		Session 6B - Nanotubes / DLC Chair: J. Dijon, <i>CEA, France</i>
10.30	INVITED PRESENTATION 10 Recent advances in electrochemical application of boron-doped diamond electrodes , Y. Einaga; <i>Keio University, Japan</i>	10.30 O15 - Anisotropically conductive and transparent polymer films with carbon nanotubes , M. Kikuchi*, Y. Inokuchi, Y. Takahashi, Y. Taki; <i>Nikon Corp., Japan</i>
11.00	O14 - Surface redox chemistry of diamond nanoparticles , K.B. Holt*, D.J. Caruana, E. Millan-Barrios; <i>University College London, UK</i>	10.50 O16 - Kinetics and mechanism of carbon nanotube growth , C.T. Wirth*, C. Zhang, G. Zhong, S. Hofmann, J. Robertson; <i>Cambridge University, UK</i>
11.20	O11 - Vertically aligned diamond nanowires: Fabrication and characterisation for advanced applications in bio- and electrochemist , W. Smirnov*, A. Kriele, M. Wolfer, N. Yang, C. E. Nebel; <i>Fraunhofer Institut of Applied Solid State Physics, Germany</i>	11.10 O17 - Growth of high-density vertically-aligned carbon nanotubes on silica-based substrates , S. Esconjauregui*, M. Fouquet, S. Hofmann, J. Robertson; <i>University of Cambridge, UK</i>
11.40	O12 - Deposition of electrocatalyst nanoparticles on modified diamond electrodes for fuel cell and chemical sensor applications , J.S. Foord*, J. Hu, X. Lu; <i>University of Oxford, UK</i>	11.30 O18 - Nanoscale guiding of single-walled carbon nanotubes on SiO₂ using catalytic breadboards , C. Papadopoulos; <i>University of Victoria, Canada</i>
12.00	O13 - Transparent diamond microelectrode for biochemical application , Z. Gao*, A. Pasquarelli, M. Dipalo, M. Feneberg, K. Thonke, E. Kohn; <i>Ulm University, Germany</i>	11.50 O19 - Diamond-like carbon nanorod films , D. Varshney*, V. Makarov, B. R. Weiner, G. Morell; <i>University of Puerto Rico, USA</i>
12.20	<i>Lunch break – Lunch not provided</i>	12.10 O20 - Plasma immersion ion implantation – a method for depositing DLC films with a gradient carbide transition layer to the substrate , W. Ensinger; <i>Darmstadt University of Technology, Germany</i>
		12:30
Session 7A (Focus Session) – Superconductivity Chair: E. Bustarret, <i>LEPES, France</i>		Session 7B - Nanodiamond particle properties Chair: C.L. Cheng, <i>National Dong Hwa University, Taiwan</i>
14.00	INVITED PRESENTATION 11 Superconductivity in diamond V. Sidorov; <i>Russian Academy of Sciences, Russia</i>	14.00 O23 - Preparation of fluorescently and magnetically visualized nanodiamond stably dispersed under physiological environment for their practical use as a biological multi-modal imaging probe , N. Komatsu*, T. Takimoto, N. Kitagawa, S. Shimizu, T. Kimura, T. Chano, et al; <i>Shiga University of Medical Science, Japan</i>
		14.20 O24 - Photoluminescent nanodiamonds as innovative biological markers and their internalization pathways in cells , O. Faklaris* ¹ , V. Joshi ² , J.P. Boudou ³ , T. Sauvage ⁴ , P. Curmi ² , F. Treussart ¹ , et al, ¹ Laboratoire de Photonique Quantique et Moléculaire, France, ² Université d'Evry, France, ³ LMSSMat, France, ⁴ Conditions Extrêmes et Matériaux: Haute Température et Irradiation, France
14.30	INVITED PRESENTATION 12 Theory of superconductivity in diamond and related solids , X. Blasé; <i>Institut Néel/CNRS, Université Joseph Fourier, France</i>	14.40 O25 - Light emitting diamond nanoparticles: Luminescence optimization and surface functionalization , S. Perruchas* ¹ , T. Gacoin ¹ , H. Girard ^{2,1} , P. Bergonzo ² , G. Dantelle ^{3,1} , F. Treussart ³ , et al; ¹ Laboratoire de Physique de la Matière Condensée (PMC) CNRS-Ecole Polytechnique Palaiseau France, France, ² CEA-LIST Diamond Sensor Laboratory CEA/Saclay Gif sur Yvette France, France, ³ Laboratoire de Photonique Quantique et Moléculaire (LPQM) CNRS-Ecole Normale Supérieure de Cachan Cachan France, France

15.00	O21 - Reciprocal space mapping of the Fermi surface and electron-phonon coupling in the normal state of superconducting diamond , H. Guyot* ¹ , M. Hoesch ² , J. Serrano ² , M. Krisch ² , A. Taleb-Ibrahimi ³ , P. Lefèvre ³ , et al; ¹ Institut Néel CNRS UJF, France, ² ESRF, France, ³ SOLEIL, France, ⁴ LPS CNRS University Paris-Sud, France, ⁵ LMPQ CNRS University Paris Diderot, France	15.00	O26 - High optical quality nanocrystalline diamond with reduced defect density at grain boundaries , Z. Remes*, A. Kromka, M. Vanecek, ASCR, v.v.i., Czech Republic
15.20	O22 - Scanning tunnelling microscopy/spectroscopy and magnetoresistance measurements on heavily boron-doped nanocrystalline diamond , S.D. Janssens* ¹ , K. Haenen ^{1,2} , P. Wagner ^{1,2} , B. L. Willems ³ , V. V. Moshchalkov ³ , L. Chibotaru ⁴ , et al; ¹ Hasselt University, Belgium, ² Division IMOMECE, IMEC vzw, Belgium, ³ Universidad Autonoma de Madrid, Spain, ⁴ Katholieke Universiteit Leuven, Belgium	15.20	O.27 - SEM and AFM studies of short grown ultra nanocrystalline diamond (UNCD) films: Determination of critical exponents , H. Sternschulte* ¹ , U. Stimming ¹ , S. Ghodbane ² , D. Steinmüller-Nethl ² , M. Fischer ³ , M. Schreck ³ ; ¹ TU München, Germany, ² rho-Best coating GmbH, Austria, ³ Universität Augsburg, Germany
15.40	Refreshment break	15.40	O.28 - Effect of ambient conditions on photoluminescence properties of nanocrystalline diamond , B. Dzurnak* ¹ , F. Trojanek ¹ , J. Preclikova ¹ , P. Maly ¹ , A. Kromka ² , B. Rezek ² ; ¹ Charles University in Prague, Czech Republic, ² Institute of Physics ASCR, Czech Republic
		16.00	Short refreshment break
Session 8A (Focus Session) – Devices Chair: Y. Koide, National Institute for Materials Science, Japan		Session 8B – Processing Chair: J. Ristein, University of Erlangen, Germany	
16.10	INVITED PRESENTATION 13 Recent progress of diamond toward power switching devices, S. Shikata; AIST, Japan	16.20	O33 - Surface analysis of CVD diamond exposed to fusion plasma , S. Porro* ¹ , G. De Temmerman ² , M. Wiora ³ , S. Lisgo ² , P. John ¹ , J.I.B. Wilson ¹ , et al; ¹ Heriot-Watt University, UK, ² UKAEA Culham Science Centre, UK, ³ Ulm University, Germany
16.40	O29 - Silicon-on-diamond layer integration by wafer bonding technology , M. Rabarot* ¹ , J. Widiez ¹ , S. Saada ² , J.P. Mazellier ¹ , J.C. Roussin ¹ , J. Dechamp ¹ , et al; ¹ CEA, LETI, MINATEC, France, ² CEA, LIST, France	16.40	O34 - FIB hard mask diamond patterning - dies for nanoimprint and nanoimprint lithography , W.R. McKenzie, J.B. Pethica, G.L.W. Cross*; Trinity College Dublin, Ireland
17.00	O30 - Low reverse-current diamond Schottky diodes prepared by VUV/ozone treatment , T. Teraji* ¹ , Y. Garino ¹ , Y. Koide ¹ , T. Ito ² ; ¹ National Institute for Materials Science, Japan, ² Osaka University, Japan	17.00	O35 - BN analogues of graphene: On the formation mechanism of boronitrene layers - solids with extreme structural anisotropy , H. Sachdev*, F. Müller, S. Hüfner; Universität des Saarlandes, Germany
17.20	O31 - AlN as passivation for surface channel FETs on H-terminated diamond , D. Kueck* ¹ , P. Leber ¹ , G. Speranza ² , E. Kohn ¹ ; ¹ Ulm University, Germany, ² Physics and Chemistry of Surfaces and Interfaces, FBK-IRST, Italy	17.20	O36 - Electrical properties of in situ Si-doped cubic boron nitride films by ECR MPCVD , Q. Ye*, Y.M. Chong, Y. Yang, B. He, A.L. Ji, W.J. Zhang, et al; City University of Hong Kong, Hong Kong
17.40	O32 - Towards low temperature thermionic electron emitters based on doped diamond thin film structures , F.A.M. Koeck, R.J. Nemanich*; Arizona State University, USA	17.40	O37 - New generations of nanodiamonds: Single-digit nanodiamonds (SDND) and “white” nanodiamonds , Y. Fedutik ¹ , A. Antipov ¹ , A. Kalachev* ¹ , T. Gubarevich ² ; ¹ PlasmaChem GmbH, Germany, ² National Academy of Science of Belarus, Belarus
18.00	End of submitted presentations		
Diamond conference anniversary session Chair: C. Nebel, Fraunhofer Institut für Angewandte Festkörperphysik (IAF), Germany			
18.30	Surface electronic properties of diamond , L. Ley, University of Nürnberg-Erlangen, Germany		
19.00	Diamond growth , G. Scarsbrook, Element Six, UK		
19.30	20 years of diamond conference , J. Robertson, University of Cambridge, UK		
20.00	End of day		
Wednesday 9th September			
Session 9A – Growth Chair: G. Scarsbrook, Element Six, UK		Session 9B – DLC Chair: J. Robertson, University of Cambridge, UK	
08.30	INVITED PRESENTATION 14 Investigation of diamond growth mechanisms using kinetic Monte Carlo methods, P. May; University of Bristol, UK	08.30	INVITED PRESENTATION 15 Carbide-based nanocomposite thin films – structures and properties, J. Patscheider; EMPA, Switzerland

09.00	O38 - Heteroepitaxial diamond films on Ir/YSZ/Si(001) for neutron monochromators , S. Gsell* ¹ , M. Fischer ¹ , M. Schreck ¹ , B. Stritzker ¹ , A. Freund ² , K. Andersen ³ , et al; ¹ Universität Augsburg, Germany, ² Via Cordis - Consulting and Movement, France, ³ Institut Laue - Langevin, France	09.00	O42 - Next generation of overcoat technology for TFMH , B. Druz* ¹ , I. Zaritsky ¹ , R. Yevtukhov ¹ , A. Andersen ² ; ¹ Veeco Instruments, Inc., USA, ² University of California, Berkeley, USA
09.20	O39 - High growth rate P-doping using (110)-oriented single crystal diamond substrates , K. Haenen* ^{1,2} , A. Lazea ^{2,1} , V. Mortet ^{1,2} , F. Jomard ³ , J. Barjon ³ ; ¹ Hasselt University, Belgium, ² IMEC vzw, Belgium, ³ CNRS-Université de Versailles Saint-Quentin-en-Yvelines, France	09.20	O43 - Plasma analysis of a novel PECVD process for corrosion resistant DLC interior coating of pipelines , S. Lapp* ¹ , F. Placido ¹ , A. Ogwo ¹ , T. Okpalugo ¹ , D. Lusk ² , M. Gore ² ; ¹ University of the West of Scotland, UK, ³ Sub-One Technology Inc, USA
09.40	O40 - Key parameters to grow (100) n-type diamond with high phosphorus donor activity , T. Tillocher*, G. Frangieh, M.-A. Pinault, J. Barjon, F. Jomard, J. Chevallier; Université Versailles St Quentin - CNRS, France	09.40	O44 - Suitability of functional DLC coatings onto thin polymers for food and electronic device packaging , S.S. Roy*, D. Mukherjee, A. Mathur, J A. McLaughlin; University of Ulster, UK
10.00	O41 - High-performance plasma etching processes for developing advanced diamond devices , E. Gu* ¹ , Y.F. Zhang ¹ , C.L. Lee ¹ , M.D. Dawson ¹ , B.R. Patton ² , J.M. Smith ² ; ¹ University of Strathclyde, UK, ² University of Oxford, UK	10.00	O45 - Investigation of the stress induced transformation from sp²- to sp³- rich phases in amorphous carbon films , D.W.M. Lau* ¹ , J.G. Partridge ¹ , M.B. Taylor ¹ , D.G. McCulloch ¹ , N.A. Marks ² , D.R. McKenzie ³ ; ¹ RMIT University, Australia, ² Curtin University of Technology, Australia, ³ University of Sydney, Australia
10.20	Refreshment break		
Session 10A - Biochemistry 2 Chair: M. Nesladek, Hasselt University, Belgium		Session 10B – Nanotubes Chair: B.I. Yakobson, Rice University, USA	
10.50	INVITED PRESENTATION 16 Photochemical modification and functionalisation of carbon surfaces with fluorine moieties , T. Nakamura; AIST, Japan	10.50	INVITED PRESENTATION 17 Carbon nanotubes for interconnects in future integrated circuits: the challenge of the density , J. Dijon; CEA, France
11.20	O46 - Diamond surface modification with mercaptophenyl group for DNA release , H. Uetsuka* ¹ , T. Nakamura ¹ , T. Yamada ¹ , C.E. Nebel ² , N. Fujimori ¹ ; ¹ National Institute of Advanced Industrial Science and Technology (AIST), Japan, ² Fraunhofer Institute for Applied Solid-State Physics (IAF), Germany	11.20	O50 - Integration of vertically aligned single-walled carbon nanotube onto SOI CMOS chips at room temperature , S. Santra ¹ , G. Zhong ¹ , S.Z. Ali* ¹ , P.K. Guha ² , J. Robertson ¹ , F. Udrea ^{1,3} , et al, ¹ University of Cambridge, UK, ² University of Warwick, UK, ³ Cambridge CMOS Sensors, UK
11.40	O47 - Biofunctionalization of diamond microelectrodes , A. Reitingner*, N.A. Hutter, S.Q. Lud, R. Jordan, M. Stutzmann, J.A. Garrido, et al; TU München, Germany	11.40	O51 - Optically active single-walled carbon nanotubes through preferential extraction with chiral mono- and diporphyrins , N. Komatsu* ¹ , X. Peng ¹ , F. Wang ¹ , T. Kimura ¹ , A. Osuka ² ; ¹ Shiga University of Medical Science, Japan, ² Kyoto University, Japan
12.00	O48 - Conductive diamond as a neural stimulating electrode , E.M. Hudak, J.T. Mortimer, H.J. Chiel, H.B. Martin*; Case Western Reserve University, USA	12.00	O52 - Nano diamond and onion-like carbon as high-performance catalyst for oxidative dehydrogenation of ethylbenzene to styrene , D.S. Su*, N.I. Maksimova, R. Schlögl; Fritz Haber Institute of the Max Planck Society, Germany
12.20	O49 - Protein-free neuron growth on mono-dispersed nanodiamonds , R. Edgington, A. Thalhammer, R. Schoepfer, R.B. Jackman*; University College London, UK	12.20	O53 - Mechanisms of single-walled carbon nanotube growth and deactivation from in situ Raman measurements , V. Jourdain*, M. Picher, E. Anglaret; Université Montpellier 2, France
12.40	Lunch break – Lunch not provided	12.40	O54 - New general class of catalysts for carbon nanotube growth , J. Robertson*, B. Bayer, S. Hofmann; Cambridge University, UK
		13.00	Lunch break – Lunch not provided

Session 11A - Electrochemistry and surfaces Chair: J. Foord, <i>University of Oxford, UK</i>		Session 11B (Focus Session) – Graphene Chair: L. Ley, <i>Erlangen University, Germany</i>	
14.00	O55 - Usage of diamond electrodes for waste water treatment and disinfection of drinking water , H. Menapace ¹ , W. Staber ² , M. Fellerer ¹ , M. Treschnitzer ¹ , J. Adam* ¹ , ¹ <i>University of Leoben, Austria</i> , ² <i>pro aqua Diamantelektroden Produktion GmbH, Austria</i>	14.00	INVITED PRESENTATION 18 Graphene on SiC studied by scanning tunneling microscopy , P. Mallet; <i>Institut Néel/CNRS, Université Joseph Fourier, France</i>
14.20	O56 - Enlargement of the electric double-layer capacitance of heavily boron-doped diamond electrodes , T. Watanabe* ¹ , T. Shimizu ² , Y. Tateyama ³ , Y. Kim ² , Y. Einaga ¹ ; ¹ <i>Keio University, Japan</i> , ² <i>Surface Chemistry Laboratory, RIKEN, Japan</i> , ³ <i>International Centre for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Japan</i>	14.30	INVITED PRESENTATION 19 Dirac cone and rashba splitting in au-intercalated graphene on Ni , O. Rader; <i>Helmholtz-Zentrum Berlin für Materialien und Energie, Germany</i>
14.40	O57 - Molten fluoride system electrolysis with boron-doped diamond electrodes , S. Wang* ^{1,2} , F. Yang ² , G. Chen ¹ ; ¹ <i>Hongkong University of Science & Technology, Hong Kong</i> , ² <i>Dalian University of Technology, China</i>		
15.00	O58 - Highly reactive and stable BNCD electrodes for EC biosensing , E. Vanhove*, J. de Sanoit, P. Mailley, A. Bongrain, C. Agnes, P. Bergonzo, et al; <i>CEA, France</i>	15.00	O62 - Double resonant Raman spectra of a large area epitaxial graphene transferred from vicinal Si-face SiC substrate , A. Hashimoto* ¹ , H. Terasaki ¹ , S. Tanaka ² ; ¹ <i>University of Fukui, Japan</i> , ² <i>Kyusyu University, Japan</i>
15.20	O59 - Deposition of detonation nanodiamonds by Langmuir Blodgett technique , V. Pichot*, K. Bonnot, M. Comet, D. Spitzer; ¹ <i>NS3E "Nanomatériaux pour Systèmes Sous Sollicitations Extrêmes" UMR 3208 ISL/CNRS Institut franco-allemand de recherches de Saint Louis (ISL), France</i>	15.20	O63 - Saturating Graphene with chemisorbed Hydrogen , T. Roman* ¹ , H. Nakanishi ¹ , H. Kasai ¹ , K. Nobuhara ² , T. Sugimoto ² , K. Tange ² ; ¹ <i>Osaka University, Japan</i> , ² <i>Toyota Motor Corporation, Japan</i>
15.40	O60 - New promising methods towards fine control of diamond nanoparticles dispersion on substrates , H.A. Girard* ^{1,2} , S. Perruchas ² , E. Scorsone ¹ , H. Perez ³ , T. Gacoin ² , P. Bergonzo ¹ , et al; ¹ <i>CEA, LIST, Diamond Sensor Laboratory, CEA/Saclay, France</i> , ² <i>Laboratoire de Physique de la Matière Condensée (PMC), CNRS-Ecole Polytechnique, France</i> , ³ <i>CEA/DSM/IRAMIS/SPAM-LFP, CEA/Saclay, France</i>	15.40	O64 - Low temperature elastic properties of chemically reduced and CVD-grown graphene thin films , X. Liu*, J.T. Robinson, Z.Wei, P. Sheehan, B.H. Houston, R.S. Snow; <i>Naval Research Laboratory, USA</i>
16.00	O61 –Monocrystalline and powder diamond surfaces: How much do they resemble each other? C. Manfredotti*, M. De la Pierre, M. Chierotti, L. Dinca, E. Vittone, C. Manfredotti, et al; <i>University of Torino, Italy</i>		
16.20	Poster session 2		
Thursday 10th September			
Session 12 – Detector Chair: E. Kohn, <i>Universität Ulm, Germany</i>			
08.30	INVITED PRESENTATION 20 Diamond detectors for hadron physics research , E. Berdermann; <i>GSI, Germany</i>		
09.00	O65 - Transverse magnetic field carrier drift velocity measurements in diamond , J. Isberg* ¹ , M. Gabrysch ¹ , S. Majdi ¹ , D. Twitchen ² ; ¹ <i>Uppsala University, Sweden</i> , ² <i>Element Six Ltd, UK</i>		
09.20	O66 - Temperature dependent time of flight measurements on different crystallographic orientation synthetic single crystal diamond samples and neutron damaged samples , S. Gkoumas*, A. Lohstroh, P. J. Sellin; <i>University of Surrey, UK</i>		
09.40	O67 - Single-crystal CVD Diamond detector for high resolution dose measurement for IMRT and novel radiation therapy techniques , J.C. Arnault* ¹ , D. Tromson ¹ , M. Rebisz-Pomorska ¹ , N. Tranchant ¹ , A. Isambert ² , P. Bergonzo ¹ ; ¹ <i>CEA LIST, Diamond Sensor Laboratory, CEA/Saclay, France</i> , ² <i>Institut Gustave Roussy, IGR, France</i>		
10.00	O68 - Contact properties of CVD diamond as studied by time-of-flight , W. Deferme* ¹ , A. Mackova ² , T. Teraji ³ , K. Haenen ^{1,4} , M. Nesladek ^{1,4} ; ¹ <i>Hasselt University, Belgium</i> , ² <i>Academy of Sciences of the Czech Republic, v.v.i., Nuclear Physics Institute, Czech Republic</i> , ³ <i>National Institute for Materials Science (NIMS), Japan</i> , ⁴ <i>IMEC vzw, Division IMOMECE, Belgium</i>		
10.20	O69 - Soft X-ray and extreme-UV plasma diagnostic at the Joint European Torus (JET) by synthetic single crystal diamond detectors , S. Almaviva, M. Marinelli, E. Milani, G. Prestopino, C. Verona, G. Verona Rinati*, et al; <i>University of Rome Tor Vergata, Italy</i>		
10.40	Refreshment break		

Session 13 – Surfaces	
Chair: T. Sugino, <i>Osaka University, Japan</i>	
11.10	INVITED PRESENTATION 21 Friction and wear of diamond interfaces from nano to macro scales , R. Carpick; <i>University of Pennsylvania, USA</i>
11.40	O70 - Ab initio study on the surface chemistry and nanotribological properties of diamond surfaces , G. Zilibotti ¹ , O. Manelli ¹ , M.C. Righi ^{*1,2} , S. Corni ^{1,2} , M. Ferrario ¹ ; ¹ <i>Universita' di Modena e Reggio Emilia, Italy</i> , ² <i>CNR-INFM S3 National Research Center, Italy</i>
12.00	O71 - In situ XPS study of diamond nanoparticles exposed to hydrogen plasma: Towards the control of their surface termination for drug delivery applications , J.C. Arnault ^{*1} , S. Zeppilli ^{1,2} , C. Gesset ¹ , P. Bergonzo ¹ , R. Polini ² , F. Treussart ³ , et al; ¹ <i>CEA LIST Diamond Sensor Laboratory, France</i> , ² <i>Università di Roma Tor Vergata, Italy</i> , ³ <i>LPQM, Ecole Normale Supérieure, France</i>
12.20	O72 - Increase of hole concentration of hydrogen-terminated diamond surface after adsorption of specific gas species , M. Kubovic [*] , M. Kasu, Y. Yamauchi, H. Kageshima; <i>NTT Basic Research Laboratories, Japan</i>
12.40	O73 - Development of low-temperature IC-compatible diamond multifunctional sensors , Y.M. Wong ¹ , B.K. Choi ¹ , J.L. Davidson ^{*1} , W.P. Kang ¹ , T. Sanders ² , C. Combs ² ; ¹ <i>Vanderbilt University, USA</i> , ² <i>AET, USA</i>
13.00	<i>Lunch break – Lunch not provided</i>
Session 14 – Defects	
Chair: P. Martineau, <i>DTC, UK</i>	
14.00	O74 - Luminescence centres in proton irradiated single crystal CVD diamond , C. Manfredotti ^{*1,2} , P. Olivero ^{1,2} , E. Vittone ^{1,2} , A. Lo Giudice ^{1,2} , L. Giuntini ^{3,4} , S. Calusi ^{3,4} ; ¹ <i>University of Torino, Italy</i> , ² <i>INFN, Sezione di Torino, Italy</i> , ³ <i>University of Firenze, Italy</i> , ⁴ <i>NFN, Sezione di Firenze, Italy</i>
14.20	O75 - Dissociation of B-D complexes in diamond under electron beam: A vibrational mechanism , N. Habka ^{*1,2} , J. Barjon ¹ , F. Jomard ¹ , J. Chevallier ¹ , C. Mer ² , P. Bergonzo ² , et al; ¹ <i>Université Versailles St Quentin, CNRS, France</i> , ² <i>CEA, LIST, Diamond Sensor Laboratory, France</i>
14.40	O76 - Fabrication and characterization of optical active nickel-nitrogen centers in CVD grown diamond , M. Wolfer [*] , A. Kriele, O. Williams, H. Obloh, C.-C. Leancu, L. Kirste, et al; <i>Fraunhofer Institute of Applied Solid State Physics, Germany</i>
15.00	O77 - A scanning Kelvin-probe study of the hydrogen-terminated diamond surface in ultra-high vacuum , C.I. Pakes ^{*1} , D. Hoxley ¹ , J. Rabeau ² , R. Kalish ³ , S. Praver ⁴ ; ¹ <i>La Trobe University, Australia</i> , ² <i>Macquarie University, Australia</i> , ³ <i>Solid State Institute and Department of Physics, Israel</i> , ⁴ <i>University of Melbourne, Australia</i>
15.20	<i>Refreshment break</i>
Session 15 – Processing	
Chair: C. Nebel, <i>Fraunhofer Institut für Angewandte Festkörperphysik (IAF), Germany</i>	
15.50	O78 - Light-assisted desorption processes in nanocrystalline diamond membranes studied by femtosecond laser spectroscopy , J. Preclíková ^{*1} , F. Trojánek ¹ , B. Dzurnak ¹ , A. Kromka ² , B. Rezek ² , P. Malý ¹ ; ¹ <i>Charles University in Prague, Czech Republic</i> , ² <i>Institute of Physics ASCR v.v.i, Czech Republic</i>
16.10	O79 - A novel method of preparation of silicon-on-diamond materials , S. Lagomarsino ^{1,2} , G. Parrini ^{1,3} , S. Sciortino ^{*1,2} , et al; ¹ <i>INFN of Florence, Italy</i> , ² <i>Department of Energetics, Italy</i> , ³ <i>Department of Physics, Italy</i>
16.30	O80 - Tuneable optical lenses from nano-diamond membranes , A. Kriele [*] , O.A. Williams, M. Wolfer, W. Müller-Sebert, D. Brink, C.E. Nebel; <i>Fraunhofer Institut für Angewandte Festkörperphysik, Germany</i>
16.50	O81- Mechanically-flexible electrode arrays based on selectively-grown diamond thin film patterns and temperature-sensitive polymer substrates , D. Sabens [*] , A. Hess, C. Zorman, H. Martin; <i>Case Western Reserve University, USA</i>
17.10	Closing session
17.25	End of Conference