NDNC2025 Poster Presentations

Poster No	Title	Authors
A: Growth and Doping		
A01	Towards electronic and quantum grades HPHT diamond crystal growth	*Ilya Ponomarev1, Alim Saidkhodjaev1, Boris Feigelson2 (1. Euclid Beamlabs (USA), 2. Naval Research Laboratory (USA))
A02	Scaling Success: The Influence of Crystal Size on Diamond Lasers	*Z. Bai1,2, H. Chen1,2, J. Ding1,2, Y. Wang1,2, Z. Lu1,2 (1 Center for Advanced Laser Technology, Hebei University of Technology (China), 2 Collaborative Innovation Center for Diamond Laser Technology and Applications (China))
A03	Uniformity of Homoepitaxial Diamond Growth by using 915MHz MWPCVD	*Hideaki Yamada1, Akiyoshi Chayahara1 (1. AIST (Japan))
A04	Advancements in Dislocation Reduction for Large-Area Diamond Substrates: Toward Scalable High-Performance Materials	*Riadh Issaoui1, 2, Lahcene Mehmel1, 2, Florent Alzetto1, Alexandre Tallaire2, Fabien Béné dic2, Ovidiu Brinza2, Jocelyn Achard2 (1. HiQuTe Diamond (France), 2. LSPM-CNRS (France))
A05	Enhancing CVD Diamond Quality through LPHT Annealing: Stress Reduction in Diamond Seeds and Its Impact on Crystal Growth	*Ramasubramanian Kannan1, Nikhil C1, RAKESH KUMAR1,2, RAMARAO V1,2, RAJEEV GANDHI J1, ARUNACHALAM N1,2,3, SATHYAN SUBBIAH1,2,3, RAMACHANDRA RAO MS1,3 (1. India Centre for Lab Grown Diamond, Indian Institute of Technology Madras (India), 2. Department of Mechanical Engineering, Indian Institute of Technology Madras (India), 3. Nano Functional Materials Technology Centre, Quantum Centre of Excellence for Diamond and Emergent Materials and Department of Physics, Materials Science Research Centre (MSRC), Indian Institute of Technology Madras (India))
A06	Investigation on the lateral growth of single crystal diamond via MPCVD: Under high pressure conditions	*Rakesh Kumar1, 4, C. Nikhil4, N. Arunachalam1, 3, 4, M.S. Ramachandra Rao2, 3, 4 (1. Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai (India), 2. Nano-Functional Materials Technology Centre (NFMTC) and Department of Physics, Indian Institute of Technology Madras, Chennai (India), 3. Quantum Centre of Excellence for Diamond and Emergent Materials (QuCenDiEM) and Material Science Research Centre, Indian Institute of Technology Madras, Chennai (India), 4. India Centre for Lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai (India))
A07	Homoepitaxial growth of high quality (111)-oriented single crystalline diamond	Shuai Xu1, GuoZhao Ren1, Peng Liu1, Sijia Hao1, Liangxian Chen1, Jinlong Liu1, Junjun Wei1, *Chengming Li1 (1. Institute of Advanced Materials and Technology, University of Science and Technology Beijing (China))
A08	Towards large area single-crystal diamond wafer: A study on mosaic grown diamond interface	*V Rama Rao1,4, C Nikhil4, N Arunachalam1,3,4, M S Ramachandra Raob3,4 (1 Department of Mechanical Engineering, Indian Institute of Technology Madras (India), 2.Nano-Functional Materials Technology Centre (NFMTC) and Department of Physics, Indian Institute of Technology Madras (India), 3 Quantum Centre of Excellence for Diamond and Emergent Materials (QuCenDiEM), Material Science Research Center (MSRC) Indian Institute of Technology Madras (India), 4 India Centre for Lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras (India))
A09	Comparison of thermal conductivity and optical properties of epitaxially grown diamond crystals and the seed substrate	*J Rajeev Gandhi1, Nickhil C1, Rakesh Kumar1, 2, V Rama Rao1, 2, Ramasubramanian K1, K N Arunachalam1, 2, 3, Sathyan Subbiah1, 2, 3, M S Ramachandra Rao1, 3 (1. India Centre for Lab Grown Diamond, Indian Institute of Technology Madras, Chennai-6000036 (India), 2. Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai-600036 (India), 3. Nano Functional Materials Technology Centre, Quantum Centre of Excellence for Diamond and Emergent Materials and Department of Physics, Materials Science Research Centre (MSRC), Indian Institute of Technology Madras, Chennai-600036 (India))
A10	Experimental and Numerical Analysis of Growth of Heteroepitaxial Diamond Using the MPCVD Method	*Yuji Mukaiyama1, 5, Kouichirou Miura2, 3, Hideo Aida2, Changda He2, 3, Ryuji Oshima2, 4 (1. STR Japan K.K. (Japan), 2. Nagaoka University of Technology (Japan), 3. Aoyama Gakuin University (Japan), 4. Disco Corp (Japan), 5. Okayama Prefectural University (Japan))
A11	Diamond nucleation and growth on vertically aligned substrates in microwave plasma	*Kun-An Chiu1, Ching-Ho Chen2, Yi Chou2, Li Chang2 (1. Taiwan Instrument Research Institute, National Applied Research Laboratories (Taiwan), 2. Department of Materials Science and Engineering, National Yang Ming Chiao Tung University (Taiwan))
A12	Possible methods and techniques for preparing and polishing intrinsic CVD diamond wafers over ten inches in size	*Guang-chao CHEN1 (1. University of Chinese Academy of Sciences (China))
A13	Protonuclei dynamics in the prenucleation phase in surface-wave plasma chemical vapour deposition chambers	*Johannes Fiedler1, Justas Zalieckas1 (1. University of Bergen (Norway))
A14	Plasma Diagnosis Validated Three-Dimensional Simulation Model of a Microwave Plasma Chemical Vapor Deposition Reactor	*AKASH AKASH1, SANJEEV PANDEY1, Venkata Sai Teja Madana1, Manikandan S.1, Nikhil C. 1, Guhan G.1, Nishant Sirse 1, Sathyan S.1, 3, Arunachalam N. 1, 3, M.S. Ramachandra Rao 1, 2 (1. India Centre for lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai, India (India), 2. Department of Physics, Materials Science and Research Centre (MSRC), Nano-Functional Materials Technology Centre (NFMTC), Quantum Centre of Excellence for Diamond and Emergent Materials (QuCenDiEM), Indian institute of Technology Madras, Chennai, India (India), 3. Department of Mechanical Engineering, Indian institute of Technology Madras, Chennai, India (India))
A15	Simulation of the effect of gas inlet position on growth rate of diamond film in a clamshell type MPCVD reactor	*Manikandan S1, Venkata Sai Teja Madana1, Akash Akash1, Sanjeev Kumar Pandey1, Guhan G1, 3, Nikhil C1, 3, Arunachalam N1, 3, Sathyan S1, 3, M.S. Ramachandra Rao1, 2, 3 (1. India Centre for Lab Grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai, Tamil Nadu 600 036 (India), 2. Department of Physics, Materials Science and Research Centre (MSRC), Nano-Functional Materials Technology Centre (NFMTC), Quantum Centre of Excellence for Diamond and Emergent Materials (QuCenDiEM), Indian Institute of Technology Madras, Chennai, Tamil Nadu 600 036 (India), 3. Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai, Tamil Nadu 600 036 (India))

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A16	S/TEM Study for Crystal Structure Analysis of Heteroepitaxial β-Ga2O3 Films on Single Crystalline Diamond Substrates	*Itsuki Misono1, Sho Nekita1, Hongye Gao2, Sreenath Mylo Valappil1, Yixin Wang1, Abdelrahman Zkria Ahmed1, Hiroshi Naragino1, Yuki Katamune3, Tsuyoshi Yoshitake1 (1. Interdisciplinary Graduate School of Engineering Sciences, Kyushu University (Japan), 2. The Ultramicroscopy Research Center, Kyushu University (Japan), 3. Department of Electrical and Electronic Engineering, Kyushu Institute of Technology (Japan))
A17	Influence of 4H-SiC Surface Characteristics on Diamond Heteroepitaxial Growth	*Ki-Yeol Woo1, Mee-Hi Choi1,Soon-Ku Hong2, Won-Jae Lee3, Si-Young Bae4, Seong-Min Jeong1,Tae-Yong Park1, Yun-Ji Shin1 (1. Korea Institute of Ceramic Engineering and Technology (Republic of Korea), 2. Chungnam National University (Republic of Korea), 3. Dong-Eui University (Republic of Korea), 4. Pukyong National University (Republic of Korea))
A18	Leakage Suppression in 2-DHG Diamond Films Grown on Al2O3/4H-SiC Using Micro Plasma Chemical Vapor Deposition	*TaeYong Park1, Ki-Yeol Woo1, 2, Nhat-Minh Phung3, Nguyen-Hoang Linh1, 3, Yun-Ji Shin1, Seong-Min Jeong1 (1. Korea Institute of Ceramic Engineering and Technology (Republic of Korea), 2. Pukyong National University (Republic of Korea), 3. Changwon National University (Republic of Korea))
A19	Progresses towards Heterogeneous Nucleation and Growth of Large-area Wafers of Single Crystal Diamond	*Yonhua Tzeng1, Jui Cheng Chien1, Jian Wei Cai1, Lung Hsin Hsu 1, Zhi Jia Kang1, Chung Yu Wei 1, Chie-Hsun Chen1, I-Lun Chiu1, Bo Han Wu1, Huai-Kuan Chen1, FuCheng Lin1 (1. National Cheng Kung University (Taiwan))
A20	3-Inch Ir/ Sapphire Substrate for Large-Area Diamond Wafer Growth and its Misorientation Effect	*Masahiro Tsuji1, Yuya Ide1, Niloy Chandra1, Masanori Eguchi2, Makoto Kasu1 (1. Dept. Electrical Electronic Eng., Saga Univ. (Japan), 2. Synchrotron Research Center, Saga Univ. (Japan))
A21	Substrate Holder Design for the Rapid Growth of Heteroepitaxial Diamond via MPCVD process	Nhat-Minh Phung1, 2, Ki-Yeol Woo1, 3, Tae-Yong Park1, Hyoungseuk Choi1, Yun-Ji Shin1, *Seong-Min Jeong1 (1. Korea Institute of Ceramic Engineering and Technology (Republic of Korea), 2. Changwon National University (Republic of Korea), 3. Pukyong National University (Republic of Korea))
A22	Selectively buried growth of heavily N doped layers on B-doped diamond (111) layer with atomically flat surface	*Riku Yoshida1, Kazuki Kobayashi1, Toshiharu Makino2, Tsubasa Matsumoto1, Kan Hayashi1, Kimiyoshi Ichikawa1, Satoshi Yamasaki1, Takao Inokuma1, Norio Tokuda1 (1. Kanazawa University (Japan), 2. AIST (Japan))
A23	Heavy B doping by ion implantation for the formation of low resistance layer in diamond	*Kaiya Imamura1, Yuhei Seki1, Yasushi Hoshino1 (1. Kanagawa University (Japan))
A24	Conductivity conversion of the high-pressure high-temperature synthesized Ib-type diamond by B ion implantation	*Yuhei Seki1, Kaiya Imamura1, Yasushi Hoshino1 (1. Kanagawa University (Japan))
A25	Growth and Electronic Properties of Boron Doped Granular and Single Crystal Diamond Produced Using CVD Process	Subhajith Chatterjee1, Nikhil C2, Ramasubramanian K2, *Ramachandra Rao M S1, 2 (1. Department of Physics, Quantum Centre of Excellence for Diamond and Emergent Materials (QuCenDiEM), Materials Science Research Centre and Nano-Functional Materials Technology Centre (NFMTC),, Indian Institute of Technology Madras, Chennai (India), 2. India Centre for Lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai (India))
A26	Fabrication of Li-doped diamond using nuclear transmutation of 7Be	*Yasuto Miyake1, Hiroki Okuno1, Hideyuki Watanabe1, 2 (1. RIKEN (Japan), 2. AIST (Japan))
A27	Spectroscopic studies of nanodiamonds formation in a gas phase	*Justas Zalieckas1, Swayamprakash Sahoo1 (1. University of Bergen (Norway))
A29	Silicon incorporation into phosphorus-doped polycrystalline diamond films from a solid-state silicon source in hot-filament CVD	*Yuka Horita1, Sora Okuno1, Satoshi Inoshita1, Yuki Katamune1, Akira Izumi1 (1. Kyushu Institute of Technology (Japan))
A30	Highly oriented selective nucleation using SiO2 mask lift-off process for micro-mosaic growth of diamond on Si substrates	Haruku Uehara1, Keiji Taniya1, *Hideo Isshiki1 (1. The University of. Electro-Communications (Japan))
A31	2.45 GHz Microwave Plasma CVD: Control of Crystal Growth on 4-inch Polycrystalline Diamond	*T.M. Yasser1, A. Fiori1, K. Tsugawa1, M. Ikemoto1 (1. Seki Diamond Systems, Cornes Technologies, Ltd. (Japan))
A32	HF-CVD growth of diamond on liquid metal	*Alisher Sultangaziyev1, 2, Yongqiang Meng1, 2, Won Kyung Seong1, Rodney Ruoff1, 2, 3, 4 (1. Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS), Ulsan (Republic of Korea), 2. Department of Chemistry, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea), 3. Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea), 4. School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea))
A33	Exploring the Memory Effect in the Plasma-Enhanced Chemical Vapor Deposition of Diamond	*David Vazquez Cortes1, Stoffel Janssens1, Eliot Fried1 (1. Okinawa Institute of Science and Technology (Japan))
A34	Selective Formation of Isolated Single-Crystal Diamond on Silicon Substrate by a Combination of Highly Oriented Nucleation with Monomethylsilane and SiO2 Mask Lift-Off Process	*Keiji Taniya1, Haruku Uehara1, Hideo Isshiki1 (1. The University of Electro-Communications (Japan))
A35	Growth of Ultranano-Crystalline Diamond by 13.56 MHz Inductively Coupled Plasma CVD using LC Antenna Method	*Natsuo Tatsumi1, Ryota Ando1, Satoru Nagamashi1 (1. Sumitomo Electric Industries, LTD. (Japan))
A36	Three-Dimensional NanoCrystalline Diamond Coatings for Titanium Implantable Medical Devices: Advancing Biocompatibility and Mechanical Performances Through Distributed Antenna Array Microwave System	Sarah Al Zeibak1, Ricky Bien Aimé1, Luis Lechaptois2, Azadeh Valinattaj Omran1, Céline Falentin-Daudré2, Ovidiu Brinza1, Riadh Issaoui1, *Jocelyn Achard1, Fabien Bénédic1 (1. Laboratoire des Sciences des Procédés et des Matériaux, CNRS - UPR 3407, Université Sorbonne Paris Nord (France), 2. Laboratoire de Chimie Bioorganique, Biophysique et Biomaté riaux pour la Santé, CNRS - UMR 7244, Université Sorbonne Paris Nord (France))
A37	Towards diamond-based flexible neural interfaces: polyimide supported nanocrystalline diamond films	*Swayamprakash Sahoo1, Justas Zalieckas1 (1. Department of Physics and Technology, Faculty of Science and Technology, University of Bergen (Norway))
A38	Highly efficient and low-damage semi-finishing of polycrystallinediamond via laser grinding	Jinxin Zou1, Sheng Ye,1, Liangxian Chen1, Jinlong Liu1, Chengming Li1, *Junjun Wei1 (1. University of Science and Technology Beijing (China))
A39	Effect of noble gas on DLC deposition using high-power impulse magnetron sputtering	*Takayuki Ohta1, Shiro Matsumoto1, Keita Takeda1, Toru Harigai2, Hiroyuki Kousaka2, Akinori Oda3 (1. Meijo University (Japan), 2. Gifu University (Japan), 3. Chiba Institute of Technology (Japan))

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A40	Deposition of amorphous carbon films using a multipole sputtering gun with neodymium magnets	*Chen Songyang1, Rio Komatsubara2, Hiroki Akasaka1 (1. Institute of Science Tokyo (Japan), 2. Tokyo Institute of Technology (Japan))
A41	Discharge Sustaining by the Anode Design in the High-Rate Filtered Arc Deposition for Hydrogen-Free Hard DLC Film	*Genki Sano1, Seiya Watanabe1, Hirofumi Takikawa1, Hiroaki Sugita2, Takahiro Hattori2, Hiroki Gima2 (1. Toyohashi Univ. Technol. (Japan), 2. OSG Co., Ltd. (Japan))
A42	Diamond-like carbon coated pipes for reduction of water pressure loss	*Ryo Sako1, Hirotaka Tamai1, Yuki Hirata1, Naoto Ohtake1, Hiroki Akasaka1 (1. Institute of science tokyo (Japan))
A43	Preparation of Si-Containing DLC FilmsUsing Gas-Injected Pulsed Plasma CVD Method	*Seigo Makida1, Toru Harigai1, Taketo Nagai1, Su-Min Bae1, Horoyuki Kousaka1 (1. Gifu University (Japan))
A44	Formation of Oxygen-Containing DLC Films Using RF Plasma CVD Method with He/CO Mixed Gas	*Toru Harigai1, Shinsuke Kunitsugu2, Hiroyuki Kousaka1 (1. Gifu University (Japan), 2. Industrial Technology Center of Okayama Prefecture (Japan))
A45	Conditions for laser joining of hydrogenated amorphous carbon films	*Karyu Hase1, Dai Harada2, Yuko Aono1, Yuki Hirata1, Naoto Ohtake1, Hiroki Akasaka1 (1. Institute of Science Tokyo (Japan), 2. Tokyo Institute of Technology (Japan))
A46	Single-walled carbon nanotube growth by liquid-phase synthesis method	*Takahiro Maruyama1, Karin Nakami1, Shinya Mizuno1, Moeri Sugiyama1, Kamal Sharma1, Takahiro Saida1 (1. Meijo University (Japan))
A47	Growth of 2D Materials Using Sputtering-Annealing Hybrid Process	*Nobuharu Kajiyama1, Yuya Tamura1, Yuki Hirata1 (1. Institute of Science Tokyo (Japan))
A48	Large area and super flat single crystal graphene by a rapid synthesis method	*Yongqiang Meng1, 2, Meihui Wang1, Minhyeok Kim1, 2, Anirban Kundu1, Alisher Sultangaziyev1, 2, Won Kyung Seong1, Rodney Ruoff1, 2, 3, 4 (1. Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS), Ulsan (Republic of Korea), 2. Department of Chemistry, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea), 3. Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea), 4. School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea))
A49	Preparation of Amorphous Carbon Nitride Thin Films with Photoinduced Deformation by Pressure-gradient RF Magnetron Sputtering	*Kohei Takaki3, Hiromi Shima2, Takaaki Morimoto1, Masami Aono3 (1. Department of Materials Science and Engineering, National Defense Academy (Japan), 2. Department of Communications Engineering, National Defense Academy (Japan), 3. Electrical and Electronics Engineering Program, Kagoshima University (Japan))
A50	Growth of Graphene and Boron Nitride on Aluminum Nitride/Silicon Substrates Using Metal Catalysts	Ryosuke Saito1, Akira Kudo1, Yasuyuki Kobayashi1, Toshiki Kanamoto1, *Hideki Nakazawa1 (1. Hirosaki University (Japan))
A51	Point defect incorporation in CVD diamond as a function of growth parameters	*U.F.S. D'Haenens-Johansson1, D.C. Jones1, A. Chan1 (1 Gemological Institute of America (GIA) (USA))

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B: Electronic Devices		
B01	All ion implanted lateral Schottky barrier diodes on heteroepitaxial CVD diamond substrates with a 7° off-angle	Jeong Hyun Moon1, Jung Hun Kim1, Jae Hwa Seo1, *Hyoung Woo Kim1, Wook Bahng1, Seong-Woo Kim2 (1. Korea Electrotechnology Research Insititute (Republic of Korea), 2. Orbary Diamond Laboratory (Japan))
B02	Schottky barrier diodes on heteroepitaxial diamond: realization of highly uniform surface potential barrier	*Junya Shiraga1, 2, Ali Abdelrahman1, 2, Shinya Ohmagari2, Tsuyoshi Yoshitake1 (1. Interdiscip. Grad. Sch. Eng. Sci., Kyushu University (Japan), 2. Sensing System Research Center, National Institute of Advanced Industrial Science and Technology (AIST) (Japan))
B03	An evaluation of high-precision surfaces on mosaic single-crystal diamond polished using VUV-assisted and catalyst-assisted wet polishing techniques	*Yusuke Shirayanagi1, 2, Takashi Imazawa1, Shingo Tomohisa1, Keiji Kasamura2, Hiroki Toyoda2, Akihisa Kubota2, Takashi Takenaga1 (1. Mitsubishi Electric corporation (Japan), 2. Kumamoto University (Japan))
B04	Integrated Stacked p-Diamond/n-Ga2O3 Heterojunctions: A New Approach for High-Voltage Nuclear Batteries	*Ziyi Chen1, 2, Benjian Liu1, 2, Kang Liu1, 2, Bing Dai1, 2, Jiaqi Zhu1, 2, 3 (1. National Key Laboratory of Science and Technology on Advanced Composites in Special Environments, Harbin Institute of Technology (China), 2. Zhengzhou Research Institute, Harbin Institute of Technology (China), 3. Key Laboratory of Micro-systems and Micro-structures Manufacturing Ministry of Education, Harbin Institute of Technology (China))
B05	Study of a Schottky Diode Fabricated Using SmartCut™ Technology: Substrate Transfer and Hydrogen Implantation	Hussein Kassem1, Julien Pernot1, *David Eon1 (1. Univ. Grenoble Alpes, CNRS, Grenoble INP, Institut Néel (France))
B06	Analysis of leakage current for diamond Schottky-pn diodes	*Atomu Yamashita1, Shota Abe1, Taichi Miyazaki1, Taro Yoshikawa2, Kimiyoshi Ichikawa2, Kan Hayashi1, 2, Satoshi Yamasaki2, Takao Inokuma1, Norio Tokuda1, 2, Tsubasa Matsumoto1, 2 (1. Kanazawa University (Japan), 2. Nanomaterials Research Institute, Kanazawa University (Japan))
B07	Design and optimization of single event burnout hardened diamond power transistors	*Ilya Ponomarev1, Shashi Poddar1, Zhaowen He2, T Chow2, Evgheni Strelcov3, Steven Moxim3, Andrei Kolmakov3 (1. Euclid Beamlabs (USA), 2. Rensselaer Polytechnic Institute (USA), 3. Nanoscale Device Characterization Division, PML, NIST (USA))
B08	Fabrication and Evaluation of Normal-Off Diamond MESFETs toward the Development of Radiation-Resistant and High-Temperature Operating Digital Circuits	*Asahi Okuno1, Junichi H. Kaneko1, Tadashi Masumura1, Hiroyuki Kawashima2, Toshiharu Makino2, Hitoshi Umezawa2 (1. Graduate School of Engineering, Hokkaido University (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan))
B09	Statistical Investigation of Performance Determinants of H-terminated Surface Conduction Diamond Field Effect Transistors	Tadashi Masumura1, *Asahi Okuno1, Hitoshi Umezawa2, 3, Hiroyuki Kawashima2, Toshiharu Makino2, Masahiko Ogura2, Yosuke Ito3, Hayato Syoji3, Naohisa Hoshikawa3, Junichi H. Kaneko1, 3 (1. Graduate School of Engineering, Hokkaido University (Japan), 2. National Institute of Advanced Industrial Science and Technology (Japan), 3. OOKUMA DIAMOND DEVICE (Japan))
B10	Low Interface-State-Density Gate Stacks for High-Mobility Hydrogen-Terminated Diamond FETs: A Scalable Fabrication Route	*Mohammad Monish1, Koki Hino1, 2, Yosuke Sasama1, Masato Urakami3, Takehiro Ota3, Naoto Mitsunaga3, Haruka Sakai3, Kenji Sakamoto1, Kenichiro Takakura3, Yamaguchi Takahide1, 2 (1. National Institute for Materials Science (Japan), 2. University of Tsukuba (Japan), 3. National Institute of Technology, Kumamoto College (Japan))
B11	Boron-doped diamond Metal Semiconductor Field Effect Transistor using selectively grown P+ layer	*Eonhee Roh1, Yoonseok Nam1, Taemyung Kwak1, Geunho Yoo1, Seong-woo Kim2, Okhyun Nam1 (1. Tech university of Korea (Republic of Korea), 2. Orbray Company Ltd. (Japan))
B12	Oxidized Si-terminated Diamond MOSFET with High-k Dielectric	*Yoonseok Nam1, Taemyung Kwak1, Geunho Yoo1, Eonhee Roh1, Seong-Woo Kim2, Okhyun Nam1 (1. Tech University of Korea (Republic of Korea), 2. Orbray Co., Ltd (Japan))
B13	Boron-doped Diamond MOSFETs working from room temperature to 400 °C	*Jiangwei Liu1, Tokuyuki Teraji1, Bo Da1, Yasuo Koide1 (1. National Institute for Materials Science (Japan))
B14	Low power diamond field effect transistors and integrated circuits	*Wenchao Zhang1, 2, Ziyi Chen1, 2, Benjian Liu1, 2, Kang Liu1, 2, Bing Dai1, 2, Jiaqi Zhu1, 2, 3 (1. National Key Laboratory of Science and Technology on Advanced Composites in Special Environments, Harbin Institute of Technology (China), 2. Zhengzhou Research Institute, Harbin Institute of Technology (China), 3. Key Laboratory of Micro-systems and Micro-structures Manufacturing Ministry of Education, Harbin Institute of Technology (China))
B15	Mechanism of Diamond Etching using Carbon Solid Solution into Nickel under High-Temperature Water Vapor Atmosphere: Dependence on Water Vapor Concentration	*Nakamura Yuto1, Kaneko Yuhi1, Nagai Masatsugu2, Hayashi Kan1, 3, Ichikawa Kimiyoshi1, 3, Yoshikawa Taro3, 4, Matsumoto Tsubasa1, 3, Inokuma Takao1, Yamasaki Satoshi3, Tokuda Norio1, 3 (1. Graduate School of Natural Science and Technology, Kanazawa University (Japan), 2. Advanced Power Electronics Research Center, National Institute of Advanced Industrial Science and Technology (Japan), 3. Nanomaterials Research Institute, Kanazawa University (Japan), 4. Innovation and Business Development Headquarters, Daicel Corporation (Japan))
B16	4050 h Continuous Operation of Diamond MOS Field Effect Transistors	Niloy Chandra Saha1, Tomoki Shiratsuchi1, Toshiyuki Oishi1, Masanori Eguchi2, *Makoto Kasu1 (1. Dept. Electrical Electronic Eng. Saga University (Japan), 2. Synchrotron Light Application Center, Saga University (Japan))
B17	Diamond MOSFETs on half-inch diamond films grown by chamber flame method	*Hiroyuki Kawashima1, Shogo Ito1, Hayato Shouji1, Keisuke Amimoto1, Shota Sakurai1, Yousuke Ito1, 2, Hitoshi Umezawa1, Junichi Kaneko1, 2, Sadao Takeuchi3, Naohisa Hoshikawa1 (1. OOKUMA DIAMOND DEVICE Co., Ltd. (Japan), 2. Hokkaido University (Japan), 3. Nippon Institute of Technology (Japan))
B18	Attempting continuous operation at 300 ° C for an amplification circuit using a diamond MOSFET	Hiroki Fukushima1, Junichi Kaneko1, Shuzo Idenawa1, Asahi Okuno, 1, Yasuhito Matsubayashi2, Mitsugu Souma2, Jun Akedo2, Mikio Higuchi1, Yousuke Ito3, Naohisa Hoshikawa3, Hitoshi Umezawa2 (1. Graduate School of Engineering, Hokkaido University(Japan), 2. National Institute of Advanced Industrial Science and Technology(Japan), 3. Ookuma Diamond Device(Japan))
B19	Functional Improvement of Harsh Environment Immune All-carbon Visible Light Detector by NV Density Enhancement through Electron Irradiation	*Sreenath Mylo Valappil1, 2, Taisuke Kageura1, Shinya Ohmagari1, Shinobu Onoda3, Hiroshi Naragino2, Tsuyoshi Yoshitake2 (1. AIST (Japan), 2. Kyushu University (Japan), 3. QST (Japan))
B20	Ultrahigh Gain Diamond Deep-ultraviolet Photodetector Due to Surface Hydrogen Termination and Deep defects	*Keyun Gu1, 2, Zilong Zhang1, Jian Huang2, Yasuo Koide1, Meiyong Liao1 (1. National Institute for Materials Science (Japan), 2. Shanghai University (China))
B21	Catalytic Planarization of Microcrystalline Diamond Films using Nickel-assisted etching	P. Patnaik1,2, *S. Sathyan1,2 (1 IIT Madras (India), 2 India Center for Lab Grown Diamond (India))

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C: Characterization		
C01	Understanding, quantifying and exploiting strain in diamond grown by chemical vapour deposition	*Jiahui Zhao1, Chloe Newsom1, 3, Ben Green1, Matthew Dale2, Laura Speich2, Mark Newton1 (1. Department of Physics, University of Warwick (UK), 2. De Beers Group, Belmont Road, Maidenhead (UK), 3. Université PSL - Chimie ParisTech (France))
C02	Charge Transient Spectroscopy (QTS) Using Time-of-Flight Technique for Defect Investigation of Undoped Wide Bandgap Materials	*Rina Yamazaki1, Jan Isberg1, Nattakarn Suntornwipat1, Aisuluu Aitkulova1, Saman Majdi1 (1. Division of Electricity, Department of Electrical Engineering, Uppsala University (Sweden))
C03	Distortion of cyclotron resonance curves in diamond at cryogenic temperatures	*Soh Teramoto1, Ryo Ikebe1, Hideto Matsuoka2, 3, Ikuko Akimoto4, Jan Isberg5, Nobuko Naka1 (1. Kyoto University (Japan), 2. Hokkaido University of Education (Japan), 3. Osaka Metropolitan University (Japan), 4. Wakayama University (Japan), 5. Uppsala University (Sweden))
C04	Detection of luminescence from negatively charge nitrogen vacancy centers excited by electron beam: influence of extrinsic and intrinsic factors	*Jun Chen1, Chikara Shinei1, 3, Jun-ichi Inoue1, Hiroshi Abe2, Takeshi Ohshima2, Masashi Miyakawa1, Takashi Taniguchi1, Takashi Sekiguchi3, Tokuyuki Teraji1 (1. National Institute for Materials Science (Japan), 2. National Institutes for Quantum Science and Technology (Japan), 3. University of Tsukuba (Japan))
C05	Optical resonators containing locally positioned NV centers from CVD growth	*Nicola Lang1, Quankui Yang1, Christian Giese1, Patricia Klar1, Anarita Ricci1, Rebekka Eberle1, Daniel Hähnel1, Peter Knittel1 (1. Fraunhofer Institute of Applied Solid State Physics, Tullastraße 72, 79112 Freiburg (Germany))
C06	All-Solid Multiwavelength Diamond Raman Lasers	*Jie Ding1,2, Z. Bai1,2 (1 Center for Advanced Laser Technology, Hebei University of Technology (China), 2 Collaborative Innovation Center for Diamond Laser Technology and Applications (China))
C07	Revealing the Surface Adsorbates of Diamond Using MEMS Resonators	*Keyun Gu1, 2, Zilong Zhang1, Wen Zhao1, Guo Chen1, Yasuo Koide1, Satoshi Koizumi1, Meiyong Liao1 (1. National Institute for Materials Science (Japan), 2. Shanghai University (China))
C08	Diamond Characterization by Imaging Spectroscopic Ellipsometry	*Shun Okano1, Takatoshi Yamada2, Matthias Duwe1, Yuya Wagatsuma3, Jongduk Kim3, Ken Okano3,4 (1. Park Systems GmbH. (former Accurion GmbH.) 'Germany), 2. Advanced Industrial Science and Technology (AIST) (Japan), 3. Park Systems Japan Inc. (Japan), 4 International Christian University (ICU) (Japan))
C09	From bulk to nanoparticles: the effect of milling on the optical and spin properties of nitrogen-vacancy centers in CVD diamond	*Alessandro Mameli1, Alexander Healey1, Giannis Thalassinos1, Johannes Ackermann2, Hiroshi Abe3, Takeshi Ohshima3, Brant Gibson1, Anke Krueger2, Jan Jeske4, Nikolai Dontschuk5, Alastair Stacey1, Philipp Reineck1 (1. School of Science, RMIT University (Australia), 2. Institute for Organic Chemistry, Julius-Maximilians University Würzburg (Germany), 3. National Institutes for Quantum and Radiological Science and Technology (Japan), 4. Fraunhofer Institute for Applied Solid State Physics IAF (Germany), 5. School of Physics, University of Melbourne (Australia))
C10	CVD growth and characterization of 7×7 mm2 detector-grade diamond plate	Senchuan Ding1, 2, Kai Su1, 2, *Jinfeng Zhang1, 2, Zeyang Ren1, 2, Yu Fu1, Yue Hao1, Jincheng Zhang1 (1. State Key Laboratory of Wide-Bandgap Semiconductor Devices and Integrated Technology, Faculty of Integrated Circuit, Xidian University (China), 2. Xidian-Wuhu research insititute (China))
C11	Study on heavy-ion irradiation effect of diamond radiation detectors under linear energy transfer value of 83.8 MeV·cm2/mg	Wei Wang1, *Kai Su1,2, Zeyang Ren1,2, Jinfeng Zhang1,2*, Yu Fu1,2, Yue Hao1, Jincheng Zhang1 (1. Xidian University (China), 2. Xidian-Wuhu Research Institute (China))
C12	Hydrogen surface modification of diamond films and their applications in ultraviolet photodetectors	*Chi-Wen Liu1, Cheng-Hsun-Tony Chang1 (1. Minghsin University of Science and Technology (Taiwan))
C13	Charge Capture Level Evaluation Using Photoexcitation Method for Diamond	*Yuto Akashi1, Junichi H. Kaneko1, Masaki Takahashi1, Kengo Oda1, Akiyoshi Chayahara2, Hideaki Yamada2, Takehiro Shimaoka 2, Naohisa Hoshikawa3 (1. Hokkaido Univ. (Japan), 2. AIST (Japan), 3. OOKUMA DIAMOND DEVICE Co., Ltd. (Japan))
C14	High Quality Factor Single-Crystal Diamond NEMS Cantilevers Fabricated by A Smart-Cut Method	*Guo Chen1, Wen Zhao1, Keyun Gu1, Satoshi Koizumi1, Yasuo Koide1, Meiyong Liao1 (1. National Institute for Materials Science (Japan))
C15	Diamond Schottky Diode Temperature Sensor and Interface State Analysis	*Bo Liang1, 2, Benjian Liu1, 2, Wei Liang1, 2, Chuanlong Li1, 2, Wenchao Zhang1, 2, Ziyi Chen1, 2, Saifei Fan1, 2, Sen Zhang1, 2, Kang Liu1, 2, Bing Dai1, 2, Jiaqi Zhu1, 2, 3 (1. National Key Laboratory of Science and Technology on Advanced Composites in Special Environments, Harbin Institute of Technology (China), 2. Zhengzhou Research Institute, Harbin Institute of Technology (China), 3. Key Laboratory of Micro-systems and Micro-structrues Manufacturing Ministry of Education, Harbin Institute of Technology (China))
C16	Characterization of Surface and Corrosion Resistance Properties of Titanium-Doped Diamond-Like Carbon Films on Metallic Substrates	*Chehung Wei1, Li-Chi Chen1 (1. Tatung University (Taiwan))
C17	Interfacial structure/chemical state analysis of graphene/diamond heterojunctions using scanning/transmission electron microscopy and electron energy-loss spectroscopy	*Ganki Saito1, Haruki Iwane2, Kenji Ueda2, Shunsuke Muto1 (1. Nagoya University (Japan), 2. Waseda University (Japan))
C18	Fabrication of Si-doped β-Ga2O3 Films on Diamond Substrates by RF Magnetron Sputtering Towards Device Application	*Yuto Ikegami1, Sreenath Mylo Valappil1, Yixin Wang1, Itsuki Misono1, Abdelrahman Zkria Ahmed1, Hiroshi Naragino1, Yuki Katamune2, Taisuke Kageura3, Shinya Ohmagari3, Tsuyoshi Yoshitake1 (1. Kyushu University (Japan), 2. Kyushu Institute of Technology (Japan), 3. Sensing System Research Center, National Institute of Advanced Industrial Science and Technology (AIST) (Japan))
C19	Electrical properties of heterogeneous integration system with boron-doped isolated single-crystal diamonds on Si substrates	*Shohei Yamazaki1, Takahiro Tsukamoto1, Hideo Isshiki1 (1. The University of Electro-Communications (Japan))
C20	Verification of Surface Reactivity on Diamond Particle Optimized by Atomic Layer Deposition	*Hiroya Ishida1, Kaoru Shibuta1, Markus Groner2, Staci Moulton2 (1. Sekisui Chemical Co., Ltd. (Japan), 2. Forge Nano, Inc. (USA))
C21	Diamond based nanomaterials and nanostructures for antimicrobial application	*Ruoying Zhang1, Nianhua Peng2, Haitaio YE1 (1. University of Leicester (UK), 2. University of Surrey (UK), 3 School of Information Science and Engineering, Fudan University (China))

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C22	Electrical and colloidal properties of hydrogenated nanodiamonds: Effects of structure, composition and size	*Stepan Stehlik1, 2, Ondrej Szabo1, Bohuslav Rezek3, Alexander Kromka1, Jiri Henych4, 5, Jan Kozempel6, Evgeny Ekimov7 (1. Institute of Physics of the Czech Academy of Sciences, Cukrovarnická 10, 162 00, Prague 6, Czechia (Czech Republic), 2. New Technologies – Research Centre, University of West Bohemia in Pilsen, Univerzitní 8, 306 14, Pilsen, Czechia (Czech Republic), 3. Faculty of Electrical Engineering, Czech Technical University in Prague, Technická 2, 166 27, Prague, Czechia (Czech Republic), 4. Institute of Inorganic Chemistry of the Czech Academy of Sciences, 250 68, Husinec-Řež, Czechia (Czech Republic), 5. Faculty of Environment, Jan Evangelista Purkyně University in Ústí nad Labem, Pasteurova 3632/15, 400 96, Ústí nad Labem, Czechia (Czech Republic), 6. Department of Nuclear Chemistry, Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague (Czech Republic), 7. Vereshchagin Institute for High Pressure Physics, Russian Academy of Sciences (Russian Federation))
C23	Electromigration induced isotope fractionation of carbon	*Alisher Sultangaziyev1, 2, Yongchul Kim1, Yongqiang Meng1, 2, Won Kyung Seong1, Rodney Ruoff1, 2, 3, 4 (1. Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS), Ulsan (Republic of Korea), 2. Department of Chemistry, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea), 3. Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea), 4. School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan (Republic of Korea))
C24	Imparting Conductivity to Diamond Powder with Conductive Nanodiamond Coating by Coaxial Arc Plasma Deposition	*Akinao Watanabe1, Hiroshi Naragino1, Abdelrahman Zkria Ahmed1, Satoshi Takeichi2, Tsuyoshi Yoshitake1 (1. Interdisciplinary Graduate School of Engineering Sciences, Kyushu University (Japan), 2. National Institute of Technology, Sasebo College (Japan))
C25	Surface treatment-driven wettability control of quenched-produced diamond films on Ti substrate for medical implants	*Yamato Ikiyama1, Hiroshi Naragino1, Abdelrahman Zkria Ahmed1, Satoshi Takeichi2, Nobuya Hayashi1, Tsuyoshi Yoshitake1 (1. Interdisciplinary Graduate School of Engineering Sciences, Kyushu University (Japan), 2. National Institute of Technology, Sasebo College (Japan))
C26	Homogenous dielectrophoretic assembly of fluorescent nanodiamond particles with fine floating-potential electrodes	*Masafumi Inaba1, Naoki Asano1, Wenhao Pan1, Michihiko Nakano1, Junya Suehiro1 (1. Kyushu University (Japan))
C27	Diamond nanosystems for delivery of siRNA	*Petr Cigler1 (1. IOCB CAS (Czech Republic))
C28	Surface Reduction of Nanodiamonds	*Bin Xia1, Naoki Komatsu1 (1. Graduate School of Human and Environmental Studies, Kyoto University (Japan))
C29	Effects of Deposition Pressure on Optical Properties of Amorphous Carbon Nitride Thin Films Deposited by RF Magnetron Sputtering	*Wakana Koya3, Kohei Takaki3, Hiromi Shima2, Takaaki Morimoto1, Masami Aono3 (1. Department of Materials Science and Engineering, National Defense Academy (Japan), 2. Department of Communications Engineering, National Defense Academy (Japan), 3. Electrical and Electronics Engineering Program, Kagoshima University (Japan))
C30	Effect of Boron Nitride Nanotube Addition on Thermal and Mechanical Properties of Aluminum Nitride Ceramics	Byeongho AHN1, Jangsu KIM1, *Sung-Soo RYU1 (1. Korea Institute of Ceramic Engineering and Technology (Republic of Korea))
C31	Changes in Film Properties near Substrate Edge in Si-DLC Films Prepared Using Pulsed DC Plasma CVD Method	*Kyohei Hotta1, Toru Harigai2, Hiroyuki kousaka2 (1. Graduate School of Natural Science and Technology, Gifu University (Japan), 2. Center for Applied Research of Plasma, Gifu University (Japan))
C32	Energy dependence of soft X-ray irradiation effects on hydrogenated DLC and Si-containing hydrogenated DLC films	*Kazuhiro Kanda1, Tomohiro Mishima1, Kyouji Morita1, Koji Nakanishi1, Tsuneo Suzuki2, Hiroki Akasaka3 (1. LASTI, Univ. Hyogo (Japan), 2. Nagaoka Univ. Tech (Japan), 3. Inst. Sci. Tokyo (Japan))
C33	Temperature dependence of electronic structures in DLC films fabricated by pulsed plasma chemical vapor deposition with different hydrocarbon sources	*Hideki Nakajima1, Thipusa Wongpinij1, Sarayut Tunmee1, Mati Horprathum2, Tanapoj Chaikeeree3, Tossaporn Lertvanithphol2, Masahito Niibe4, 5, Hiroki Akasaka6 (1. Synchrotron Light Research Institute (Thailand), 2. National Electronics and Computer Technology Centerr (Thailand), 3. King Mongkut's University of Technology Thonburi (Thailand), 4. LASTI, University of Hyogo (Japan), 5. ISSP, The University of Tokyo (Japan), 6. Institute of Science Tokyo (Japan))
C34	Influence of polymeric substrate material on structure and conductivity of DLC films	*Ayumu Takada1, Sarayut Tunmee2, Ukit Rittihong2, Hideki Nakajima2, Syuji Obata1, Kenji Hirakuri3, Yasuharu Ohgoe1 (1. Tokyo Denki Univ Faculty of Science and Technology (Japan), 2. Synchrotron Light Research Institute (Public Organization) (Thailand), 3. Tokyo Denki Univ Faculty of Engineering (Japan))
C35	Depth Distribution of Carbon Bond in Atomic Hydrogen Exposed Diamond-like Carbon Film Investigated by Using Ar Ion Bombardment	*Yuichi Haruyama1, Akira Heya2, Ko Sumitomo2, Seigo Ito2, Mao Yotsumoto3, Takahiro Maruyama3 (1. LASTI, University of Hyogo (Japan), 2. Graduate School of Engineering, University of Hyogo (Japan), 3. Department of Applied Chemistry, Meijo University (Japan))
C36	Electrochemical effect of DLC film electrode for Japanese sake sensing with cyclic voltammetry	*Hiromichi Moide 1, Yoshiharu Mukouyama1, Hiroki Akasaka2, Masami Aono3, Toru Harigai4, Kenji Hirakuri1, Yasuharu Ohgoe1 (1. Tokyo Denki University (Japan), 2. Institute of Science Tokyo (Japan), 3. Kagoshima University (Japan), 4. Center for Applied Research of Plasma, Gifu University (Japan))
C37	Effect of DLC coating width on cell behavior	*Naoya Morishita1, Takayuki Simizu1, Teruo Suzuki2, Yutaka Tamura2, Satoru Ogiso2, Satoshi Sugimura2, Kei Matsuura2, Kenji Hirakuri1, Yasuharu Ohgoe1 (1. Tokyo Denki University (Japan), 2. Kasuga Denki, INC. (Japan))
C38	Improving mechanical properties of nickel-aluminum-bronze alloys using diamond-like carbon films deposition	*Artit Chingsungnoen1, Phitsanu Poolcharuansin1, Anthika Lakhonchai1 (1. Mahasarakham University (Thailand))
C39	Surface Improvement of Cold Work Tool Steels using Plasma Nitriding and diamond-like carbon coating	*Kodchaporn Chinnarat1, Artit Chingsungnoen1, Yasuharu Ohgoe2, M. Hiratsuka3 (1. Mahasarakham University (Thailand), 2. Tokyo Denki University (Japan), 3 Nanotec Corporation (Japan))
C40	Kelvin probe force microscope characterization between interface graphene and Ohimc contact	Misthuhiro Okada1, Yuki Okigawa1, *Takatoshi Yamada1 (1. National Institute of Advanced Industrial Science and Technology (Japan))
C41	Graphene Transfer Using a Porous Cellulose Layer with Reduced Tensile Stress	*Shimpei Miura1, Takeshi Watanabe1, Toa Ishizuka1, Shinji Koh1 (1. Aoyama Gakuin University (Japan))
C42	Persistent homology analysis of AFM images to understand electrical properties of CVD graphene	*Yuki Okigawa1, Takatoshi Yamada1 (1. AIST (Japan))

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C43	Activation of Alkane C-H Bonds on Graphene/Ru(0001)	*Peter McBreen1, Sonali Khomane1, Tianchi Zhang1, El Mamoune Zahidi1 (1. Laval University (Canada))
C44	Proton-impermeable property of pore-free graphene oxide	*Tatsuki Tsugawa1, Kazuto Hatakeyama1, Michio Koinuma1, Shintaro Ida1 (1. Kumamoto University (Japan))
C45	Electrochemical Deuteration of Organic and Drug Molecules Using a Graphene Oxide Membrane Reactor	*Imam Sahroni1, 2, Takeru Nahakara1, Ami Takase1, Muhammad Sohail Ahmad3, Yusuke Inomata1, Tetsuya Kida1, 3 (1. Graduate School of Science and Technology, Faculty of Advanced Science and Technology, Kumamoto University (Japan), 2. Department of Chemistry, Faculty of Mathematics and Natural Sciences, Universitas Islam Indonesia (Indonesia), 3. International Research Organization for Advanced Science and Technology (IROAST), Kumamoto University (Japan))
C46	Graphene Barrier Film for the Antenna of RFID Devices	*Yuki Kudo1, Etsuro Inamoto1, Takatoshi Yamada2 (1. E-Garde Co., Ltd. (Japan), 2. AIST (Japan))
C47	Nanodiamond-Embedded Graphene Aerogel: A Novel Material for Electromagnetic Wave Absorption	*Ze Cai1, Shinya Hayami1 (1. Kumamoto University (Japan))
C48	Structural analyses of nitrogen-doped graphene nanoribbons by infrared spectroscopy	*Lizhi Pu1, Koki Abe1, Satoshi Sato1, Yasuhiro Yamada1 (1. Chiba University (Japan))
C49	Structural analyses of nitrogen-doped graphene nanoribbons by Raman spectroscopy	*Lizhi Pu1, Tetsuro Soejima2, Satoshi Sato1, Yasuhiro Yamada1 (1. Chiba University (Japan), 2. Kindai University (Japan))
C50	Dielectric properties of hydrogen-terminated C(111) thin films	*Hayato Kobayashi1, Akira Sumiyoshi1, Shota Sato1, Ranferi C. Betancourt1, Jun Nakamura1 (1 The University of Electro-Communications (Japan))
C51	Comparative study on dislocations in CVD diamonds by birefringence and confocal Raman mapping	*Kensuke Matsumoto1, Yuki Katsuno1, Ryo Ikebe1, Soh Teramoto1, and Nobuko Naka1 (1 Department of Physics, Kyoto University (Japan))
C52	Application of AFM for 2D materials	*Yuya Wagatsuma1, Chie Goto1, Tian Xiaowei1, Jongduk Kim1 (1. Park Systems Japan Inc.(Japan))
C53	Scalable production of ultraflat and ultraflexible diamond membrane	*Jixiang Jing1, Fuqiang Sun1, Zhongqiang Wang2, Qi Wang2, Kwai Hei Li3, Yuan Lin1, Zhiqin Chu1 (1 The University of Hong Kong (China), 2 Dongguan Institute of Opto-Electronics, Peking University (China), 3 School of Microelectronics, Southern University of Science and Technology (China))
D: Mechanical Properties		
D01	Enhancing thermal conductivity of heat conduction composite sheets using bimodal fillers in electrical alignment method	*Yoshihiko Kubota1, Soichiro Ichiki1, Masafumi Inaba1, Michihiko Nakano1, Junya Suehiro1 (1. Kyushu University (Japan))
D03	Tribological Properties of Halogen-free Ionic Liquid based Carbon Onion Gel	Nao Kambayashi1, Yuko Aono2, Satoshi Momozono2, *Atsushi Hirata2 (1. Tokyo Institute of Technology (Japan), 2. Institute of Science Tokyo (Japan))
D04	Friction Properties of DLC Films Prepared on Anisotropically Rough Substrates under Biodegradable Oil Lubrication	*Kenta Yamamoto1, Akane Sakakura1, Makoto Kano1, Yuki Hirata1 (1. Institute of Science Tokyo (Japan))
D05	Mechanics of nanoscale diamond explored by the in-situ TEM with a quartz force sensor	*Jiaqi Zhang1, Shaobo Cheng1, Chongxin Shan1 (1. zhengzhou university (China), 2 Henan Academy of Sciences (China))
D06	High temperature and high pressure preparation of ultrahard bulk sp3 amorphous carbon	Yuchen Shang1, Zhaodong Liu1, Jiajun Dong1, Mingguang Yao1, *Bingbing Liu1 (1. Jilin University (China))

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E: Electrochemistry and Bio applications		
E01	Application of Diamond Electrodes in Flow Electrolysis for CO2-Based Synthesis	*Ryoya Okamura1, Yuvaraj Hunge1, Hiroshi Uetsuka2, Chiaki Terashima1 (1. Tokyo University of Scinece (Japan), 2. Asahi Diamond Industrial Company (Japan))
E02	Preparation of Spray-coated Diamond Electrodes and Evaluation of Sulfuric Acid Electrolysis Performance	*Hiroki Hasegawa1, Yuji Okada2, Haiya Yang1, Takeshi Kondo1 (1. Tokyo University of Science (Japan), 2. Asahi Kasei Corporation (Japan))
E03	Diamond Assisted Silicon Anode for Long-Life High-Capacity Lithium-Ion Battery	Yonhua Tzeng1, *Aurelius Ansel Wilendra1, Yu Yang Chiou1, Cheng-Ying Jhan1, ShiHong Sung1 (1. National Cheng Kung University (Taiwan))
E04	Evaluation of the Durability of Conductive Diamond Electrodes in Organic Compound Electrolysis	*Keisuke Ono1, Takeshi Kondo1 (1. Tokyo University of Science (Japan))
E05	Quantitative Estimation of Electrochemical Corrosion Rate of Boron Doped Diamond Electrodes for Electro-Oxidation Applications	*Nikhil C1, 3, Ramasubramanian K3, Arunachalam N1, 3, Ramachandra Rao M S2, 3, (1. Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai (India), 2. Department of Physics, Quantum Centre of Excellence for Diamond and Emergent Materials (QuCenDiEM), Materials Science Research Centre and Nano-Functional Materials Technology Centre (NFMTC), Indian Institute of Technology Madras, Chennai (India), 3. India Centre for Lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai (India))
E06	Radical Oxidation of Volatile Organic Compounds Using Boron-Doped Diamond Electrodes for Air Purification Technologies	*Yukine Fukaya1, Ryoya Okamura1, Hiroshi Uetsuka2, Chiaki Terashima1 (1. Tokyo University of Science (Japan), 2. Asahi Diamond Industrial Co., Ltd (Japan))
E07	Effect of hydrogen termination on oxygen reduction performance in diamond-like carbon electrodes	*Hiromichi Moide1, Yoshiharu Mukouyama1, Teruo Suzuki3, Yutaka Tamura3, Satoru Ogiso3, Satoshi Sugimura3, Kei Matsuura3, Kenji Hirakuri2, Yasuharu Ohgoe1 (1. Faculty of Science and Engineering, Tokyo Denki University (Japan), 2. Faculty of Engineering, Tokyo Denki University (Japan), 3. Kasuga Denki, INC. (Japan))
E08	Doped carbon thin films as a versatile electrode material in electrochemistry and catalysis	*Frank Kaulfuss1, 2, Cory Rusinek2, Volker Weihnacht1 (1. Fraunhofer Institute for Material and Beam Technology IWS (Germany), 2. Miami University, Chemistry and Biochemistry Department (USA))
E09	Diameter Controlable Separation of Single-Walled Carbon Nanotubes by Simply Changing Metal with Phenanthroline-Based Nanocalipers	Xinyi Fu1, Takuya Hayashi2, Guoqing Cheng1, *Naoki Komatsu1 (1. Kyoto University (Japan), 2. Shinshu University (Japan))
E10	Graphene oxide as a self-carbocatalyst to facilitate the ring-opening polymerization of glycidol for efficient polyglycerol grafting	*Yajuan ZOU1, Y. Nishina1 (1. Okayama University (Japan))
E11	Interlocking of SWNTs with Metal-Tethered Tetragonal Nanobrackets to Enrich a Few Hundredths of Nanometer Range in Their Diameters	Guoqing Cheng1, Takuya Hayashi2, Hiroshi Tabata3, Mitsuhiro Katayama3, *Naoki Komatsu1 (1. Kyoto University (Japan), 2. Shinshu University (Japan), 3. Osaka University (Japan))
E12	Measurement of temperature change in C. elegans using fluorescent nanodiamonds with local optical heating	*Fumiya Kamada1, Kazuki Kinjo1, Yumiko Taki1, Takaki Arakawa1, Sara Mandic1, Keisuke Oshimi1, Masazumi Fujiwara1 (1. Department of Chemistry, Graduate School of Life, Environmental, Natural Science and Technology, Okayama University (Japan))
E13	Instructions for Temperature-Dependent Cellular Uptake of Nanodiamonds	*Nahono Komatsu1, Mina Tavakkoli1, Masazumi Fujiwara1 (1. Department of Chemistry, Okayama University (Japan))
E14	Nanodiamond suspension for custom functionalization of dental implant surface	*Aidee Itandehui Garcia Zintzun1, 2, Sascha Balakin2, 3, Katharina Ekat4, Bernd Kreikemeyer4, Jörg Opitz1, 2 (1. Technical University of Dresden (Germany), 2. Fraunhofer Institute for Ceramic Technologies and Systems (Germany), 3. Leibniz Institute for Solid State and Materials Research (Germany), 4. University Medicine Rostock, Institute of Medical Microbiology, Virology and Hygiene (Germany))
E15	Nanocrystalline Diamond Films: A Novel Biomaterial for Enhancing Cell Migration and Wound Healing	*Ivan Rios-Mondragon1, 2, Justas Zalieckas1, Marit Hougen1 (1. Dept. of Physics and Technology, University of Bergen (Norway), 2. Dept. of Clinical Dentistry, University of Bergen (Norway))
E16	Quantitative Evaluation of Protein Corona Forming and Tumor Cell Targeting Capabilities of RGD Motif Conjugated on Poly(glycerol) Grafted Fluorescent Nanodiamonds	Jie Yu1, Masahiro Nishikawa1, Heon Gyu Kang1, Guoqing Cheng1, *Naoki Komatsu1 (1. Kyoto University (Japan))

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F: Color Centers and Quantum applications		
F01	Quantum Super-Resolution Microscopy	*Tingpeng Luo1, Stepan Vintskevich1, Boris Bantysh1, Rene Reimann1, Konstantin Katamadze1 (1. Technology Innovation Institute (TII) (UAE))
F02	Miniaturization of Quantum Spin Relaxometry for Solution Based Magnetic Field Detection.	*Trent Ralph1, 2, Erin Grant2, Lianne Lay1, Sepher Ahmadi2, Liam Hall2, David Simpson1 (1. University of Melbourne (Australia), 2. CSIRO Manufacturing (Australia))
F03	Development of Ultrahigh-precision Ion Implantation System Connected with Laser-cooled Ion Source	Koichi Hosaka1, Seiji Hosoya1, Hirotsugu Kashiwagi1, Yasuyuki Ishii1, Nobumasa Miyawaki1, Ryohei Yamagata1, Yosuke Yuri1, Kazumasa Narumi1, Kento Muroo2, Kiyokazu Ito2, Hiromi Okamoto2, *Shinobu Onoda1 (1. QST, Takasaki (Japan), 2. Hiroshima University (Japan))
F04	Effect of Oxygen Terminations on the Local Spin Environment of Shallow NV Ensembles	*Jens Fuhrmann1, Johannes Lang1, 2, Jochen Scharpf3, N. Striegler3, Thomas Unden3, Philipp Neumann3, Joachim Bansmann4, Fedor Jelezko1, 5 (1. Institute for Quantum Optics, Ulm University, Albert-Einstein-Allee 11, 89081 Ulm, Germany (Germany), 2. Diatope GmbH, Buchenweg 23, 88444 Ummendorf, Germany (Germany), 3. NVision Imaging Technologies GmbH (Germany), 4. Institute of Surface Chemistry and Catalysis, Ulm University (Germany), 5. Integrated Quantum Science and Technology (IQST), Ulm University (Germany))
F05	Vacancy mediated nitrogen mobile in diamond crystalby high-fluence electron beam irradiation	*Chikara Shinei1, 2, Yuta Masuyama3, Hiroshi Abe3, Masashi Miyakawa1, Takashi Taniguchi1, Takeshi Ohshima3, Tokuyuki Teraji1 (1. National Institute for Materials Science (Japan), 2. University of Tsukuba (Japan), 3. National Institutes for Quantum Science and Technology (Japan))
F06	Competition between recombination of carbon atoms with vacancies and NV- center formation at high temperature electron beam irradiation	*Teppei Tamura1, Hiroshi Abe3, Takeshi Ohshima3, Takeaki Sakurai1, Tokuyuki Teraji1, Chikara Shinei1,2 (1 University of Tsukuba (Japan), 2 National Institute for Materials Science (Japan), 3 National Institutes for Quantum Science and Technology (Japan))
F07	Influence of Substrate Surface Defects on Characteristics of Preferentially-oriented Nitrogen-vacancy Centers in Diamond on {111} Facets Inverted-pyramid-shaped Holes	*Koki Imuta1, 2, Yohei Oikawa1, 2, Rui Suzuki1, 2, Norio Tokuda3, Hideyuki Watanabe4, Junko Ishi-Hayase1, 2 (1. School of Fundamental Science and Technology, Keio University (Japan), 2. Center of Spintronics Research Network, Keio University (Japan), 3. Nanomaterial Research Institute, Kanazawa Univ. (Japan), 4. National Institute of Advanced Industrial Science and Technology (Japan))
F08	Fabrication of Isotopically Purified NV Diamonds via CVD for Enhanced Quantum Sensing	Christoph Findler1, Johannes Lang1, Mario Prescher2, Rebekka Eberle2, Peter Knittel2, *Christian Osterkamp1 (1. Diatope GmbH (Germany), 2. Fraunhofer Institute for Applied Solid State Physics (Germany))
F09	Detecting metabolic changes in yeast cells with diamond magnetometry	Aryan Morita1, *Felipe Perona1, Romana Schirhagl1 (1. University Medical Center Groningen (Netherlands), 2 Universitas Gadjah Mada, Indonesia)
F10	NV magnetometers for Real-World Applications	Rafael Paiva1, *Tingpeng Luo1, Karsten Pyka1, Konstantin Katamadze1, Rene Reimann1 (1. Technology Innovation Institute (TII) (UAE))
F11	Towards nanoscale MRI using single spins in diamond	*Raul Gonzalez Brouwer1, Berndt Koslowski1, Fedor Jelezko1 (1. Institut für Quantenoptik, Ulm University (Germany))
F12	Fabrication of Isotopically-Engineered NV Diamonds for Quantum Computation	*Christoph Findler1, Allegra De Gleria Clark1, Philipp Vetter1, Eva Raffalt1, Yarden Hagian1, Johannes Lang1, Christian Osterkamp1 (1. Diatope GmbH (Germany))
F13	Enhancing nitrogen-vacancy center formation through sulfur co-doping and diamond overgrowth	*Karolina Schüle1, Manuel Kuhrke1, Dominic Reinhardt2, Tobias Lühmann2, Roberto Sailer1, Jan Meijer2, Fedor Jelezko1, 3 (1. Institute for Quantum Optics, Ulm University, Germany (Germany), 2. Angewandte Quantensysteme, Leipzig University, Germany (Germany), 3. Center for Integrated Quantum Science and Technology (IQST), Ulm, Germany (Germany))
F14	EPR Characterization of Single Vacancy Defects in Diamond Under Optical Illumination	*Yuliya Mindarava1, Rémi Blinder1, Serhei Malykhin2, Lev Kazak1, Martin Korzeczek3, Christian Laube4, Gergő Thiering5, Adam Gali5, Martin Plenio3, Polina Kuzhir2, Fedor Jelezko1, 6 (1. Institute for Quantum Optics, Ulm University (Germany), 2. Department of Physics and Mathematics, University of Eastern Finland (Finland), 3. Institute for Theoretical Physics, Ulm University (Germany), 4. Department of Functional Surfaces, Leibniz Institute of Surface Engineering (Germany), 5. Wigner Research Centre for Physics, Hungarian Academy of Sciences (Hungary), 6. Centre for Integrated Quantum Science and Technology (IQST) (Germany))
F15	Photoionization of double negatively charged silicon vacancy in diamond	*Ilia Chuprina1, Gergo Thiering2, Milos Nesladek3, Adam Gali2, 4, Petr Siyushev3, Fedor Jelezko1, 5 (1. Institute for Quantum Optics, Ulm University (Germany), 2. HUN-REN Wigner Research Centre for Physics (Hungary), 3. Institute for Materials Research, Hasselt University (Belgium), 4. Department of Atomic Physics, Institute of Physics, Budapest University of Technology and Economics (Hungary), 5. Integrated Quantum Science and Technology (IQST), Ulm University (Germany))
F16	Advancing Quantum-Grade Nanodiamonds through Amination and Azidation	*Filip Steiner1, 2, Ema Fialová1, Jakub Čopák1, 2, Michal Gulka1, Petr Cígler1 (1. Institute of Organic Chemistry and Biochemistry of the Czech Academy of Sciences (Czech Republic), 2. Department of Physical and Macromolecular Chemistry, Faculty of Science, Charles University (Czech Republic))
F17	Creation of Fluorescent Nanodiamond by Electron Irradiation for Nanoscale Quantum Biosensors	*Hiroshi ABE1, Kiichi Kaminaga2, Ryuji Igarashi2, Kensuke Osada4, Takeshi Ohshima1, 3 (1. National Institutes for Quantum Science and Technology, Takasaki, Gunma (Japan), 2. National Institutes for Quantum Science and Technology, Chiba (Japan), 3. Department of Materials Science, Tohoku Univ (Japan))
F18	Selective Optical Transport of Fluorescent Nanodiamonds Utilizing Absorption and Emission Processes	*Yoshiki Saito1, Takao Horai1, Yuto Makino1, 2, Takuya Matsuda1, Yosuke Minowa3, 4, Hajime Ishihara1, Masaaki Ashida1 (1. Osaka University (Japan), 2. Daicel Corporation (Japan), 3. Kyoto University (Japan), 4. The Hakubi Center for Advanced Research Kyoto University (Japan))
F19	Development of bright Quantum-Grade Fluorescent Nanodiamonds	Keisuke Oshimi1, Hitoshi Ishiwata2, *Hiromu Nakashima1, Sara Mandić1, Hina Kobayashi1, Minori Teramoto3, H. Tsuji3, Yoshiki Nishibayashi3, Yutaka Shikano4, 5, Toshu An6, and Masazumi Fujiwara1 (1 Okayama Univ (Japan), 2 QST institute (Japan), 3 Sumitomo Electric Industries, Ltd. (Japan), 4 University of Tsukuba (Japan), 5 Institute for Quantum Studies, Chapman Univ 1 University (USA), 6 JAIST (Japan))

Poster No	Title	Authors
F20	pH dependent charge fluctuations of NV center inside nanodiamonds	*Mateja Pršlja1, P. Pršlja2, M. Sow1, M. Börsch3, O. Williams4, and F. Jelezko1 (1 Institute for Quantum Optics, Ulm University (Germany), 2 Department of Chemistry and Material Science, School of Chemical Engineering, Aalto University (Finland), 3 Single-Molecule Microscopy Group, Jena University Hospital, Friedrich Schiller University Jena (Germany), 4 School of Physics and Astronomy, Cardiff University (UK))
F21	Detonation-created multi-color centers for multimodal temperature sensing in ultra-small nanodiamonds	*Frederick Tze Kit So1, 2, Nene Hariki1, Masaya Nemoto1, Alexander Shames3, Ming Liu4, Akihiko Tsurui4, Taro Yoshikawa4, Yuto Makino4, Masanao Ohori1, Masanori Fujiwara1, Ernst Herbschleb1, Naoya Morioka1, 5, Izuru Ohki1, Masahiro Shirakawa2, 6, Ryuji Igarashi2, 7, Masahiro Nishikawa4, Norikazu Mizuochi1, 5 (1. Institute for Chemical Research, Kyoto University (Japan), 2. Institute for Quantum Life Science (Japan), 3. Department of Physics, Ben Gurion University of the Negev (Israel), 4. Daicel Corporation (Japan), 5. Center for Spintronics Research Network, Kyoto University (Japan), 6. Department of Molecular Engineering, Kyoto University (Japan), 7. School of Life Science and Technology, Tokyo Institute of Technology (Japan))
F22	Nanodiamonds Coated with Thermoresponsive Polymers for Intracellular Thermometry	*Jakub Copak1, 2, Michal Gulka1, Ema Fialova1, Maabur Sow3, Simon Lepleux3, Fedor Jelezko3, Petr Cigler1 (1. Institute of Organic Chemistry and Biochemistry of the the Czech Academy of Science (Czech Republic), 2. Department of Physical and Macromolecular Chemistry, Faculty of Science, Charles University (Czech Republic), 3. Institute of Quantum Optics, Ulm University (Germany))
F23	Multimodal Hybrid Nanosensors of Carbon Quantum Dots and Fluorescent Nanodiamonds for Advanced All-Optical Sensing	*Kota Shiraya1, Yurina Nakane2, Hiroshi Abe3, Takeshi Ohshima3, Takuma Sugi2, Yumi Yoshida1, Kohji Maeda1, Shingo Sotoma1 (1. Graduate School of Science and Technology, Kyoto Institute of Technology (Japan), 2. Program of Biomedical Science, Graduate School of Integrated Sciences for Life, Hiroshima University (Japan), 3. National Institutes for Quantum Science and Technology (Japan))
F24	A confocal-microscope-based quantum sensing system for multimodal live cell measurements with NV centers in nanodiamonds	*Shuntaro Usui1, Akihiro Yamaguchi1, Takumi Zushi1, Nana Sugimoto1, Takashi Tanii1 (1. Faculty of Science and Engineering, Waseda University (Japan))
F25	Detection of Radicals in Living Cells using Nanodiamond Quantum Sensors	*Qi Lu1, Kaiqi Wu1, Yingke Wu1, Tanja Weil1 (1. Max Planck Institute for Polymer Research (Germany))
F26	Enhancing the Uptake of Fluorescent Nanodiamonds in C. elegans by Surface Charge Modulation	*Yumiko Taki1, Kazuki Kinjo1, Fumiya Kamada1, Sara Mandić1, Takaki Arakawa1, Keisuke Oshimi1, Naoki Komatsu2, Eriko Nakadai2, Masazumi Fujiwara1 (1. Okayama university (Japan), 2. Kyoto University (Japan))
F28	UV-Luminescence of impurity domain in hexagonal boron nitride single crystals grown by HPHT method	*Kenji Watanabe1, Takashi Taniguchi1 (1. National Institute for Materials Science (Japan))
F29	Maximum Likelihood Estimation for Real-Time Data Analysis During NV-Center NMR Measurements	*Akirabha Chanuntranont1, Tomoki Ota1, Yuka Kobayashi1, Daiki Saito1, Yuto Miyake1, Ken Sekiguchi1, Arisa Oda1, Shuntaro Usui1, Takashi Tanii1 (1. Waseda University School of Fundamental Science and Engineering (Japan))
F30	Ab Initio Study of Quantum Tunnelling Rates of NnVH Defects	*Samuel Frost1 (1. University of Warwick (UK))
F31	Hybrid integrated diamond quantum sensor with the alignment-tolerant waveguide coupler	*K. Takada1,2, R. Katsumi1,2, K. Kawai1, D. Sato1, T. Yatsui1,2 (1 Toyohashi University of Technology (Japan), 2 The University of Tokyo (Japan))
F32	Hexagonal Boron Nitride Nanoparticles for Intracellular Temperature Sensing	*Suzune Shimomura1, Hiroshi Abe2, Takeshi Ohshima2, Yurina Nakane3, Takuma Sugi3, Yusuke Miyake1, Yumi Yoshida1, Kohji Maeda1 and Shingo Sotoma1 (1 Graduate School of Science and Technology, Kyoto Institute of Technology (Japan), 2 National Institutes for Quantum Science and Technology (QST), Quantum Materials and Application Research Center (QUARC) (Japan), 3 Program of Biomedical Science, Graduate School of Integrated Sciences for Life, Hiroshima University (Japan))
F33	Electron irradiation and annealing to produce NV ensembles in high-nitrogen CVD diamond	*Anoushka Ross1, Gloria Zhao1, Andrew Edmonds2, Richard Beanland1, Mark Newton1 (1 Department of Physics, University of Warwick (UK), 2 Element Six Global Innovation Centre (UK))