NDNC2026 Poster Presentations

Poster No	Title	Authors
A: Growth, Doping, and Wafer Technology		
A01	Inch-scale ultrahard diamond wafer with 200 GPa hardness via high-frequency pulsed local non-equilibrium growth	Juping Tu1,2,3, Jiayi Li3, Yong Wang2,4, Yun Zhao5, Jinlong Liu2*, Junjun Wei2, Liangxian Chen2, Jianjun Zhang2, Li Ding1*, Yang Lu3*, Chengming Li2* (1.School of Electronics, Peking University (China), 2. Institute for Advanced Materials and Technology, University of Science and Technology Beijing (China), 3.Department of Mechanical Engineering, The University of Hong Kong (China), 4.College of Chemistry and Molecular Engineering, Peking University (China), 5. College of Science, China Agricultural University (China))
A02	Dislocation Reduction in Diamond via Microscopic Lateral Extension approach: Enhancing Structural and Optical Properties toward HighFunctionality Materials	Rakesh Kumar1,4, C. Nikhil4, K. Ramsubramanian4, N. Arunachalam1,3,4 and 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), Indian Institute of Technology Madras, Chennai (India), 4.India Centre for Lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai (India))
A03	Reduction of Interfacial Stress in Mosaic Single-Crystal Diamond by LPHT Treatment	V Rama Rao1,4, C Nikhil4, N Arunachalam1,3,4 and 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), Material Science Research Center (MSRC) Indian Institute of Technology Madras, Chennai (India), 4. India Centre for Lab-grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai (India))
A04	Heteroepitaxy of (111) Diamond on Misoriented r-Plane Sapphire Substrates	Seolyoung Oh1, Taemyung Kwak1, Yoonseok Nam1, Hyunsu Ma1, Min Yoon1, Sangwook Park1, Geunho Yoo1, and Okhyun Nam1* (1.Dept. of Semiconductor Engineering, Tech University of Korea (Republic of Korea))
A05	Heteroepitaxial Growth of (111) Single-Crystal Diamond via Epitaxial Lateral Overgrowth	Sangwook Park1, Taemyung Kwak1, Yoonseok Nam1, Seolyoung Oh1, Geunho Yoo1, and Okhyun Nam1* (1.Department of Semiconductor Engineering, Tech University of Korea (Republic of Korea))
A06	Unexplained spontaneous diamond nucleation on non-diamond particles during CVD growth	I. Tiazhelov, V. Sedov, A. Martyanov, A. Alexandrov and S. Kuznetsov (1.Prokhorov General Physics Institute of the Russian Academy of Sciences (Russia))
A07	Synthesis and Characterization of B-O Co-doped Diamond Single Crystals in the Fe-Ni-C System	Z.Q. Wang, ZhiWen. Wang, H.A. Ma* and X.P. Jia (1.Jilin University (China))
A08	High Efficiency Activation of Boron-Implanted Single Crystal Diamond	Keyan Niu1,2, Zixuan Zeng1,3, Xuan Zhang1, Liguo Zhang1, Rongkun Ji1, Zhipeng Wei2, Baoshun Zhang1, and Zhongming Zeng1 (1.Suzhou Institute of Nano-Tech and Nano-Bionics, CAS (China), 2.Changchun University of Science and Technology (China), 3.Shanghai University (China))
A09	Study on the Relationship between Twin Boundaries and Void Defects in CVD Diamond Thin Films	K. An1,*, and L.J. Li1 (1.School of Mechanical and Materials Engineering, North China University of Technology (China))
B: Electronic and Optical Properties, and Device Applications		
B01	Deposition of diamond films on SiC/diamond composite substrates: Fabrication of insulating thin layers	JunHao. Zhang1, Y.B. Hu1, J.J. Li1, K. Li1, L.X. Chen1,J.J. Wei1, J.L. Liu1, and C.M. Li1,* (1.Institute for Advanced Materials and Technology, University of Science and Technology Beijing (China))
B02	Temperature-Dependent Characteristics of Boron-Doped Single-Crystal Diamond MOSFETs	Jiali Wang1, Ruozheng Wang1*, Genqiang Chen1, Liangshun Qu1, Mingyu Jiao1, Hong-Xing Wang1* (1.Key Laboratory of Physical Electronics and Devices Ministry of Education, School of Electronic Science and Engineering, Xi'an Jiaotong University (China))
B03	Ultrathin Diamond NEMS Cantilevers with Enhanced Frequency Stability for High-Sensitivity Mass Sensing	Guo Chen, Wen Zhao, Zhaozong Zhang, Satoshi Koizumi, and Meiyong Liao (National Institute for Materials Science (Japan))
B04	Electrical characteristics of H-diamond FETs with Al/Al2O3/Al gate under proton irradiation	Hyunsu Ma1, Taemyung Kyak1, Yoonseok Nam1, Geunho Yoo1, Dongseok Kim2, Seong-woo Kim3 and Okhyun Nam1 (1.Convergence Center for Advanced Nano Semiconductor, Department of Semiconductor Engineering, Tech university of Korea, 2.Korea Atomic Energy Research Institute (KAERI), 181 Mirae-ro, Geoncheon-eup, Gyeongju-si, Gyeongsangbuk-do 38180 (Republic of Korea), 3.Obray Co., Ltd., (Japan))

B05	Temperature-Independent Interfacial Behavior in LaB6/H-Diamond Schottky Diodes	Shihao. Lu1, X. Zhang1, M. Li1, W. Wang2, S. Wang1, Z. Han1, Y. Li1, Z. Jiao1 and J. Zhang1 (1.Affiliation School of Integrated Circuits, North China University of Technology (China), 2.Affiliation Key Laboratory of Physical Electronics and Devices, Ministry of Education, School of Electronic Science and Engineering, Xi'an Jiaotong University (China))
C: Mechanical Properties and Thermal Management		
C01	Fabrication and Processing of Diamond Heat Spreaders by Hot Filament Chemical Vapor Deposition	Yubao Wang1,2, Yanxin Cao1 , Xiaobo Zhao1, Huayang Wei1, Rongzhen Li1, Mingzhao Liu1, Chengming Li2 (1.Diamond Jinan Branch, Sinoma Synthetic Crystals Co.,Ltd (China), 2.Institute for Advanced Materials and Technology (IAMT), State Key Laboratory for Advanced Metals and Material, University of Science and Technology Beijing (China))
C02	Amorphization of graphite under ultrahigh pressure	Yutong Chen1, Yaping Zhao1, Desi Chen1, Jiajun Dong*1, Mingguang Yao1, Bingbing Liu1 (1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China))
C03	Interfacial-Mediated Texturing in Nanopolycrystalline Diamond Yields Simultaneous Enhancement of Mechanical Properties and Thermal Conductivity	X.J. Li1, and M.G. Yao1 (1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China))
C04	Stress-Induced Anisotropy in Amorphous Matrix Three-Phase Carbon Composites	Saisai Wang1, Yuchen Shang1*, Si Yin1, Yankun Yin1, Bingqi Linghu2, Desi Chen1, Xiangjun Li1, Chunguang Zhai1, Kuo Hu1, Zhaodong Liu1, Jie Zhu2*, Mingguang Yao1*, and Bingbing Liu1 (1.State Key Laboratory of High Pressure and Superhard Materials, Synergetic Extreme Condition User Facility, College of Physics, Jilin University (China), 2.School of Energy and Power Engineering, Key Lab of Ocean Energy Utilization and Conservation of Ministry Education, Dalian University of Technology (China))
C05	Large-Scale Synthesis of Ultrahard sp3 Amorphous Carbon	Xu. Li1, Y. Shang1, and M. Yao1 (Jilin University (China))
C06	Constructing robust conductive graphite with local sp3 hybridization by high pressure and high temperature	Kaixuan Rong 1, Hui Li 1,3, Xinglin Wang 1, Cun You 1, Hetian Liu 1, Xiaoci Ma 1, Li Bai 2, Chaoshuo Hou 1, Zhihui Li 1, Qiang Zhou 1, Yanli Chen 2,*, Qiang Tao 1,* , Pinwen Zhu 1,* (1.Synergetic Extreme Condition High-Pressure Science Center, State Key Laboratory of High Pressure and Superhard Materials, College of Physics, Jilin University (China), 2.Key Laboratory of Functional Materials Physics and Chemistry of the Ministry of Education, Jilin Normal University (China), 3.College of Mathematics and Physics, Guangxi Minzu University (China))
C07	Synergistic improvements in mechanical and thermal performance of TiB2 solid-solution-based composites	Zhuang Li, Cun You, Zhihui Li, Xuepeng Li, Guiqian Sun, Xinglin Wang, Qi Jia, Qiang Tao*, and Pinwen Zhu* (1.Synergetic Extreme Condition High-Pressure Science Center, State Key Laboratory of High Pressure and Superhard Materials, College of Physics, Jilin University (China))
D: Electrochemistry and Biotechnology		
D01	Diamond Solution Gate Field Effect Transistor for Alpha Fetoprotein Detection	Yuxiang. Du1, Minghui. Zhang1 and Hongxing. Wang1,* (1.Key Laboratory for Physical Electronics and Devices of the Ministry of Education & Shaanxi Key Laboratory of Information Photonic Technique & Institute of Wide Bandgap Semiconductors, School of Electronic Science and Engineering, Xi'an Jiaotong University (China))
D02	A Universal Approach: Nanodiamond Mediated Reducing Co Nanoparticles Exsolution from La0.7Sr0.2Fe0.8Co0.2O3 for Enhanced Oxygen Evolution Reaction	Xin Hu1, Wei Cheng1, Zhuo Li, Xin Zhang, Shaoheng Cheng*, Nan Gao*, and Hongdong Li* (1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China))
D03	Preparation of carbon sphere/nickel/boron doped diamond electrode for highly sensitive electrochemical detection of estriol	Yaqi Liang1, Anqi Zheng, Linfeng Wan, Liuan Li,* Qiliang Wang,* Nan Gao* (1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China))
E: Color Centers and Quantum Technology		
E01	Optimizing the Depth-Dependent Nitrogen Vacancy Center Quantum Sensor in Diamane	Pei Li[1,2], Guanjian Hu[1], Xiao Yu[3], Bing Huang[4], and Song Li[1] (1.Beijing Computational Science Research Center (China), 2.School of Integrated Circuit Science and Engineering, Tianjin University of Technology (China), 3.Institute of Electronic Engineering, China Academy of Engineering Physics (China), 4.School of Physics and Astronomy, Beijing Normal University (China))
E02	Fast customization of color centers in single nanodiamonds and its applications on data storage	Jiaqi Li1, and Zhiqin Chu1, 2, * (1.Department of Electrical and Computer Engineering, The University of Hong Kong (China), 2.School of Biomedical Sciences, The University of Hong Kong (China))

E03	Effect of Electron Fluence and Annealing Temperature on NV Center Formation in MPCVD Diamond	J Rajeev Gandhi1, Nikhil C1, Rakesh Kumar1,2, V Rama Rao1,2, Ramasubramanian K 1, Ambuj Pandey2, Rahul Raj1, T.N. Sai Ram1, Sathyan Subbiah1,2,3, Vidya Praveen Bhallamudi2 and M S Ramachandra Rao*1,2 (1.India Centre for Lab Grown Diamond (InCent-LGD), Indian Institute of Technology Madras, Chennai-6000036 2.Quantum Centre of Excellence for Diamond and Emergent Materials and Department of Physics, Nano Functional Materials Technology Centre, Materials Science Research Centre (MSRC), Indian Institute of Technology Madras, Chennai-600036 3.Department of Mechanical Engineering, Indian Institute of Technology Madras, Chennai-600036)
E04	Single-Cell Identification with Quantum-Enhanced Nuclear Magnetic Resonance	Qian Shi1, and Zhiyuan Zhao1 (1.Laboratory of Spin Magnetic Resonance, School of Physical Sciences, Anhui Province Key Laboratory of Scientific Instrument Development and Application, University of Science and Technology of China (China))
E05	The development of quantum-enhanced diamond molecular force microscopy	Feng Xu1, Yong Hou1, Shuxiang Zhang1,2, Qiang Wei2,*, and Zhiqin Chu1,* (1.Department of Electrical and Computer Engineering, The University of Hong Kong (China), 2.College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials and Engineering, Sichuan University (China))
E06	Quantitative Nanoscale MRI Using NV Centers for Early Detection of Sepsis	Yuanyuan Chai1,2, Geert van den Bogaart1,and Romana Schirhagl2 (1.Groningen University, Faculty of Science and Engineering, Molecular Immunology & Microbiology, Nijenborgh7, 9747 AG Groningen, 2. Groningen University, University Medical Center Groningen, Department of Biomaterials and Biotechnology, Antonius Deusinglaan 1, 9713AV Groningen)
E07	Long-Coherent Time of Ensemble Nitrogen-Vacancy Centers in Diamond via Quasi-Uniaxial High-Pressure and High-Temperature Annealing	Yunhan Ma1, Shucheng Liu1, Qiuwen Dong1, Linfeng Wan1, Jingjing Chen1, Shaoheng Cheng1, Kuo Hu1, Zhaodong Liu1, Bingbing Liu1 (1. State Key Laboratory of High Pressure and Superhard Materials, Synergetic Extreme Condition User Facility, College of Physics, Jilin University (China))
E08	Real-Time Nanoscale Monitoring and Generation of Hydroxyl Radicals via a Quantum-Enabled Nanocatalysts	Jia Su1,2, Zenghao Kong1,2, Fei Kong1,2,3, Xing Liu4, Linyu Zeng1,3, Zhecheng Wang1,3,5, Zijian Zeng1, Jie Liu4, Jihu Su1,2,3, Junhua Yuan1,3, Guosheng Shi4* and Fazhan Shi1,2,3,5,6* (1.Laboratory of Spin Magnetic Resonance, School of Physical Sciences, Anhui Province Key Laboratory of Scientific Instrument Development and Application, University of Science and Technology of China (China), 2.Hefei National Laboratory, University of Science and Technology of China (China), 3.Hefei National Research Center for Physical Sciences at the Microscale, University of Science and Technology of China (China), 4.Shanghai Applied Radiation Institute, State Key Lab. Advanced Special Steel, Shanghai University (China), 5.School of Biomedical Engineering and Suzhou Institute for Advanced Research, University of Science and Technology of China (China), 6.The First Affiliated Hospital of USTC, Division of Life Sciences and Medicine, University of Science and Technology of China (China))
F: Theory and Simulations		
F01	Improving dual-sites conductivity in Li-doped diamond with strain engineering by First-principles calculations	Weimin Lu1, Yida Wu1 and Hongxing Wang1,* (1.Key Laboratory for Physical Electronics and Devices of the Ministry of Education & Shaanxi Key Laboratory of Information Photonic Technique & Institute of Wide Bandgap Semiconductors, School of Electronic Science and Engineering, Xi'an Jiaotong University (China))
F02	Simulation of Time Response Characteristics of Diamond Radiation Detector	Yifan. Xu1,2, and Yao. Li1,2 (1.Department of Electronic Engineering, Xi'an University of Technology (China), 2.Xi'an Key Laboratory of Power Electronic Devices and High-Efficiency Power Conversion (China))
F03	First-Principles Study of Group-IV Centers in Diamond Nanostructures	Jijun. Huang1, and Song Li1 (1.Beijing Computational Science Research Center (China))
F04	Surface Evolution and Roughness Scaling in Diamond Growth: A Kinetic Monte Carlo Study	Silveira,M1,Nl Allan2, PW May3, EJ Corat1, VJ Trava-Airoldi4 (1.University of Bristol, Cantock's Close, Bristol BS8 1TS, United Kingdom 2.National Institute for Space Research (INPE), São José dos Campos, SP, Brazil)
F05	Ab Initio Study of Quantum Tunnelling of the NVH- Defect in Diamond	S. Frost 1 A. Bartok-Partay 1 B. Green 1 (1 University of Warwick, Coventry CV4 7AL, UK.)
G: Carbon Nanomaterials		
G01	Multi-pulse Accumulation Induced Directional Phase Transition from sp^3 to sp^2 in Single Crystal Diamond under Femtosecond Laser Irradiation	SiJia. Hao1, L. P. Zheng1, J. X. Zou1, K. Huang1, L. X. Chen1,J. J. Wei1, J. L. Liu1, and C. M. Li1,* (1.Institute for Advanced Materials and Technology, University of Science and Technology Beijing (China))

G02	Freestanding, Ultrasmooth Diamond Membranes by Simple Delamination via HF(aq) Etching	Vijay Gupta1, Anirban kundu1, Paulius Pobedinskas2,3, Ken Haenen2,3* and Rodney S. Ruoff1,4,5,6* (1.Center for Multidimensional Carbon Materials (CMCM), Institute for Basic Science (IBS), Ulsan, (Republic of Korea), 2.Institute for Materials Research (IMO), Hasselt University, 3590, Diepenbeek, (Belgium), 3.IMOMEC, IMEC vzw, 3590, Diepenbeek, (Belgium), 4.Department of Chemistry, Ulsan National Institute of Science and Technology (UNIST), Ulsan, (Republic of Korea), 5. Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan, (Republic of Korea), 6.School of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Ulsan, (Republic of Korea))
G03	Prior Knowledge Assisted Surprised Learning Empowered High-throughput Comprehensive Morphology Evaluation of Single-walled Carbon Nanotube Arrays	Xinran Zhang2, Qiuchen Zhao1* (1.State Key Laboratory of Superhard Materials and High Pressure, Jilin University, (China), 2.Collage of Chemistry, Jilin University, (China))
G04	Sintering and Properties of WC-cBN composite under High Temperature and High Pressure	W.H. Zhao, H. Tang, and Z.D. Liu (1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China))
G05	Growth of high-density carbon nanotube horizontal arrays by adsorption-oxygen-assisted pre-carbonization method	Kaiyun Tan1, Qiuchen Zhao1,* (1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China))
G06	Efficient degradation of 1,4-benzoquinone on cauliflower-like boron-doped diamond with surface loaded Co3O4 nanosheets	Tianyi Wang1, Yuhan Yang1, Liuan Li1*, Fenghua Li2*, Zhenxin Wang2, and Hongdong Li2*(1.State Key Lab of High Pressure and Superhard Materials, Jilin University (China), 2.Key Laboratory of Electroanalytical Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences (China))
G07	Pressure-Induced Abnormal Transformation of Multiwalled Carbon Nanotubes into an Ultrarigid sp^3 Phase	Jianqi Shang1, Mingguang Yao, Jiajun Dong, Bingbing Liu (College of Physics, Jilin University (China))