

Poster

16th June (Mon.)

18:00–20:00

Light Emission, Structure-Phase Evolution, and Photocatalytic Behavior in Full-Series Multilayered GaTe_{1-x}S_x (0 ≤ x ≤ 1) with Direct-Transition Edge

*Ching-Hwa Ho¹, Luthviah Choirotul Muhimmah¹

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Hydrophobicity and space confinement effect of carbon nanotube-alumina support on the Cu-Co catalysts for CO₂ methanation

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Double-Walled Carbon Nanotubes with Dynamic Strength of Over 90 GPa Enhanced by Intershell Friction

*Hongjie Yue¹, Fei Wei¹

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Pd-based nanoparticles on reduced graphene oxide for formic acid electro-oxidation

*Patraporn Luksirikul¹, Pacharapon Kankla¹, Teera Butburee², Narong Chanlek³, Suchinda Sattayaporn⁴

1. Kasetsart University (Thailand), 2. National Science and Technology Development Agency (Thailand), 3. Synchrotron Light Research Institute (Public Organization) (Thailand), 4. King Mongkut's University of Technology North Bangkok (Rayong Campus) (Thailand)

Half-Full Filled Aerogels with A 348% Increment in Energy Absorption and A Retained High Electromagnetic Shielding Performance

*Zhengqiang Lyu¹

1. Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences (China)

3D-structured carbon nanotube fibers as ultra-robust fabrics for adaptive electromagnetic shielding

*Dongmei Hu¹

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Study on structure of carbon nanotubes for electrochemical electrodes

*Daichi Suzuki¹, Takemura Kenshin¹, Nao Terasaki¹

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Mass density effects on thermal resistance of CNT forests

*Yamato Watanabe¹, Takayuki Nakano¹, Yoku Inoue¹

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Novel CNT-based thermal interface films: Design, fabrication, and evaluation

*Tomoki Okumura¹, Takayuki Nakano¹, Yoku Inoue¹

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Wafer-Scale Characterization of Macroscopic Defects in Aligned Carbon Nanotube Arrays Fabricated by Dimension-Limited Self-Alignment

*Bing Gao¹, Chuanhong Jin¹

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Morphological evolution of atomic layer deposited hafnium oxide on aligned carbon nanotube arrays

*Sujuan Ding¹, Yifan Liu², Bing Gao¹, Bo Wang¹, Zhiyong Zhang², Chuanhong Jin¹

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Bond based spectral map of oligomers in machine learning algorithm for MD vibrational spectra in graphene SERS sensor

*Tatiana Zolotoukhina¹, Haruto Goto¹, Yasuhiro Yamamoto¹

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Effective Fabrication of Suspended Graphene Nanoribbon Transistors for Width-Dependent Transition from Quantum Interference to Coulomb Blockade

*Yuan-Liang Zhong¹

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Strongly hybridized phonons and spontaneous electric polarizations in low-dimensional graphitic multilayers

Shaoqi Sun¹, Zhou Zhou¹, Xiyao Peng¹, Qingyun Lin¹, Yihuan Li¹, Daichi Kozawa², Huizhen Wu¹, Shigeo Maruyama³, Pilkyung Moon⁴, Toshikaze Kariyado², Ryo Kitaura², *Sihan Zhao¹

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High-performance Transparent and Conductive CNT Films from Dilute Organic Dispersions

*Tsuyoshi Endo¹, Seiya Nishida¹, Hiroaki Kahara¹, Satoshi Yamazaki², Takashi Kodama³, Yoko Iizumi⁴, Toshiya Okazaki⁴, Keigo Otsuka¹, Shigeo Maruyama¹, Shohei Chiashi¹

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Mxene/metal Composites for Hydrogen Evolution Application

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High near-field noise suppression in the 5G frequency bands for graphene sheets printed by jet-dispensing

*Masato Watanabe¹

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Flavin-Wrapped Carbon Nanotubes for Fundamentals and Applications

*Sang-Yong Ju¹, Hangil Lee², Seongjoo Hwang¹

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Monocyclic Aromatic Molecule-Driven Confined Synthesis of 6-Armchair Graphene Nanoribbons

*Huiju Cao¹, Yingzhi Chen¹, Kunpeng Tang¹, Wendi Zhang², Kecheng Cao², Lei Shi¹

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Inner Doping of Carbon Nanotubes with Perovskites and Charge Detection for High Performance Nanoelectronics

*Huimin Yin¹, Chuanhong Jin¹

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UHV exfoliation and rational functionalization of 2D materials

*Martin Kalbac¹

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Microscopic Understanding of Metal Contacts to Aligned Carbon Nanotubes Arrays: Wetting and Coverage

*Haozhe Lu¹, Chuanhong Jin¹

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Encapsulation and Electronic Modulation of Tungsten-Alloyed MoS₂ Nanoribbons in Carbon Nanotubes

*Yuanfang Zhang¹, Wenqi Lv³, Fenfa Yao², Yanning Zhang³, Xin Chen¹, Chuanhong Jin²

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Synthesis of carbon nanotubes using higher alkanes as a carbon source

*Łukasz Nowicki¹, Sandra Lepak-Kuc^{2,1}, Agnieszka Lekawa-Raus¹

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Symmetry and asymmetry in carbon nanotube mutations and memory retention in long- and short-range

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Observation of strongly hybridized phonons in one-dimensional van der Waals crystals

*Shaoqi Sun¹, Qingyun Lin¹, Yihuan Li¹, Daichi Kozawa², Huizhen Wu¹, Shigeo Maruyama³, Pilkyung Moon⁴, Toshikaze Kariyado², Ryo Kitaura², Sihan Zhao¹

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Optical Modeling, Solver, and Design of Single-Enantiomer Carbon Nanotube Film and Reconfigurable Chiral Photonic Device

Jichao Fan¹, *Benjamin Hillam¹, Cheng Guo², Hiroyuki Fujinami³, Koki Shiba³, Haoyu Xie¹, Ruiyang Chen¹, Kazuhiro Yanagi³, Weilu Gao¹

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Anomalous Interfacial Electron Transfer Kinetics in Moiré Graphene

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Photoluminescence of gated mixed-dimensional heterostructures

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Thermal Conductivity of Solution-Spun Carbon Nanotube Fibers with Different Draw Ratios

*Jiun-Hung Yi^{1,2}, Ognjan Stefanov^{1,2}, Michelle Durán-Chaves^{2,3}, Eldar Khabushev^{2,4}, Matteo Pasquali^{2,3,4}, Geoff Wehmeyer^{1,2}

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APPLICATION OF MULTIWALL CARBON NANOTUBES TO ENHANCE THE LUBRICATION PERFORMANCE OF MACHINE ELEMENTS

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Synthesis of single-unit-cell thin perovskites by liquid-phase confined assembly for high-performance ultrastable X-ray detectors

*Meihui Song¹, Feng Yang¹

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Low power NO₂ sensing by MoS₂ photoactivated sensor with integrated micro-LED light source

*Hiroshi Tabata¹, Kotaro Fujii¹, Shuhei Ichikawa¹, Toshihiro Ishihara¹, Kazunobu Kojima¹, Yasufumi Fujiwara^{1,2}, Mitsuhiro Katayama¹

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Extraction of the true topography of carbon nanotubes on SiO₂/Si substrates by scanning electron microscopy

*Boxiang Zhang¹, Chuanhong Jin¹

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High performance aligned carbon nanotube thin film transistors for mini- and micro-LED driving

*Xi Mei qi^{1,2}, Liu Fang¹, Zhu Xue hao¹, Li Yi¹, Bai Lan^{1,2}, Peng Lian mao^{1,2}, Cao Yu^{1,2}, Liang Xue Lei^{1,2}

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Synthesis of a Hybrid Flexible Thermoelectric Device with Carbon Nanotubes and Chalcogenide-based Thermoelectric Materials

*Aarti Bisht¹, Bhasker Gahtori, Sanjay R. Dhakate, Bhanu Pratap Singh

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The cross-scale assembly and mechanical behavior of super-strong carbon nanotubes

*Yukang Zhu¹, Fei Wei¹

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Effects of Y on stabilizing Fe catalyst in carbon nanotube growth

*Duy Huy Khuong Le¹, Takayuki Nakano¹, Hisashi Sugime², Yoku Inoue¹

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Reinforcement of Polyimine Covalent Adaptable Networks with Mechanically Interlocked Derivatives of SWNTs

*ALEJANDRO LOPEZ-MORENO¹, ION ISASTI¹, SILVIA MIRANDA¹, DAVID M. JIMENEZ¹, SYLWIA PARZYSZEK¹, NATALIA MARTÍN SABANÉS¹, HENRIK PEDERSEN², EMILIO M. PEREZ¹

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Overcoming the Yield-Quality Trade-off for Aerosol-CVD-Synthesized Single-Walled Carbon Nanotubes by Diameter Control

*Ilya V. Novikov¹, Yasir Shafi Mir¹, Il Hyun Lee¹, Jeong-Seok Nam¹, Il Jeon¹

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Boosted thermal conductivity of single-walled carbon nanotube films via BN welding and encapsulation

*Changping Yu^{1,2}, Feng Zhang^{1,2}, Chang Liu^{1,2}

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Enhanced Efficiency in Dye-Sensitized Solar Cells Using Carbon Nanotube Composite Papers via Multiple Dye Fixation

*YI KOU¹, Takahide Oya^{1,2}

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Confined synthesis of nitrogen-doped graphene nanoribbons transformed from nitrogen-containing precursors

*Kunpeng Tang¹, Yingzhi Chen¹, Huiju Cao¹, Wendi Zhang², Kecheng Cao², Lei Shi¹

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Annealing and Doping Effects on Axial Thermal Transport Properties of Solution-Spun Carbon Nanotube Fibers

*Ognyan Stefanov^{1,2}, Michelle Duran-Chaves^{2,3}, Aoshen Anand^{2,3}, Eldar Khabushev^{2,4}, Matteo Pasquali^{2,3,4}, Geoff Wehmeyer^{1,2}

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Cathodes based on V₂O₅ are an excellent material for fabricating symmetric supercapacitors for lithium-ion batteries

*Kaviyarasu Kasinathan¹

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Replica higher-order topology of Hofstadter butterflies in twisted bilayer graphene

*Youngkuk Kim¹

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Bright trion emission in carbon-nanotube/tungsten-diselenide mixed-dimensional heterostructures

*Nan Fang¹, Ufuk Erkilic¹, Yih-Ren Chang¹, Shun Fujii^{1,2}, Daiki Yamashita^{1,3}, Chee Fai Fong¹, Yuichiro K. Kato¹

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Diameter Controllable Separation of Single-Walled Carbon Nanotubes by Simply Changing the Metal in Phenanthroline-Based Supramolecular Polymers

*Xinyi Fu¹, Takuya Hayashi², Guoqing Cheng¹, Naoki Komatsu¹

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High-Frequency Current Noise in Carbon Nanotubes due to Phonon Scattering

*Raimu Akimoto¹, Aina Sumiyoshi¹, Takahiro Yamamoto^{1,2}

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Ceramic Cold Cathode X-ray Tubes with a Compact Size and High Performance Fabricated by CNT Film Field Electron Emitter

Cheol Jin LEE^{1,2}, *Hyunjea LEE², Jun Young Lee², Hosan Shin², Yejin Kong²

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Fully recyclable carbon nanotube fibers

*Michelle Duran-Chaves^{1,2}, Ivan Rosa Siqueira^{1,2}, Oliver Scott Dewey^{1,2}, Steven Williams^{1,2}, Cedric J. S.

Ginestra^{1,2}, Juan de la Garza¹, Yingru Song¹, Geoff Wehmeyer^{1,2,3}, Matteo Pasquali^{1,2,3}

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High-Sensitivity UV Photodetector Using 2D WS₂/Ti₂N MXene Quantum Dot Hybrid Structure

*Shamima Afroz¹, Annas Syhukri Ariffin¹, Anir Syahmi Sharbirin¹, Jeongyong Kim¹

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Integration of single-defect carbon nanotube photon sources into waveguide circuits for quantum applications

*Clement Deleau¹, Chee Fai Fong^{1,2}, Finn Sebastian³, Jana Zaumseil³, Yuichiro Kato^{1,2}

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ENTANGLED EXITON EMISSION FROM EXCITON QUANTUM BITS MADE WITH CARBON NANOTUBES BY CONTROLLED-NOT GATE OPERATION

*Akira Hida¹, Koji Ishibashi¹

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Electrospray deposition of single-walled carbon nanotube films for gas sensors

*Yuto Nishizono¹, Ryo Kuchino¹, Shuhei Ichikawa¹, Kazunobu Kojima¹, Mitsuhiro Katayama¹, Hiroshi tabata¹

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Exciton Behaviors in Monolayer MoSe₂-SWCNT Mixed-Dimensional Heterostructures

*Yih-Ren CHANG^{1,2}, Nang Fang¹, Chee Fai Fong¹, Shun Fujii^{1,3}, Yuichiro K. Kato¹

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Unique structure and thermodynamics of adsorbed water on CNT surface

Yuki Maekawa¹, Yusei Kioka¹, Kenji Sasaoka¹, *Yoshikazu Homma¹, Takahiro Yamamoto¹

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Cinematographic Electron Microscopic Study on Formation Processes of Carbon Materials

*Koji Harano¹

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In-situ monitoring of single-molecule functionalization in vapor-phase for air-suspended single-walled carbon nanotubes

*Mengyue Wang^{1,2}, Daichi Kozawa^{1,2,3}, Yuichiro K. Kato^{1,2}

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Development of Carbon-Based Xerogels and Aqueous Dispersions Inspired by Japanese-Solid-Ink

*Sakurako Kubota¹, Kotone Masuda¹, Junpei Hayakawa¹

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Relationship between the interfacial adhesion and microscopic interface structures in CNT/epoxy resin nanocomposites

*Tomoe Yayama¹, Tenma Hiraishi², Fumiko Akagi^{1,2}

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Diameter Controllable Synthesis of Single-walled Carbon Nanotubes by Arc Discharge Using Ni-based Catalysts

Yixi Yao^{1,2}, *Zeyao Zhang^{1,2}, Yan Li^{1,2}

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Diameter Specific Bandgap Modulation in MoS₂ Nanotubes Grown via Template Reaction

Zhen Han^{1,2}, *Runze Lai², Jian Sheng², Chengping Lian², Yan Li^{1,2}

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Green conversion of low quality chemical feedstock to hydrogen and carbon nanotubes

*Chaojie Cui¹, Bofan Li¹, Ruijing Jiao¹, Weizhong Qian¹

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Hybrid Fibers incorporating Carbon Nanotubes

*Erica F Antunes¹, Daiana Pimenta¹, Rayza Gonçalves¹, Manuela Mourthe¹, Thiago Cançado¹, Felipe Murta¹, Alexander Kasama², Luiz Ladeira¹, Myriano Oliveira Jr.¹, Glauro Silva¹

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Harnessing Multiscale Engineering for Advancing CNT Technology: From AI for Synthesis to Functional Nanocarbon Assembly

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Technology (Japan), 3. City University of Hong Kong (Hong Kong)

Mass Production of Two-Dimensional Materials by Bubbling Chemical Vapor Deposition

*Zhiyuan Shi¹

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Precise structural regulation of carbon crystals by electron doping

Fei Pan¹, Kun Ni¹, *Yanwu Zhu¹

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Autonomous Multi-Objective Bayesian Optimization of Carbon Nanotube Yield and Diameter Control at Synthesis from Disordered Catalyst

*Robert Waelder^{1,2}, Woojae Kim³, Mark Pitt⁴, Jay Myung⁴, Benji Maruyama¹

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Towards a More Complete Empirical Thermodynamic Understanding and Control of Supported Catalyst Carbon Nanotube Synthesis

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Evolution of Carbon atoms to Chiral Carbon Nanotubes on metal free template

*Shuchen Zhang¹

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Synthesis of isolated pentagonal h-BN crystals by atmospheric pressure CVD

*Kamal Prasad Sharma¹, Takahiro Maruyama¹

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Synthesis of Long Carbon Nanotubes by Br-assisted Floating Catalyst Chemical Vapor Deposition

*Hirotaka Inoue^{1,2}, Anastasios Karakassides², Toshihiko Fujimori^{1,3}, Akira Takakura¹, Soichiro Okubo¹, Hua Jiang², Ghulam Yasin², Kazuhiro Ikeda¹, Takamasa Onoki¹, Yoku Inoue⁴, Esko I. Kauppinen²

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Graphene: a hybridization of 2D silica glass and graphene

*Sathvik Ajay Iyengar¹, Manoj Tripathi², Anchal Srivastava³, Abhijit Biswas¹, Tia Gray¹, Mauricio Terrones⁴, Alan B Dalton², Marcos A. Pimenta⁵, Robert Vajtai¹, Vincent Meunier⁴, Pulickel Ajayan¹

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Controlled Growth of Horizontally Aligned Single-Walled Carbon Nanotube Arrays

*Liu Qian¹, Ying Xie¹, Yue Li¹, Jin Zhang¹

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Preparation of semiconducting single-wall carbon nanotube arrays with a narrow band-gap distribution

*Jia-Yang Zhang¹, Lingtong Ding², Chen Xie², Lili Zhang¹, Meng-Ke Zou¹, Xiao Wang², Chang Liu¹

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Engineering Luminescent Defects in Polymer-Wrapped SWCNTs using Benzoyl Peroxide Chemistry

*Andrzej Dzienia¹, Patrycja Taborowska¹, Pawel Kubica-Cypek¹, Dawid Janas¹

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Unleashing Ultra-Efficient Heat Transfer: The Magic of Graphene-Skinned Powders Synthesized by FB-CVD in Nanoelectronic Thermal Management

*Yuqing Song¹

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Controlled Growth of Graphene-skinned Al₂O₃ Powders by Fluidized Bed-Chemical Vapor Deposition for Heat Dissipation

*Yuzhu Wu^{1,2}, Yuqing Song²

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Sorting and brightening of single-walled carbon nanotubes using organic derivatives of hydrazine

*Dominik Sebastian Just¹, Ryszard Siedlecki¹, Błażej Podleśny¹, Dawid Janas¹

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Single-walled carbon nanotube growth by CVD with high-entropy alloy catalysts composed of platinum-group elements

*Takahiro Maruyama¹, Shu Matsuoka¹, Kamal Prasad Sharma¹, Takahiro Saida¹, Kohei Kusada², Hiroshi Kitagawa²

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Molecule Super-Transport through Macroscopic Length of Individual Carbon Nanotube

*Jingwei Wu¹, Fei Wei¹

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BSTCIM: A Balanced Symmetry Ternary Fully Digital In-MRAM Computing Macro for Energy Efficiency Neural Network

*Zhongzhen Tong^{1,2}, Chenghang Li^{1,2}, Chao Wang^{1,2}, Daming Zhou², Xiaoyang Lin^{1,2}

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Monolithic 3D integration of CNTFET and SOT-MTJ for high-performance non-volatility memories

Ke Zhang¹, Ningfei Gao², *Daming Zhou¹, Zhongzhen Tong¹, Hongxi Liu³, Xiaoyang Lin¹, Haitao Xu^{2,4}, Lianmao Peng², Weisheng Zhao¹

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Interlayer Stacking Sensitivity of Anisotropic Thermoelectric Transport Properties of NbSe₂ Polymorphs based on First-Principles Band Calculations

*Mark Edwin Jr Roa Cleofe¹, Koichi Nakamura¹, Tetsuro Habe¹

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Solution Processed Carbon Nanotube Integrated Circuits for Multi-Modal Edge Computing

*Jingfang Pei¹, Songwei Liu¹, Yingyi Wen¹, Lekai Song¹, Guohua Hu¹

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Multi-functional Data Processing by Solution-processed 2D Material Ferroelectric Junction Devices

*Songwei Liu¹, Yingyi Wen¹, Jingfang Pei¹, Guohua Hu¹

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Temporal Signal Processing by Physical Reservoir Computing Using Solution Processed MoS₂ Charge-Trapping Transistors

*Yingyi Wen¹, Songwei Liu¹, Teng Ma², Guohua Hu¹

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Application of aerosol-synthesized single-walled carbon nanotubes for binder-free Nickel-rich positive electrodes via a solvent-free fabrication

*Alisa Bogdanova¹, Filipp Obrezkov¹, Seyedabolfazl Mousavihashemi¹, Eldar Khabushev¹, Tanja Kallio¹

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High-Energy-Density Quasi-Solid-State Lithium-Sulfur Batteries: Reliable Energy Storage Solutions in Extreme Environments

*Haifa Taoum¹, Mariam Ezzedine¹, Costel-Sorin Cojocaru¹

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Pt@WS₂ -an Extrinsic 2D Dilute Ferromagnetic Semiconductor Beyond Room Temperature

*Yu-Xiang Chen^{1,2,3}, Mario Hofmann⁴, Ya-Ping Hsieh¹

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Two-Dimensional Electronic Transport and Surface Electron Accumulation in Transition Metal Dichalcogenides

*Hemanth Kumar Bangolla¹, Ruei-San Chen¹

1. Taiwan Tech (Taiwan)

Efficient Field-free Switching of Perpendicular Magnetization induced by Dominant out-of-plane Torque Generated by NbIrTe₄

*Wei Yang^{1,2,3}, Juan-Carlos Rojas-Sánchez³, Xiaoyang Lin^{1,2}, Weisheng Zhao^{1,2}

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Enhanced Surface Properties of WS₂ via Cryogenic Exfoliation and High-Pressure Dispersion for Catalysis

*Yejin Choi¹, Myeung-Jin Lee¹, Bora Jeong¹, Hong-Dae Kim¹

1. Korea Institute of Industrial Technology (Korea)

Hot-electron Injection Enabled High-performance Broadband Photodetection Based on WO_{3-x}/Bi₂O₂Se Hybrid structure

*Xinlei Zhang¹, Yuanfang Yu², Junpeng Lv¹, Zhenhua Ni¹

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First-principles Calculations on Oxygen Functional Group Interactions on Graphene and Their Modulation by Surface Normal Electric Fields

*Takazumi Kawai¹, Yoshiyuki Miyamoto²

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Ambipolar Doping of Single-Walled Carbon Nanotubes via Covalent Charge-Transfer Engineering

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Intrinsic temperature dependence of Raman-active modes in individual isolated single- and double-walled carbon nanotubes

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