

NANO KOREA 2024 Symposium

July 3^(Wed) ~ 5^(Fri), 2024 | KINTEX, Korea

Best Poster Awards Winners

Grade	Presentation Code	Abstract Title	Author	Affiliation
Grand	TS06W_BP_12	Non-Covalent Selector Functionalization of P4VP-SWCNT Composite for Selective Acetate Detection Across π - π Interaction	Yeon-Joo Kim, Seung-Ho Choi, Jae-Woo Seo, Ga-Yeon Baek, and Seon-Jin Choi	Hanyang University
Gold	TS07W_BP_25	Highly Specific Multiplex Detection of SNPs using Encoded Hydrogel Microparticles with Universal Mismatch-Incorporated DNA Probes	Hyun June Moon, Seok Joon Mun, Jun Ho Lee, Yoon Ho Roh, Yong Jun Lim, Jiwoo Kim, and Ki Wan Bong	Korea University
Gold	TS09W_BP_3	Deep Brain Stimulation by Blood-Brain-Barrier-Crossing Piezoelectric Nanoparticles Generating Current and Nitric Oxide under Focused Ultrasound	Jihye Lee, Taejeong Kim, and Won Jong Kim	POSTECH
Gold	TS01T_BP_16	Sound-Based Triboelectric Platform Fabricated by using Mechanically 4D Printing Technology	Girak Gwon, Dongik Kam, Yoonsang Ra, Donghan Lee, and Dongwhi Choi	Kyung Hee University
Silver	TS05W_BP_24	Investigating the Preparation of Refractory High Entropy Alloy via Optical Floating Zone Crystal Growth Processing	Hung Yen ¹ , Che-Jen Liu ¹ , An-Chou Yeh ¹ , and Hyeong-Seop Kim ²	¹ National Tsing Hua University, ² POSTECH
Silver	TS08W_BP_15	High-Amplification, Ultra-Flexible Organic Electrochemical Transistors for Skin-Interfaced Sensors	Inho Lee, Hyeongbeom Lee, Jonghyun Won, and Sungjun Park	Ajou University
Silver	TS10W_BP_13	Probabilistic Bits with SiO _x -Based Threshold Switches for Vehicle Routing Problem	Jihyun Kim, Hyun Wook Kim, Hyeonsik Choi, and Jiyong Woo	Kyungpook National University
Silver	TS14W_BP_9	Two-Dimensional Electron Confinement in Antipolar Ordered Metallic SrFeO ₃	Jaemin Hwang, Do Hyeon Hwang, and Jaekwang Lee	Pusan National University
Silver	TS16W_BP_8	Effects of Energetic Disorder in Doped Conducting Polymer: Molecular Dynamics and Monte Carlo Study	Seonghyeon Kang, Seungwon Jeong, and Chang Yun Son	POSTECH
Best Poster	TS01W_BP_8	Characterization of a Body-Attached Thermoelectric Generator based on Polyurethane Foam Coated with Carbon Nanotubes	Insik Jo and Kyungwho Choi	Sungkyunkwan University

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Best Poster	TS01W_BP_15	Magneto-Mechano-Triboelectric Nanogenerator for Stray Magnetic Field Energy Harvesting	Tae Kyoung Yoon ^{1,2} , Hyun Soo Kim ¹ , Hyun-Cheol Song ¹ , and Jeong Min Baik ²	1KIST, 2Sungkyunkwan University
Best Poster	TS02W_BP_7	Improvement of Lithium-Ion Battery Performance through Siloxane Binder Application	Jun-Kyu Park ^{1,2} , Jin-Joo ² , and Jung-Keun Yoo ¹	1KIST, 2Kyungpook National University
Best Poster	TS02W_BP_8	Controlling Dendrite Growth in Sodium Metal Batteries using Tailored Gel Polymer Electrolytes	Da-Sol Kwon ¹ , Jimin Shim ² , and Minah Lee ¹	1KIST, 2Seoul National University
Best Poster	TS02W_BP_13	Highly Conductive and Durable WO _{3-x} Particles as Cathode Framework Stabilizing Additive for All-Solid-State Batteries	Hyeon-Ju Song, Yoo-Jung Choi, and Won-Hee Ryu	Sookmyung Women's University
Best Poster	TS03W_BP_3	Enhanced Catalytic Activity and Selectivity of Platinum supported on Ditungsten Oxide Electride for Chlorine Evolution Reaction	Seongsu Choi, Hanhwi Jang, and Yeon Sik Jung	KAIST
Best Poster	TS03W_BP_11	Unassisted Photoelectrochemical H ₂ O ₂ Production with in Situ Glycerol Valorization using α -Fe ₂ O ₃	Sarang Kim, Dongrak Oh, and Ji-Wook Jang	UNIST
Best Poster	TS05W_BP_2	Micro-Alloying as a Solution for Mitigating Hydrogen Embrittlement in Ultra High Strength Press Hardening Steel (PHS)	Seokhwan Ju ¹ , Ho Hyeong Lee ¹ , Seawoong Lee ² , and Dong-Woo Suh ¹	1POSTECH, 2POSCO
Best Poster	TS05W_BP_9	A Nanoindentation Study on the Micromechanical Behavior of Multi Layered Medium-Entropy Alloy	Zhe Gao ¹ , Dong-Hyun Lee ² , Yakai Zhao ³ , Hyoung Seop Kim ⁴ , Upadrasta Ramamurty ⁵ , and Jae-il Jang ¹	1Hanyang University, 2Chungnam National University, 3Institute of Materials Research Engineering, 4POSTECH, 5Nanyang Technological University
Best Poster	TS06W_BP_3	Highly Sensitive Photon Upconversion Moisture-Sensing Hydrochromic Smart Materials for Cryptographic Applications	Joo Hyeong Han and Won Bin Im	Hanyang University
Best Poster	TS06W_BP_20	Photothermal-Triggered Nanoparticle Redispersion on Metal Oxides	Euichul Shin, Jong Won Baek, and Il-Doo Kim	KAIST

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Best Poster	TS07W_BP_2	A Gold Nanostructured Platform for Assessment of Multipotency in Mesenchymal Stem Cells based on Differences in Cellular Metabolism	Chang Dae Kim, Kyeong Mo Koo, and Tae-Hyung Kim	Chung-Ang University
Best Poster	TS07W_BP_21	Droplet Microfluidic Device for Continuous Detection of Microparticles	Ji Woo Jeon, Ji Wook Choi, and Bong Geun Chung	Sogang University
Best Poster	TS08W_BP_21	Membrane-Assisted Fabrication of Multilayer Biodegradable Polymer Microneedles with Reliable Drug Delivery	Ha Young Choi ^{1,2} , Sangmin Song ¹ , Hojeong Jeon ¹ , Honggu Chun ² , and Myoung-Ryul Ok ^{1,3}	1KIST, 2Korea University, 3UST
Best Poster	TS09W_BP_10	Aloe-derived Extracellular Nanovesicles for Acute Colitis Treatment	Sang-Hun Choi and Jihoon Kim	Chung-Ang University
Best Poster	TS11W_BP_7	Controlling the Phase Distribution of Single Bromide Quasi-2-Dimensional Perovskite Crystals via Solvent Engineering for High Efficiency Pure-Blue Light-Emitting Diodes	Seoyeon Park ¹ , Joonyun Kim ² , Sooheyong Lee ³ , Byeong-Gwan Cho ³ , and Byungha Shin ¹	1KAIST, 2SAIT, 3KRISS
Best Poster	TS11W_BP_8	Angle-Independent Color Filtering with Metal-Insulator-Metal-Based Meta-Mirror	Yeonah Kim and Seung-Yeol Lee	Kyungpook National University
Best Poster	TS12W_BP_4	Lattice Strain Control for Perovskite Solar Cells	YunKyeong Hong, Sanghee Yang, and Hui-Seon Kim	Inha University
Best Poster	TS12W_BP_5	Revisiting the Redox Reactions at Perovskite-Nickel Oxide Interfaces through an Innovative Method of Buried Interface Exposure based on Transfer Printing	Geon Woo Yoon and Hyun Suk Jung	Sungkyunkwan University
Best Poster	TS14W_BP_12	Phonon Thermal Conductivity of Magnesium Oxide Particle Fillers for Thermal Management	Yejin Lee, Hyun Woo, and Hyejin Jang	Seoul National University
Best Poster	TS15W_BP_11	Intergrative Transcriptomics Analysis for Evaluating Nanotoxicity Induced Adverse Outcome Pathway	Seung-geun Park ¹ , Eunseo Lee ¹ , Seung-Min Ha ¹ , Yewon Han ¹ , Bogeum Kim ¹ , Mingyu Bae ¹ , Soonyeop Kwon ¹ , and Tae Hyun Yoon ^{1,2}	1Hanyang University, 2Yoon Idea Lab Co., Ltd.
Best Poster	TS15W_BP_13	Ceria-Based Therapeutic Antioxidants in Head and Neck Cancer Treatment as Radioprotectants	Jisoo Lee, Ye Seul Oh, and Min Soh	HyeonTechNBio, Inc.

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Best Poster	TS16W_BP_4	Phase-Field Study of Solid-State Sintering with Multiphase Nano-Powders in Fe-Ni Alloys	K. Kim, S. Sugathan, A. Roy, and P-R. Cha	Kookmin University
Best Poster	TS16W_BP_14	Ab Initio Study on Improving Electrochemical Performance of $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ Spinel Cathode for Lithium-Ion Batteries	Phan Thi Yen Nhi, Truong Ba Tai, and Hyeyoung Shin	Chungnam National University
Best Poster	TS02T_BP_1	Mesoporous Silicon-Graphene Composite Anode for High-Performance Lithium-Ion Batteries	Subin Lee, Na-Yeong Kim, and Ji-Won Jung	University of Ulsan
Best Poster	TS05T_BP_10	Analysis of Microstructure and Ductile-Brittle Transition Behavior of SUS316L Material Manufactured by L-PBF in the Charpy Impact Test	Tae Hyeong Kim ¹ , Jun Seok Lee ¹ , Haeum Park ² , Jeong Min Park ² , and Jae Wung Bae ¹	1Pukyong National University, 2KIMS
Best Poster	TS06T_BP_2	Rational Design of nIR Fluorescent Nanosensor Array for Multivariate Cellular Products Monitoring	YoungWook Cho and Soo-Yeon Cho	Sungkyunkwan University
Best Poster	TS07T_BP_14	Development of Polyaniline/ Graphene Nanocomposite-Based Wearable pH Sensor	Seo Jin Kim ¹ , Bong Gill Choi ² , Kyoung G. Lee ³ , and Oh Seok Kwon ¹	1Sungkyunkwan University, 2Kangwon National University, 3NNFC
Best Poster	TS08T_BP_3	Development of Core Technology for Ultra-Miniaturized Multimodal Sensor based on Cantilever Beam	Nam Hyeong Lee ¹ , Dong Jin Lee ¹ , Sangwon Kim ¹ , Younghan Kim ¹ , Yoorim Loh ¹ , Seongju Lee ¹ , Hagyoung Lee ¹ , Hyeonseok Han ² , Seokjoo Cho ² , Inkyu Park ² , and Yong Suk Oh ¹	1Changwon National University, 2KAIST
Best Poster	TS10T_BP_3	One-Dimensional WO_x -Based Physical Reservoir Computing for Wearable Neuromorphic Applications	H. Shin ¹ , H. Cho ¹ , D. H. Kim ² , T. W. Kim ² , and G. Wang ¹	1Korea University, 2Jeonbuk National University
Best Poster	TS10T_BP_7	FN Tunneling Properties of A-BN and its Application to Synaptic Transistors	Won Suk Oh, Hwaseon Jo, Jaegoo Lee, and Hongseok Oh	Soongsil University
Best Poster	TS11T_BP_2	Ultrafast Topological Phase Switching of Non-Hermitian Photonic System	Sangha Lee, Donghak Oh, Junho Park, Soojeong Baek, Fabian Rotermund, and Bumki Min	KAIST

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Best Poster	TS13T_BP_1	Development of Nanoscale Pattern Production Technology using Machining and MEMS Process Convergence Technology	Hae In Hwang ¹ , In Ho Jo ¹ , Yeongeun Yoo ² , Yong Jun Oh ¹ , and Jeong Hwan Kim ¹	1Hanbat National University, 2KIMM
Best Poster	TS13T_BP_3	Inkjet-Printed Stretchable Thin-Film Transistors with Van Der Waals Heterostructures	Jiwoo Yang ^{1,2} , Kyungjune Cho ¹ , Takhee Lee ² , Yongtaek Hong ² , and Seungjun Chung ¹	1Korea University, 2Seoul National University
Best Poster	TS13T_BP_9	Investigating the Impact of Multilayer Structure on the Emissivity of EUV Pellicles	Young Woo Kang, Haneul Kim, Won Jin Kim, Jungyeon Kim, Young Wook Park, and Jinho Ahn	Hanyang University