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NANO KOREA 2026

The 24th International Nanotech Conference

Innovation for Future: As Nano Meets AI

July 8(Wed.) – 10(Fri.), 2026

KINTEX Exhibition Hall 1, Korea

Hosted by Ministry of Science and ICT, Ministry of Trade, Industry and Resources

Organized by KoNTRS Korea Nanotechnology Research Society, KNTIA

TS01 Nanoelectronics

Theme **Nanoelectronics Accelerating AI and Quantum Technology**

The explosive growth of AI is constrained by the limits of current semiconductor technology, marked by the end of Moore's Law and the inefficiency of the centralized von Neumann architecture. To overcome these challenges and enable low-power/high-density devices, Post von Neumann Computing, and Quantum Computing, nanotechnology is essential. Especially, quantum phenomena in nanomaterials and nanodevices offer the foundation to move past conventional electronic constraints.

This session will explore pioneering research in next-generation nanomaterials and nanodevices-including novel architecture for Post von Neumann computing, and quantum sensors/communications-to show how nanoelectronics will lead the age of intelligent computing and quantum technology.

Topics

- Novel materials and devices for advanced electronics
- Electronic devices based on low-dimensional materials
- Neuromorphic devices including synapse- and neuron-mimic devices
- Nanodevices for quantum computing and control
- Quantum sensor and quantum communications technologies
- Single-photon emitter and detector materials and devices
- Spintronic and valleytronic devices
- Devices for physical reservoir computing and probabilistic computing
- High-performance sensors and actuators based on nano-materials and nano-structures
- Organic nanodevices and soft nanoelectronic devices
- Nanoelectronics-based security and hardware accelerators

Important Dates

Abstract Submission Deadline	Notification of Acceptance	Presenter & Pre-Registration Deadline
Friday, March 27, 2026	**Friday, April 24, 2026**	**Friday, May 15, 2026**

Invited Speakers

- Changsoon Choi (Sungkyunkwan Univ.)
- Hocheon Yoo (Hanyang Univ.)
- Hyejin Ryu (KIST)
- Junhwan Choi (Dankook Univ.)
- Kyung Seok Woo (UNIST)
- Max C. Lemme (RWTH Aachen Univ.)
- Minah Seo (Sogang Univ.)
- Moonsang Lee (Inha Univ.)
- Myungsoo Kim (UNIST)
- Saptarshi Das (Penn State Univ.)
- Sejeong Kim (Sungkyunkwan Univ.)
- Seok-Kyun Son (Kyung Hee Univ.)
- Uri Vool (MPI for Chemical Physics of Solids)
- Wei Huang (UESTC)
- Weida Hu (SITP, CAS)
- Yutaka Wakayama (NIMS)

Committees

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	Jehyung Kim (UNIST)	Uri Vool (MPI for Chemical Physics of Solids)
	Jiyong Woo (Kyungpook Nat'l Univ.)	Yonghun Kim (KIMS)
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Organizers

Conference Committee Chair	Baeho Park (Konkuk Univ.)
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Abstract Submission →

http://nanokorea-conference.or.kr/2026/abstract.php

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