

# NVMTS 2024

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## **Prof. Cheol Seong Hwang**

(Seoul National University (SNU), Republic of Korea)



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“Cheol Seong Hwang” received an M.Sc. degree in 1989 and a Ph.D. in 1993 in the Department of Inorganic Materials Science and Engineering from Seoul National University, Seoul, South Korea. In 1993, he joined the Materials Science and Engineering Laboratory of the National Institute of Standards and Technology, MD USA, as a postdoctoral research fellow. Then, he joined Samsung Electronics as a senior researcher in 1994 and contributed to semiconductor memory device fields by researching *high-k* dielectrics, including (Ba,Sr)TiO<sub>3</sub>. Since 1998, he has been a professor in the materials science and engineering department at Seoul National University. He has authored or co-authored more than 710 papers in international peer-reviewed scientific journals, cited ~45,300 times (H-index 99, Google Scholar), and has given over 150 invited presentations at international conferences. He also holds over 200 (105 approved, > 100 under review) international/domestic patents. He is a recipient of the Alexander von Humboldt fellowship award, which made him stay in Forschungszentrum Juelich, Germany, as a Humboldt fellow in 2004, the seven<sup>th</sup> presidential Young Scientist award of the Korean government, and the AP Faculty Excellence Award, Air Products, USA, Incheon Award, and Kyung-Ahm Award. He also received the 2022 ALD Innovation Award from the American Vacuum Society. His interests include high-k gate oxide, DRAM capacitors, new memory devices including RRAM/PRAM, ferroelectric materials and devices, negative capacitance effect, and thin-film transistors. He is also working actively in neuromorphic computing devices/materials. He served as the general chair of the international ALD conference in June 2010 in Seoul, Korea. He also authored “Atomic Layer Deposition for Semiconductor” in 2013 through Springer and “Ferroelectricity in doped hafnium oxide” in 2019 through Elsevier. He is a member of the Korean Academy of Science and Technology, the National Academy of Engineering of Korea, and a Fellow of the Royal Society of Chemistry, UK. On September 1, 2020, he was selected as the Seoul National University (SNU) Distinguished Professor.