

Resume



Dr. Ki-Bum Kim

Department of Materials Science and Engineering
Seoul National University, Korea
Professor

Email: kibum@snu.ac.kr

Research field: Nanofabrication(Atomic Image Projection E-beam Lithography),
Nanofluidics(Nanopore & Nanochannel), Graphene fabrication

Qualifications

2016 President, Korea Nano Technology Research Society
2007-2008 Visiting Professor, IBM T. J. Watson Research Laboratory
1996-1997 Visiting Scientist, Applied Materials Inc. /Stanford University
1991-1992 Research Scientist, Applied Materials Inc.
1988-1991 Research Scientist, Philips Research Laboratory
1983-1990 Ph.D., Stanford University, Materials Science and Engineering
1981-1983 MS, Seoul National University, Metallurgical Engineering
1976-1980 BS, Seoul National University, Metallurgical Engineering

Publications (selected)

Dong-Kyu Kwak, Hongsik Chae, Mi-Kyung Lee, Ji-Hyang Ha, Gaurav Goyal, Min Jun Kim, Ki-Bum Kim, and Seung-Wook Chi, "Probing the Small-Molecule Inhibition of an Anticancer Therapeutic Protein-Protein Interaction Using a Solid-State Nanopore", *Angew Chem Int Ed*, 55, 1-6 (2016)

Kyeong-Beom Park, Hyung-Jun Kim, Hyun-Mi Kim, Sang A Han, Kang Hyuck Lee, Sang-Woo Kim and Ki-Bum Kim, "Noise and Sensitivity Characteristics of Solid-State Nanopores with a Boron Nitride 2-D Membrane on a Pyrex Substrate", *Nanoscale*, 8, 5755-5763 (2016)

Philippa Nuttall, Kidan Lee, Pietro Ciccarella, Marco Carminati, Giorgio Ferrari, Ki-Bum Kim, and Tim Albrecht, "Single-Molecule Studies of Unlabelled Full-Length

Resume

p53 Protein Binding to DNA", JOURNAL OF PHYSICAL CHEMISTRY B, 120(9) (2016)

Hyun-Mi Kim, Seong-Yong Cho and Ki-Bum Kim, "Nanopore formation in TiN membranes by the focused electron beam of a transmission electron microscope", J. Vac. Sci. Technol. B, 33(6), 2166-2746 (2015)

Seong-Yong Cho, Min-Sik Kim, Minsu Kim, Ki-Ju Kim, Hyun-Mi Kim, Do-Joong Lee, Sang-Hoon Lee and Ki-Bum Kim, "Self-assembly and continuous growth of hexagonal graphene flakes on liquid Cu", Nanoscale, 7, 12820-12827 (2015)

Jae-Seok Yu, Min-cheol Lim, Duyen ThiNgocHuynh, Hyung-Jun Kim, Hyun-Mi Kim, Young-Rok Kim, and Ki-Bum Kim, "Identifying the Location of a Single Protein along the DNA Strand Using Solid-State Nanopores", ACS NANO, 9 (5), pp 5289-5298 (2015)

William H. Pitchford, Hyung-Jun Kim, Aleksandar P. Ivanov, Hyun-Mi Kim, Jae-Seok Yu, Robin J. Leatherbarrow, Tim Albrecht, Ki-Bum Kim, and Joshua B. Edel, "Synchronized Optical and Electronic Detection of Biomolecules Using a Low Noise Nanopore Platform", ACS NANO, 9(2) (2015)

Seung-Hyun Lee, Hyomin Lee, Tianguang Jin, Sungmin Park, Byung Jun Yoon, Gun Yong Sung, Ki-Bum Kim, and Sung Jae Kim, "Sub-10nm transparent all-around-gated ambipolar ionic field effect transistor", Nanoscale, 7, 936 (2015)

Min-Hyun Lee, Ashvani Kumar, Kyeong-Beom Park, Seong-Yong Cho, Hyun-Mi Kim, Min-Cheol Lim, Young-Rok Kim & Ki-Bum Kim, "A Low-Noise Solid-State Nanopore Platform Based on a Highly Insulating Substrate", Scientific Reports, 4, 7448 (2014)

Kwon C.W., Lee J.I., Kim K.B., Lee H.W., Lee J.H., Son J.W., "The thermomechanical stability of micro-solid oxide fuel cells fabricated on anodized aluminum oxide membranes", Journal of Power Sources (ELS), 210, p178 (2012)

Lee D.B., Kang D.M., Kim H.M., Kang D.H., Lyeo H.K., and Kim K.B., "Interface-controlled thermal transport in nano-clustered phase change materials", Journal of Applied Physics, 111, 073528 (2012)

Jung S.W., Kim K.B., Fernandes G., Kim J.H., Wahab F., and Jimmy Xu, "Enhanced thermoelectric power in nanopatterned CNT film", Nanotechnology, 23, 135704, 4p (2012)

Cho S.Y., Kim H.M., Lee M.H., Lee D.J., and Kim K.B., "Single step formation of a graphene-metal hybrid transparent and electrically conductive film", Nanotechnology, 23, 115301, 6p (2012)

Personal Website: <http://nfl.snu.ac.kr>

Head, Research Center for Nano-Iontronic Device
School of Materials Science & Engineering, Seoul National University
and
President, Korea Nano Technology Research Society



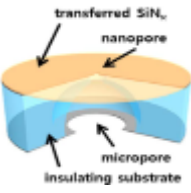
PARTICIPANT	
NAME	Ki-Bum Kim
POSITION	Professor
TEL	+82-2-880-7095
MOBILE	+82-10-8232-7095
E-MAIL	kibum@snu.ac.kr
WEBSITE	http://nfl.snu.ac.kr

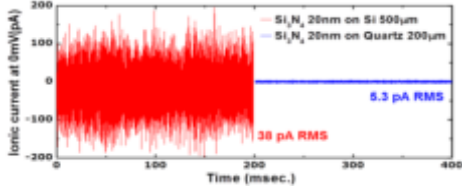
TECHNOLOGICAL EXPERTICE AND INTEREST		
IT	Integrated Circuit	semiconductor integration process, metallization
NT	Nanoiontronics	Biomolecule detection using solid-state nanopore and nanochannel device

KEY BUSINESS AREA & MAJOR PRODUCTS
Low noise solid-state nanopore device, Nano-iontronic device

DETAILED DESCRIPTION

- Low noise solid state nanopore device




- Electrically-tunable nanopore and nanochannel device