Jiyoung Kim

Professor with Tenure
Dept of Materials Science and Engineering
Affiliated to Department of Electrical Engineering
& Department of Mechanical Engineering
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Education

Degree	Year	University	Major
Ph. D.	1994	The University of Texas at Austin	Materials Science and Engineering
(Ph.D. dissertation: PLZT thin films for ULSI DRAM application," Advisor : Jack C. Lee)			
M.S.	1988	Seoul National University	Metallurgical Engineering
(MS Thesis: Dissolution of Silver sulfide in acidic ferric chloride solution," Advisor : T. Kang)			
B.S.	1986	Seoul National University	Metallurgical Engineering

Professional Experience

Years	Title	Organization	Location
2013-Present	Professor	Dept. of MSE, U. of Texas at Dallas	Richardson, TX
2008-2013	Associate Professor	Dept. of Mech. E., U. of Texas-Dallas	Richardson, TX
2007-2013	Associate Professor	Dept of MSE., U. of Texas-Dallas	Richardson, TX
2005-2013	Associate Professor	Dept of EE., Univ. of Texas - Dallas	Richardson, TX
2004-2005	Director	Research Institute of Nano Technology and Science, Kookmin U.	Seoul, Korea
2003-2005	Associate Professor	Prog. In Nano-Sci & Tech., Kookmin U.	Seoul, Korea
2004	Visiting Researcher	Dept. of Electrical Eng. Univ. of Texas	Richardson, TX,
2003-2003	Visiting Researcher	Dept. of Materials Sci., U of North Texas	Denton, TX.
2002-2005	Associate Professor	Sch. of Adv. Materials Eng., Kookmin U.	Seoul, Korea
1998-2002	Assistant Professor	Sch. Materials Eng., Kookmin U	Seoul, Korea
1996-1998	Fulltime Lecturer	Dept. of Materials Eng., Kookmin U.	Seoul, Korea
1994-1996	Process Integration Eng.	World Wide Productization, Texas Inst.	Dallas, TX
1993-1994	Academic Contractor	APRDL, Motorola	Austin, TX

Consultation Experience

Years	Topics	Organization	Location
2010-2011	Global Partnering	KOTRA	Seoul, Korea
2010-2011	Frontier R&D (Graphene)	KIMS	ChangWon, Korea
2007-2008	CNT Dispersion	Lynntech	College St, TX
1997-1999	Gas Sensor	KOGAS	Ansan/Korea

Research Interests

Advanced Materials and Novel Devices for Information Technology

Novel thin film processing including ALD (Atomic Layer Deposition)

R&D on Novel reactors and precursors, In-situ characterization and Epitaxial Growth of ALD process, 3D nanomaterials, such as nanotubes, Organic-Inorganic hybrid thin films selective deposition as well as CMOS applications- In-situ Electrical and Materials Characterization

Graphene and 2D material fabrication and device applications

Gate Stack Engineering for the next generation CMOS applications

Low temperature Atomic Layer Epitaxy for High Power/RF Devices
Nano-structure materials and devices for bio, energy and information technologies
Novel logic and memory device materials, fabrication and applications
Materials, process and devices for Flexible electronics
Nano-patterning and Nano-fabrication

Professional Activity

Membership in Professional Organization

Institute of Electrical and Electronics Engineer (IEEE) (Senior Member)
The Minerals, Metals & Materials Society (TMS)
The Electrochemical Society (ECS)
The American Vacuum Society (AVS)
Materials Research Society (MRS)
The Korean Scientists and Engineers Association (KSEA)
The Korean Institute of Metals and Materials (Permanent Life Member)
The Korean Ceramic Society (Permanent Life Member)
The Korean Materials Research Society (Permanent Life Member)

Offices and Committee Assignments in Professional Organization

Symposium Organizer, 2D Materials, 2017 ICAE (Jeju/Korea) Nov. 21-24, 2017
Symposium Organizer, Atomic Layer Deposition, 2017 iMRC (Cancun, Mexico)
Program Committee, 2017 International ALD conference, (Denver, CO), July. 15 - 18, 2016
Symposium Lead Organizer, 2017 Symposium on Functional Nanomaterials, 2017 TMS (San Diego, CA) 2017
Committee, Compound Semiconductor Technical Committee, IEEE EDS (Electronic Devices Society) 2016-2018
Symposium Co-Organizer, Materials Science and Engineering, 2016 US-Korea Conference (Dallas, TX), Aug. 10-13, 2016
Symposium Co-Organizer, 2016 Symposium on Functional Nanomaterials, 2016 TMS (Nashville, TN) Feb. 14-18, 2016
Program Committee, 2016 International ALD conference, (Dublin, Ireland), July. 24 - 27, 2016
Advisory Committee, 2015 International ALD conference, (Portland, OR), Jun. 28 - Jul. 2, 2015
Lead-Oragnizer, 2D Nanomaterials, 2015 MRC, Cancun/Mexico, Aug. 2015
Symposium Co-Organizer, Materials Science, 2015 US-Korea Conference, Atlanta/GA, Jul. 2015
Executive Committee, FMD (Functional Materials Division), TMS, 2011-2017
TMS Program Committee, TMS, 2015-2018
Symposium Co-Organizer, 2015 Symposium on Functional Nanomaterials, 2015 TMS (Orlando, FL) Mar. 15-19, 2015
Symposium Organizer, 2014 ENGE, Jeju, Korea, Nov. 19-21. 2014
Session Co-Chair, 2014 Nano Korea, Jul. 3-4, 2014
Advisory Committee, 2014 International ALD conference, (Kyoto, Japan), Jun. 15-18, 2014
Symposium Co-Organizer, 2014 Symposium on Functional Nanomaterials, 2014 TMS (San Diego, CA) Feb. 16-20, 2014
Symposium Organizer, 2013 US-Korea Conference, Symposium I (MSE) (NJ), Aug. 6-11, 2013
Symposium Co-Organizer, 2013 US-Korea Conference, Joint Symposium on Semiconductor (MSE) (NJ), Aug. 6-11, 2013
Conference Co-chair, 2013 International ALD Conference (San Diego, CA) Jul. 27 – Aug. 1, 2013
Program Committee, 2012 Interanational ALD conference, Dresden, Germany, Jun. 17-20, 2012
Lead-organizer, 2012 Symposium on Functional and Structural Nanomaterials, 2012 TMS (Orlando, FL), Mar. 11-15, 2012
Co-organizer and session chair, 2012 Surface and Heterostructures at Nano- or Micro-Scale and Their Characterization, Properties, and Applications, 2012 TMS (Orlando, FL), Mar. 11-15, 2012
Chair, TMS Nanomaterials Committee, 2013-2015
Vice-Chair, TMS Nanomaterials Committee, 2011-2013
Program Committee, IEEE Nanotechnology Materials and Device Conferences 2011 (Jeju, Korea), Oct.

18-21 (2011)
Lead-organizer, 2011 Symposium on Structural and Functional Nanomaterials, 2011 TMS (San Diego, CA) Feb. 27-Mar. 3 (2011)
Co-organizer and session chair, 2011 Surface and Heterostructures at Nano- or Micro-Scale and Their Characterization, Properties, and Applications, 2011 TMS (San Diego, CA) Feb. 27-Mar. 3 (2011)
Program Committee, EMPD, American Vaccum Society (2011-2013)
Executive Committee, EMPD, American Vacuum Society (2008-2010)
Executive Committee, Technical Vice Chair, IEEE 6th International Symposium on Advanced Gate Stack Technology (ISAGST) (San Francisco/CA) (2009)
Executive Committee, Treasurer, IEEE 5th International Symposium on Advanced Gate Stack Technology (ISAGST) (Austin/TX) (2008)
Executive Committee, Local Arrangement Chair, IEEE 4th International Symposium on Advanced Gate Stack Technology (ISAGST), (Dallas/TX) Sep.26-28 (2007)
Co-organizer and session chair, 2010 Nanomaterials, 2010TMS (Seattle/WA) Feb.14-18 (2010)
Co-organizer and session chair, 2009 Nanomaterials, 2009 TMS (San Francisco/CA) Feb.14-19 (2009)
Session Chair, High-k Dielectrics for Nanoscale CMOS Devices, 21st International Symposium on Integrated Ferroelectrics and Functionalities (ISIF 2009), (Colorado Springs, CO, Sep. 27-Oct.1, (2009))
Technical Committee, FeRAM session chair, IEEE 9th Annual Non-volatile Memory Technology Symposium (NVMTS) (2008)
Technical Committee, Novel memory concept session chair, IEEE 8th Annual Non-volatile Memory Technology Symposium (NVMTS), (Albuquerque/NM), Nov. 10-13 (2007)
Session Chair, NanoScience and Technology Division, US-Korea Conference (UKC) 2008, (San Diego, CA.) Aug. 13 – 16 (2008)
Session Chair, NanoScience and Technology Division, US-Korea Conference (UKC) 2007, (Washington D.C.) Aug. 9 – 13 (2007)
Committee, Korean workshops on Ferroelectrics and FRAM Technology (2001-2004)
Session Chairman, Thin Film Technology, the Korean Conference on Semiconductors, (2002-2003)
Organization Committee, Fall Meeting of the Corrosion Science Society of Korea, Seoul, Korea (2001)
Organization Committee, Spring Meeting of the Korean Materials Research Society, Seoul, Korea (1999)
Organization Committee, Fall Meeting of the Korean Institute of Metals and Materials, Korea (1997)

Editorship in Peer Reviewed Journal

Guest Editor, Materials, Nov. 2016
International Advisory Board Member of Electronic Materials Letters (2010-present)
Guest Editor, Thin Film Solid,
Editorial Board Member of Electronic Materials Letters (2005 – 2010)
Editorial Board Member of the Korean Institute of Surface Engineering (2003-2004)
Editorial Board Member of the Korean Institute of Metals and Materials (2001-2003)
Editorial Board Member of the Korean Ceramic Society (1998-2000)

Committee Assignments in Korean Government and Government Agency

External Member, Planning Committee, Ultra-Low Power Seminconductor for Future Electronics, NRF/MOCIE (Korea) (2016-2017)
Committee, Materials Genome Planing Committee, NRF (2012-2013)
Committee, NT (New Technology) Mark by Korean Agency for Technology and Standards (2000-2005)
Committee, EM (Excellent Mark) Mark by Korean Agency for Technology and Standards (2000-2005)
Selection and Evaluation Committee, Division of Electronic Materials for National Lab Program by Korean Ministry of Science and Technology (1999-2002)
Selection Committee, Korean Science and Engineering Foundation (1998-2005)
Selection Committee, Korean Research Foundation (1998-2005)
Evaluation Committee, Korean Institute of Industrial Technology Evaluation (2001)

University (School) Committees and Councils – *Univ. of Texas at Dallas*

Chair, Colloquium Committee, MSE (2016 – Current)
Member, Search Committee, Tenured Track Faculty in Photonics (2017)

Member, Ad Hoc Committee, Mid-Provationary Evaluation of Dr. Jeremiah Gassensmith (Chemistry) (2015-2016)
Member, Ad Hoc Committee, Mid-Provation Evaluation of Dr. Chadwin Young (MSE) (2014-2015)
Member, Graduate Recruiting and Admissions Committee, MSE (2013-Current)
Member, Curriculum Committee, MSE (2014-2016)
Member, Personnel Review Committee, MSE (2013-2016)
MSE Director, Advanced Electrical Characterization Lab., (2011 – 2012)
Member, MSE Faculty Search Committee, ECS School., (2011-2012)
Member, Personnel Review Committee, ECS School (2011-2012)
Member, Personnel Review Committee, MSE (2011-2012)
Member, External Relationship Committee, MSE (2011-2012)
Member, Undergraduate Curriculum Subcomittee, Nano- Minor (2010-2012)
Mentor, UTD Faculty Mentoring Program (2010- 2012)
Member, Graduate Recruiting & Admission Committee, MSE (2009 – 2012)
Chair, Graduate faculty membership, MSE (2009-2010)
Chair, Faculty Search Committee, MSE (2009- 2010)
Nanoelectronics Chair Search Committee (2009 – 2010)
Chair, MSE Colloquia committee (2008 – 2009)
TA Committee, Electrical Engineering (2006 – 2009)
Graduate Advisor for new coming graduate students in Materials Science & Engineering and Solid State Devices & Microsystems Fabrication (2007-2008)
Selection Committee Chair, Search on Advanced Microscopy Lab. Manager (2006)
Associate Director, Cleanroom Research Laboratory (Electrical Characterization Facility) (2005-2006)

University Committees and Councils – *Kookmin University, Seoul, Korea*

Committee Chair, Initiating Interdisciplinary graduate program in nanotechnology (2002-2003)
Faculty Representative, Kookmin University Faculty Association (2001-2003)
Committee, Engineering College Planning (2001-2003)
Committee, Engineering College Research Program Development (2001-2003)
Committee, Engineering College Dean Search Committee (2001)
Committee, University Evaluation by Korean Council for University Education (2000)
Committee, School of Advanced Materials Engineering Planning (2000)
Task Force Committee, Information Technology Excellence University Program (1999)
Committee, KMU Networking Committee (1999)
Committee, School of Materials Engineering Program Development (1998)

Activities in Outreach Program and Society Organization

2016-Current, Mentor UT-Dallas Undergraduate Research Award
Meredith Lee, ME, UT-Dallas
2014 Mentor, REU Site Program
Danielle Lizarazo from University of Florida (Gainesville, FL)
2012 Mentor, REU Site Program
Elizabeth Hurst from Tulane University (New Orleans, LA)
2011-2012 KSEA-NTC (Korean Scientists & Engineers Association – North Texas Chapter), President
2011- Present. Vice President, KAMS (Korean-American Materials Society)
2011 US-Korea Renewable Energy Forum, Organizer, Nov. 22. 2011 (Dallas, TX)
2011 NMSC (National Math and Science Competition) North Texas Chair, Korean Scientists and Engineers Association, ECSS (University of Texas at Dallas), Apr. 16, 2011
(About 160 students (4-11th grade) participated in this competition. About 100 parents and guardians attended a series of seminar by Prof. Ahn (UT-SW) and Mr. D. Kim (C2Education))
2010 NMSC (National Math and Science Competition) North Texas Chamber (NTC), Chair, Korean Scientists and Engineers Association (KSEA), ECSS (University of Texas at Dallas), Apr. 24, 2010
(About 140 students (4-11th grade) participated in this competition. About 100 parents and guardians attended a series of seminar by Prof. Ahn (UT-SW) and Mr. D. Kim (C2Education))

2008 - 2011 Executive Committee, KSEA-NTC
2010 NanoExplorer Mentor (UT-Dallas)
Kevin Chen (10th grade, Jasper High School, Plano, TX)
David Li (11th Grade, Plano Senior High School, Plano, TX)

Awards and Honors

Best Poster Award (by Dr. Lanxia Cheng) at 2017 ALD conference (Denver, CO) (2017)
3rd Best Presentation Award (by Mr. Antonio Lucero) at NT4D (NanoTechnology for Defense, City of Industry, CA) (2015)
Best Paper Award at 2010 IUMRS-ICEM
Selected Outstanding Research by Korean Ministry Of Science and Technology, (2004) *Press Released in Korea*
Best Paper Award at 2004 Korean Metals and Materials Society (2004)
Best Poster Award at 2003 Korean Materials Research Society Meeting (2003)
Named in "Who's Who in Science and Engineering (2000)"
Named in "Who's Who in the World (1999)"
Korean Government Oversea Scholarship (1990 – 1993)

Students/Staffs Directly Supervised at the University of Texas at Dallas.

Post Doctoral Research Fellows

KyuJung Choi (Nov. 2006 – Nov. 2007, Currently at NCD Tech)
HyunChul Kim (Aug. 2007 – Aug. 2009, Currently at Samsung Mobile Display)
Bongki Lee (Jun. 2010 – Nov. 2010, Currently at Global Foundry (Samsung Austin Semiconductor))
TaeJoo Park (Nov. 2008 – Feb. 2011, Currently Professor at Hanyang University)
Prasanna Sivasubramani (Sep. 2009 –Sep. 2011, Currently at LAM Research)
Sunwoo Lee (Feb. 2011 – Mar. 2012, Currently at Samsung Mobile Display)
MinWoo Ha (Feb. 2013 – Fab. 2014, Currently Professor at MyungJi Univ.)
Lanxia Cheng (Dec. 2012 – Current, previously Post-Doc at U of Wisconsin, Milwakee and UC-Riverside, PhD from St-Andrew Univ., Scottland, UK)
YoungChul Byun (Mar. 2014 – Current, previously, SKKU, Korea)
Jaegil Lee (May. 2015- Current, previously, HongIk Univ., Korea)
Sijoon Kim (May 2016-Current, previously, SDI, PhD from Yonsei Univ.)
Antonio Thomas Lucero (Jun. 2016 – Current, PhD from UT-Dallas)

***Ph.D.s*:**

Bongki Lee (MSEN) (Aug. 2005 – May. 2010, Currently Samsung Austin Semiconductor)
Brian Coss (MSEN) (Aug. 2008 – Dec. 2011, Currently Intel)
MinGun Lee (MSEN) (Aug. 2007 – Aug. 2013, Currently Dongjin Semiconductor)
Srikar Jandhyala (MSEN) (Sep. 2010 – May, 2013, Currently Intel)
Huang Jie (MSEN) (Jan. 2010 – May. 2014, Currently TI)
Antonio Thomas Lucero (MSEN) (Sep. 2010 – May 2016, Currently UT-Dallas)

Ph. D. Candidates (After Proposal)

Ph.D. Students (Passing Ph.D. Qualifying Exam):

Xin Meng (EE) (Sep. 2014 – Current)
JaeBeom Lee (MSEN) (Jan. 2015 – Current)
Arul Ravichandran (MSEN) (Sep. 2014 –Current)
JungHo Park (MSEN) (Jan. 2011-May 2011, Currently leave of Absence)

Ph.D. Students (Prior to passing Qualifying Exam):

Joy Sangmi Lee (MSEN) (Jan. 2016 – Current)
Sani LeClear (ME) (Sep. 2015 –Current) co-advisor w/ Prof. WonJae Choi

Harrison Sejoon Kim (MSEN) (Jan. 2016 – Current)
Jaidah Mohan (MSEN) (Aug. 2016 – Current)
Sumin Hwang (MSEN) (Jan. 2017 – Current)
Aswin Lakshmi Narayanan (MSEN) (Aug. 2017 – Current)

M.S.s:
Brian Coss (MSEN) (Sep. 2006 – May. 2008)
Aarabhi Hande (EE) (Jun. 2007 – Jan. 2009)
Srikar Jandhyala (MSEN) (Sep. 2008-Aug. 2010)
TaeWook Kim (EE) (Sep. 2007 – Dec. 2010)
Arul Ravichandra (MSEN) (Sep. 2014 – Dec. 2016)
Greg Mordi (EE) (Jan. 2008 – Dec. 2010) (Non-Thesis Option)
Huang Jie (MSEN) (Jan. 2008– Dec. 2010) (Non-Thesis Option)
Jing Yang (MSEN) (Jan. 2015 – Dec. 2015), Graduated with MS (Non-thesis option)

Undergraduate Students
JiHyung Lee (EE) (Jan. 2006 – Aug. 2008)
Greg Mordi (EE) (Nov. 2007 – Jan. 2009)
Antonio Lucero (Physics) (Jan. 2010 – Aug. 2010)
SaengEun Park (EE) (Sep. 2011- Aug. 2013)
Shah Rohan (Bio-Chemistry) (May. - Dec, 2014)
Dushyant Nanrayan (Phys) (Sep. 2015 – Aug. 2016)
Merdethian Lee (ME) (May 2016 – Current)

Mentoring REU Students
Elizabeth Hirth (Chemical Engineering, Tulane Univ. LA) (May. Aug. 2012)
Danielle Lizarazo (Chemical Engineering, Univ. of Florida, FL) (Jun.-Aug. 2014)

Mentoring High School Students
David Li (Plano Senior High School) (Jun. 2010 –Aug. 2010)
Kevin Chen (Jasper High Junior High School) (Jun. 2010 –Aug. 2010)
GeunYeong Jason Lee (Texas Academy of Math and Science) (Jun. 2011 –Aug. 2011)
Joshua Lee (Junior, Prestonwood Christian Academy) (May – Aug. 2013)

Visiting Scholars
Dr. YongSun Ko (Apr. 2006 – Feb. 2007) From Samsung Electronics Co.
Dr. Sujin Ahn (Jul. 2007 – Oct. 2008) from Samsung Electronics Co.
Prof. HyunJung Shin (Jan. 2008 – Aug. 2010) from KMU (Kookmin Univ., Seoul, Korea)
Dr. JaeSung Sim (Sep. 2008 – Oct. 2009) from Samsung Electronics Co.
Mr. SangMin Moon (Jul. 2009 – Jul. 2011) from Ministry of Knowledge Economics (Gwacheon, Korea)
Dr. HeeSoo Kang (Oct. 2009-Aug. 2011) from Samsung (Kiheung, Korea)
Prof. Pil-Ryung Cha (Dec. 2009 –Feb. 2012) from KMU (Seoul, Korea)
Dr. SungHyun Park (Dec. 2009-Aug. 2011) from KCTech (Ansan, Korea)
Mr. EungJae Park (Jan. 2010-Aug. 2011) from Dongjin (PyungTaek, Korea)
Mr. JunSeok Lee (Dec. 2010-Aug. 2011) from DMS (Suwon, Korea)
Dr. KookNyung Lee (Mar. 2010-Aug. 2011) from KETI (SungNam, Korea)
Dr. SungHo Jang (May. 2010-Feb. 2011) from DMS (Suwon, Korea)
Prof. GaWon Lee (Jan. 2011-Feb. 2012) from ChungNam National Univ. (Daejeon, Korea)
Prof. JangSik Lee (Feb. 2012-Feb. 2013) from KMU (Kookmin Univ. Seoul, Korea)
Prof. SangChul Lee (Jan. 2012-Jul. 2014) from KAU (Korean Aerospace Univ., Seoul, Korea)
Dr. TaeHui Cho (Mar. 2013-Mar. 2014) from Samsung Electronics Co.
Prof. HoSeok Nam (Feb. 2014 – Feb. 2015) from KMU
Prof. Byung Hun Lee (Apr. 2014 – Aug. 2015) from GIST, Korea
Prof. Rino Choi (Jul. 2014 – Feb. 2016) from Inha Univ, Korea

Prof. KwangSun Ryu (Jul. 2014 – Aug. 2015) from Univ. of Ulsan, Korea
Mr. ChangYeon Kim (Dec. 2014 – May. 2015) from MOTIE, Korea
Prof. JaeKyeong Jeong (Jul. 2015 – Jan. 2016) from Hanyang U., Korea
Prof. HoeChang Yang (Dec. 2015 – Current) from Inha U., Korea
Prof. JeeWon Chung (Jan. 2016 – Feb. 2017) from Inha U. Korea
Mr. SeokHo Lee (Dec. 2016-Current) from MOTIE, Korea
Ms. Mihye Park (Mar. 2016 – Apr. 2017) from GIST, Korea
Prof. SeungJae Baik (Dec. 2016 – Current) from HanKyung National University, Korea
Prof. JangSik Lee (Dec. 2016 – Current) from POSTECH
Dr. JaeYong Song (Jan. 2017 – Current) from KRISS
Mr. SeungJu Park (Jan. 2017 – Current) from Samsung Electronics Co.
Mr. Hajin Sung (Jul. 2017-Current) from MOTIE
Prof. J. Ahn (Sep. 2017 – Current) from HanYang Univ.

Visiting Post-Doc
Dr. SangHyun Hong (Jan. 2008 – Jan. 2009) From POSTECH

Visiting Ph.D. Student
Ms. KeumJee Chung (Nov. 2008 – Jun. 2010) From HanYang Univ. (Seoul/Korea)
Mr. SangChul Lee, (Jan. 2012 – Aug. 2012) From GIST (GwangJu Institute of Science and Technology, GwangJu, Korea)
Mr. YoungGon Lee (Feb. 2014 – Jan. 2015) From GIST
Mr. HyeonJun Hwang (Feb. 2014 – Jan. 2015) From GIST

Graduate Students Co-Supervised at the University of Texas at Dallas.

Ph. D. Candidates **:**
Dongkyu Cha (Aug. 2005 – May. 2009) with Prof. Moon Kim

M.S. Students:
Amar Chowdhury (Sep. 2006 – Dec. 2008) with Prof. Robert Wallace
Mayra Daniela Morales (Visiting Student) (Aug. 2006 – May. 2007) with Visiting Prof. Alberto Herrera-Gomez

Graduate Students Directly Supervised at Kookmin Univ.

Ph. D.:
Sung-Won Jung (Sep. 2000 – Aug. 2005, currently at KOGAS)

M.S. Students :
CheeYoung Lee (Mar. 2005-Feb. 2007, currently at Kookmin Univ.)
SangHee Won (Mar. 2005 – Feb. 2007, currently at Neo Semitech, Inc.)
TaeKwan Oh (Mar. 2004 – Feb. 2006, currently at LG-Philips)
Dae-Kyun Jung (Mar. 2003 –Feb. 2005, currently at ASM International)
Jin-Woo Lee (Mar. 2003 – Feb. 2005, currently at Samsung Electronics)
Sungho Kong (Mar. 2002 – Feb. 2004, currently at Sinco, Inc.)
Nohheon Park (Mar. 2002 – Feb. 2004, currently at Charm Engineering)
Juhwan Park (Mar. 2001 – Feb. 2003, currently at Neo Semitech, Inc.)
Chang-Bae Jeon (Mar. 2001 – Feb. 2003, currently at Korea Circuit, Inc.)
Hyung-Sub Min (Mar. 2000 – Feb. 2002, currently at Sejong Univ.)
Junemo Koo (Mar. 2000 – Feb. 2002, currently at SAIT (Samsung Advanced Inst. of Tech.))
Taeho Kim (Mar. 1999 – Feb. 2001, currently at Hyundai Automobile Inc.)
Woo-Sung Choi (Mar. 1998 – Feb. 2000, currently at TongYang Semiconductor)
Hyung-Seok Kim (Mar. 1998 – Feb. 2000, currently at Jusung Engineering)
Ilhwan Bang (Sep. 1997 – Aug. 1999, currently at Charm Engineering)

SungWon Jung (Mar. 1997 – Feb. 1999, currently at KOGAS.)

Courses Developed and Taught at UT-D

Graduate Courses

Introduction to Materials Science and Engineering (3 Credits)
Phase Transformation (3 Credits)
Metals and Ceramics (3 Credits)
Thin Films Science and Technology (3 Credits)
Defects in Solids (3 Credits)
Nanoelectronics – Materials and Devices (3 Credits)

Undergraduate Courses

Introduction to Materials Science and Engineering (3 Credits)

Courses Developed and Taught at KMU

Undergraduate Courses

Modern Physics for Materials Scientists (3 Credits)
Electronic Materials Lab (2 Credits)
Introduction to Materials Science (3 Credits)
Structures of Materials (3 Credits)
Semiconductor Processing Lab (2 Credits)
Semiconductor Physics and Technology (3 Credits)
Electronic Materials Processing (3 Credits)
Materials Science of Thin Films (3 Credits).
Electrical and Magnetic Properties of Materials (3 Credits)
Engineering Mathematics (3 Credits)
Materials Characterization (3 Credits)
Materials and Cultures (2 Credits, for non MSE major students)

Graduate Courses

Physics of Semiconductors (3 Credits)
Semiconductor Process Integration (3 Credits)
Semiconductor Processing (3 Credits)
Advanced Materials Structures (3 Credits)
Electronic Materials (3 Credits)
Process Integration for Multi-level Interconnection (3 Credits)
Physics of Metals (3 Credits)
Diffusion in Metal (3 Credits)

Inter-University Semiconductor Research Center (Seoul National University, Seoul, Korea)

Oxidation (3 Hr, 14 times, total 388 attendees)

Publication List

Co-coauthored Book

1. B. Choi, K. Bae, Jiyoung Kim, “Next Generation Memory Devices,” ISBN 89-5884-077-3 93560, Korean Institute of Science and Technology Information (206-9 CheongRyangRi-Dong, DongDaeMoon-Gu, Seoul, Korea) / I-Room ChulPanSa, p. 61, Jun. 30. 2004 (Written in Korean)

Peer Reviewed Journal Papers

H factors : 37 (Google Scholar) / 31 (Scopus) / 30 (Science Citation Index)

1. Ava Khosravi, Rafik Addou, Christopher M. Smyth, Ruoyu Yue, Christopher R. Comier, Jiyoung Kim, Christopher L. Hinkle, Robert M. Wallace, "Covalent Nitrogen Doping in MBE and Bulk WSe2", Appl. Phys. Lett. Mater. (Submitted)
2. Hui Zhu, Qingxiao Wang, Lanxia Cheng, Rafik Addou, Jiyoung Kim, Moon J. Kim, Robert M. Wallace, "Defects and surface structural stability of MoTe2 under vacuum annealing", ACS Nano (Under revision)
3. Lanxia Cheng, Jaebeom Lee, Hui Zhu, Arul Vigneswar Ravichandran, Qingxiao Wang, Antonio T. Lucero, Moon J. Kim, Robert M. Wallace, Luigi Colombo, Jiyoung Kim, "Sub-10nm tunable hybrid dielectric engineering on MoS23 for 2D materials-based devices," ACS Nano (Accepted)
4. Lee A. Walsh, Christopher M. Smyth, Adam T. Barton, Zifan Che, Ruoyu Yue, Jiyoung Kim, Moon J. Kim, Robert M. Wallace, Chrisopher L. Hinle, "Interface Chemistry on Contact Metals and Ferromagnets on the Topological Insulator Bi2Se3," Jour. Phys. Chem. C (Submitted)
5. Lorena Martin, Yuzhi Gao, Maxime Vallet, Iman Abdallah, Benedicte Warot-Fonrose, Christophe Ternailleau, Antonio T. Lucero, Jiyoung Kim, Alain Exteve, Yves J. Chabal, Carrole Rossi, "Performance enhancement via incorporation of ZnO nanolayers in energetic Al:CuO multilayers," ACS AMI (am-2017-12192x) (Submitted)
6. Lorena Marin, Yuzhi Gao, Maxime Vallet, Iman Abdallah, Benedicte Warot-Fonrose, Christophe Ternailleau, Antonio T. Lucero, Jiyoung Kim, Alain Exteve, Yves J. Chabal, Carrole Rossi, "Incorportation of a thin ZnO layer as an effective interfacial barrier in CuO/Al reactive nanolaminates," Physical Chemistry Chemical Physics, (Submitted)
7. Yuzhi Gao, Lorena Marin, Eric Mattson, Jeremy Cure, Charith Nanayakkara, Jean-Francois Veyan, Antonio Lucero, Jiyoung Kim, Carole Rossi, Alain Esteve, Yves Chabal, "Basic Mechanisms of Al Interaction with the ZnO Surface," Jour. Phys. Chem. C, 121 (23), PP. 12780-12788 (Jun. 15, 2017) **DOI:** 10.1021/acs.jpcc.7b02661
8. Diego Barrera, Ali Jawaid, Trey B. Daunis, Lanxia Cheng, Qingxiao Wang, Yun-Ju Lee, Moon Kim, Jiyoung Kim, Richard A. Vaia, Julia W. P. Hsu, "Inverted OPVs with MoS2 hole transport layer deposited by spray coating," Solar Energy Mater. & Solar Cells (Submitted)
9. Yue, Ruoyu; Nie, Yifan; Walsh, Lee; Addou, Rafik; Liang, Chaoping; Lu, Ning; Barton, Adam; Zhu, Hui; Che, Zifan; Barrera, Diego; Cheng, Lanxia; Cha, Pil-Ryung; Chabal, Yves; Hsu, Julia; Kim, Jiyoung; Kim, Moon; Colombo, Luigi; Wallace, Robert; Cho, Kyeongjae; Hinkle, Chris, "Nucleation and growth of WSe₂: Enabling large grain transition metal dichalcogenides", 2D Materials, Accepted
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Invited Talk / Colloquia

1. J. Kim, “In-situ Materials and Electrical Characterization of ALD”, Seminar, Memory Manufacturing Center, Samsung Semiconductor, Hwasung, Korea (Nov. 9, 2016)
2. J. Kim, “In-situ Characterization of Atomic Layer Deposition” Plenary Talk, the IX International Conference on Surface, Materials and Vacuum, Mazatlan, Sinaloa, Mexico (Sep. 26-30, 2016)
3. J. Kim, Tutorial, “Atomic Layer Deposition,” the IX International Conference on Surface, Materials and Vacuum, Mazatlan, Sinaloa, Mexico (Sep. 26-30, 2016)
4. J. Kim, “Advanced Dielectrics for 2D Materials Devices” Electrical and Computer Engineering Colloquium, Univ. of Alabama (Tuscaloosa, AL) (Jan. 20, 2016)
5. J. Kim, “ALD of Dielectrics for Advanced Channel Materials – Initial Interface Formation”, 2015 IWDTF (International Workshop on Dielectric Thin Films for future electron device” Tokyo, Japan (Nov2-4. 2015)
6. J. Kim, Tutorial, “Synthesis and Integration of 2D Materials,” iMRC, Cancun, Mexico (Aug. 16. 2015)
7. J. Kim, “Molecular-Atomic Layer Deposition (MALD) for Novel Flexible Hybrid Materials,” iMRC, Cancun, Mexico (Aug. 16-21. 2015)
8. J. Kim, “Organic-Inorganic Hybrid Films Using Molecular-Atomic Layer Deposition (MALD)” SPIE, San Diego, CA (Aug. 17-21, 2014)
9. Jiyoung Kim, “Ozone Based Atomic Layer Depsotion for Gate Dielectrics,” ALD conference, Kyoto, Japan (Jun. 15-18, 2014)
10. Jie Huang, Mingun Lee, Antonio Lucero, Jiyoung Kim, “Molecule Engineering for ALD Applications,” ACS conference, Dallas, TX (Mar. 15-20, 2014)
11. J. Kim, “Gate Dielectrics on Graphene,” AVS National Conference, Long Beach, CA (Oct. 27-Nov.1, 2013)
12. J. Kim, “Initial ALD half cycle study using in-situ XPS and electrical characterization,” NIMS conference, Tscuba, Japan, (Jul. 1-4, 2013)
13. J. Kim, “New Waves in Semiconductor Research” Samsung Global Technology Outreach Forum (HwaSung, Korea) (Nov. 29. 2012)
14. J. Kim, “Graphene FETs for Future Device Applications” Qualcomm, San Diego/CA (Nov. 2. 2012)
15. J. Kim, “Top gated graphene transistors,” 2012 IUMRS-ICA (Pusan, Korea) (Aug. 26-31, 2012)
16. J. Kim, “ Gate Dielectric Engineering for Graphene Device Applications“ ICMAP 2012 (International Conference on Microelectronics and Plasma Technology (Jeju, Korea) (July 4-6, 2012)
17. J. Kim, “Dielectric Engineering for Graphene FET Applications,” SKKU Colloquium, (Suwon, Korea) (May 17. 2012)
18. J. Kim, “In-situ XPS study on atomic layer deposition of high-k dielectrics,” E-1, 221st ECS Meeting (Seattle, WA) (May 6-10, 2012)
19. J. Kim, “In-situ Electrical Studies of Ozone Based Atomic Layer Deposition on Graphene,” E-2, 221st ECS Meeting (Seattle, Wa) (May 6-10, 2012)
20. J. Kim, “R&D Activities for Touch Panel Devices in UT-Dallas,” Colloquium, SoonCheon National University (SoonCheon, Korea) (Feb. 13. 2012)
21. J. Kim, “R&D Activities for Flexible Electronics in UT-Dallas,” Colloquium, JeonBuk National University (JeonJu, Korea) (Feb. 13. 2012)
22. J. Kim, “Graphene for Touch Panel Applications,” International Workshop for Touch Panel Technology, Naju (NaJu, Korea), (Feb. 9-11. 2012)
23. J. Kim, “ALD for Micro and Nano electronics,” 1st International Symposium SEMINA, Hermosillo, Sonoma, Mexico. (Feb. 2-3, 2012)
24. J. Kim, “ALD of Gate Dielectrics for Graphene FETs” 2011 International Forum on Functional Materials & the 2nd Symposium on Advances in Functional Materials (IFFM & AFM), Jeju, Korea, July 28-31, 2011
25. J. Kim, “Atomic Layer Deposited Nanotubes for Biosensor Applications,” 3rd International Conference on Microelectronics and Plasma Technology (ICMAP-2011), Dalian, China, Jul. 4-7, 2011
26. J. Kim, “International R&D collaboration for Semiconductor Industries,” 2010 System IC Workshop, COSAR, Jeju, Korea, Feb. 15-16., 2011
27. J. Kim, “ALD for Micro/Nanoelectronics,” International Conference on Nano Science and Nano

Technology – ICNST 2010, Nov. 8-9. 2010, Gwangju, Korea
28. J. Kim, "Flatform for logic device – Foundry," International Symposium of 19th Anniversary KETI, Aug. 25, 2010
29. J. Kim, "Ozone ALD for Gate Dielectric Applications," International Union of Materials Research Societies – International Conference on Electronics Materials 2010 (IUMRS-ICEM 2010), Aug. 24 (Aug. 22-27) 2010, Seoul, Korea
30. J. Kim, "Low temperature ALD for flexible electronics," XIX International Material Research Congress (IMRC 2010), Aug. 16 (Aug. 15-20), 2010, Cancun, Mexico
31. J. Kim, "Ozone based ALD of high-k gate dielectrics," IEEE UGIM 2010 – University Government Industry Micro/Nano Biennial Symposium, Jul. 1 (June. 28 – July 1) 2010, Purdue University, West Lafayette, IN
32. J. Kim, B. Lee, G. Mordi, S. Jandhyala, "ALD of Al_2O_3 dielectrics for top-gated graphene device applications," 10th International Conference on Atomic Layer Deposition- ALD-2010," Jun. 22. (Jun. 20-23. 2010) Seoul, Korea
33. J. Kim, "High-k Dielectric Deposition (Al_2O_3) Using Ozone-based ALD (atomic layer deposition) for Graphene-based Devices," GIST MSE colloquium, May. 27. 2010, GwangJu, Korea
34. J. Kim, "In-situ XPS half cycle study of ALD," 2nd International Conference on Microelectronics and Plasma," (Sep. 17- Sep. 25) Sep. 23. 2009, Pusan, Korea
35. J. Kim, H.C. Kim, B. Lee, A. Hande, E.M. Vogel, M.J. Kim, and R.M. Wallace**,** "ALD of High-k Gate Dielectrics on Si and Alternative Substrates, AVS 55th International Symposium, October 21, 2008, Boston, MA, USA
36. Jiyoung Kim, D. K. Cha, O. Lourie, M. J. Kim**, "**Characterization of nanodevices by using in-situ TEM-STM (Invited talk)**,** 2008 M&M Meeting**,** Jun. 29 – Jul.3, 2008**,** Albuquerque, NM
37. Jiyoung Kim, Dongkyu Cha, Moon J. Kim, "Single nanotube and nanowire device fabrication using focused ion beam system," The Sixth Pacific Rim International Conference on Advanced Materials and Processing, Jeju/Korea, Nov. 5-9, 2007
38. C. Bae, H. Shin and J. Kim, "Fabrication of Nanoscale Tubular Structures and Capsules of Oxides by ALD," 212th Meeting of the Electrochemical Society, Washington DC, Oct. 7 – 12 (2007)
39. Jiyoung Kim, "ALD for Deposition Equipment for Nano-Regime," Materials Science and Engineering Colloquia, Korea University, Seoul/Korea, Jul. 6. 2007.
40. Jiyoung Kim, "Resistance RAM (ReRAM)," Texas Instruments, Dallas/TX, Mar. 2. 2007
41. Jiyoung Kim, "HfO_2/SiO_2 Wedding Cake," SEMATECH, Austin/TX, May. 25. 2006
42. Jiyoung Kim, "Atomic Layer Chemical Vapor Deposition for Microelectronics and Nanotechnology Applications," Materials Science and Engineering Colloquia, University of Texas at Arlington, Arlington/TX, Nov. 11, 2005.
43. Jiyoung Kim, "Atomic Layer Chemical Vapor Deposition (ALCVD) for Microelectronics and Nanotechnology Applications," Materials Science and Engineering Colloquia, University of North Texas, Denton/TX, Sep. 17, 2003
44. Jiyoung Kim, "Alternative Gate Dielectrics for the Next Generation CMOS applications," Advanced Materials Engineering Colloquia, HongIk University, Seoul/Korea, Sep. 17. 2002
45. Jiyoung Kim, JuneMo Koo, "Novel dual oxidation barrier layers for high density ferroelectric memory applications," 3rd Workshop on high-k dielectric / ferroelectric materials and devices, Seoul National University, Seoul/Korea, Dec. 17, 2001 (Invited)
46. Jiyoung Kim, "Fabrication and Applications of Ferroelectric Thin Films," 5th Lecture Series on Nano Materials and Technology, Chosun University, Kwangju/Korea, Mar. 21. 2001
47. Jiyoung Kim, "Ferroelectric Memory Devices," Materials Science and Engineering Colloquia, GIST, KwangJu/Korea, Feb. 23. 2000
48. Jiyoung Kim, "PLZT Thin Film Capacitors for Gb Generation DRAM Applications," 1996 Spring Symposium of the Korean Materials Research Society, TaeGu/Korea, May. 17. 1996 (Invited)

International Conference Presentation (English)

1. Jaebeom Lee, Lanxia Cheng, Antonio T. Lucero, Jiyoung Kim, "Thin hybrid dielectric film engineering on MoS2 using molecular-atomic layer deposition (MALD) 145th (TMS) The Minerals, Metal & Materials Society Annual Meetings, San Diego, CA, (Feb. 26 –Mar. 2, 2017)

2. Xin Meng, Young-chul Byun, Jaegil Lee, Jiyoung Kim. Effects of surface treatments on the electrical characteristics of AlGaN/GaN MOS capacitors using ALD grown epitaxial ZnO as interfacial gate dielectric, Accepted, 2017 TMS Annual Meeting & Exhibition, San Diego, CA, Feb. 26 –March 2 2017
3. Dushyant Narayan, Si Joon Kim, Jae-Gil Lee, Young-Chul Byun, Antonio T. Lucero, Jiyoung Kim, "The effect of H2O vs O3 as ALD oxidant on the ferroelectric phase transition of Hafnium-Zirconium Oxide, 145th (TMS) The Minerals, Metal & Materials Society Annual Meetings, San Diego, CA, (Feb. 26 –Mar. 2, 2017)
4. Harrison Kim, Young-Chul Byun, Xin Meng, Jiyoung Kim, B. K. Hwang. FT-IR Investigation of H Content in SiNX Thin Film Grown by PEALD Using HCDS as Precursor; Achieving Low WER, 2017 TMS Annual Meeting & Exhibition, San Diego, CA, Feb. 26 –March 2 2017
5. Antonio Lucero, Lanxia Cheng, Joy S. Lee, Jaebeom Lee, Xin Meng, Arul Ravichandran, Young-Chul Byun, Jaegil Lee, Jiyoung Kim. Novel In Situ Electrical Characterization of the Dielectric Deposition Process on 2-D Transition Metal Dichalcogenides, 2017 TMS Annual Meeting & Exhibition, San Diego, CA, Feb. 26 –March 2 2017
6. L. Cheng, J. Lee, H. Zhu, A. Ravichandran, Q. Wang, Z. Che, A.T, Lucero, M. Kim, R. M. Wallace, L. Colombo, and J. Kim, "Ultrathin Al2O3 gate dielectric engineering on MoS2 for 2D Materials Based Devices", 145th (TMS) The Minerals, Metal & Materials Society Annual Meetings, San Diego, CA, 2017. Feb. 26th –March 2nd **(Invited talk)**
7. Jaegil Lee, Young-Chul Byun, Dushyant Narayan, Jiyoung Kim, "Enhancement-mode ALD DEZ-H2O treated InGaAs MOSFETs with High-k Gate Dielectric," 145th (TMS) The Minerals, Metal & Materials Society Annual Meetings, San Diego, CA, 2017. Feb. 26th –March 2nd
8. L. Cheng, J. Lee, H. Zhu, A. Ravichandran, Q. Wang, Z. Che, A.T, Lucero, M. Kim, R. M. Wallace, L. Colombo, and J. Kim, "Ultrathin Al2O3 gate dielectric engineering on MoS2 for 2D Materials Based Devices", TMS 2017, San Diego, CA (Feb. 26–March 2, 2017)
9. Antonio T. Lucero, Lanxia Cheng, Joy S. Lee, Jaebeom Lee, Xin Meng, Arul Ravichandran, Young-Chul Byun, Jaegil Lee, and Jiyoung Kim, "Novel in-situ Electrical Characterization of the Dielectric Deposition Process on 2D Transition Metal Dichalcogenides", 2017 TMS Annual Meeting & Exhibition, San Diego, CA (Feb. 26 – Mar. 2, 2017)
10. Jae-Gil Lee, Young-Chul Byun, Si Joon Kim, Jiyoung Kim "Atomic Layer Deposited HfZrO2-based Inversion-Type In0.53Ga0.47As Metal-Oxid-Semiconductor Field Effect Transistors, 2017 KCS, HongCheon, Korea, (Feb. 13-15, 2017)
11. S. Choi, Y.An, C. Lee, J. Song, M.-C. Nguyen, Y.-C. Byun, J. Kim, R. Choi and H. Kim, "Electrical and chemical properties of HfO2/Al2O3 on In0.53Ga0.47As annealed at different H2 pressures"AVS PacSurf 2016, Hawaii, USA (Dec. 11-15, 2016)
12. Y.An, C. Lee, S. Choi, J. Song, Y.-C. Byun, J. Kim and H. Kim, "Electrical properties of the atomic-layer-deposited Al2O3 on GaSb pretreated with TMA and TDAMT", AVS PacSurf 2016, Hawaii, USA (Dec. 11-15, 2016)
13. C. Lee, Y. An, S. Choi, J. Song, Y.-C. Byun, J. Kim and H. Kim, "Optimization of the ZnO passivation process on p-type In0.53Ga0.47As using atomic layer deposition", AVS PacSurf 2016, Hawaii, USA (Dec. 11-15, 2016)
14. Young-Chul Byun, Jae-Gil Lee, Antonio T. Lucero, Chadwin D. Young, Moon J. Kim, Jiyoung Kim, "Enhanced Electrical Stability in Recessed Gate GaN HEMTs on Si using Low-Temerpatrure Atomic Layer Deposited ZrO2," IEEE SISC, San Diego/CA, Dec. 7-10 (2016)
15. Jaegil Lee, Young-Chul Byun, Young Jun Oh, Dushyant Narayan, Antonio T. Lucero, Kyeongjae Cho, Chadwin D. Young, Hyoungsub Kim, Jiyoung Kim, "Effect of DEZn Surface Treatment on Sulfur-Passivated InGaAs with Atomic Layer Deposited High-k Film, IEEE SISC, San Diego/CA, Dec. 7-10 (2016)
16. Antonio T. Lucero, Lanxia Cheng, Jaebeom Lee, Joy S. Lee, Jiyoung Kim, "Enabling Future Flexible Electronics: Organic-Inorganic Hybrid Films Deposited with MALD", Defense Innovation 2016, Austin, TX (Nov. 29 – Dec. 1)
17. H.J. Hwang, L. Cheng, A.T. Lucero, B.H. Lee, Jiyoung Kim, "Ultra-thin SiO2 dielectric characteristics using E-beam evaporated system on HOPG and CVD graphene, 2016 IEEE Nanotechnology Materials and Devices Conference (NMDC), Toulouse/France, Oct. 9-12 (2016)
18. J. Kim, "In-situ Characterization of Atomic Layer Deposition" Plenary Talk, the IX International Conference on Surface, Materials and Vacuum, Mazatlan, Sinaloa, Mexico (Sep. 26-30, 2016)

19. Antonio T. Lucero, Lanxia Cheng, Joy S. Lee, Jaebeom Lee, Xin Meng, Arul Ravichandran, Dushyant Narayan, Young-Chul Byun, Jaegil Lee, and Jiyoung Kim, "The effects of ALD and PEALD processing on 2D transition metal dichalcogenide devices: in-situ electrical characterization," ALD conference, Dubline, Ireland (Jul. 24-27)
20. L. Cheng, J. Lee, H. Zhu, R. Ravichandran, Q. Wang, Z. Che, A. T. Lucero, M. Kim, R. M. Wallace, L. Colombo, and J. Kim, "Dielectric engineering of ultrathin organic-inorganic hybrid films on 2D TMDs using Molecular atomic layer deposition", ALD Conference 2016, Dublin, Ireland (July 24 – 27, 2016
21. Y-C. Byun, A.T. Lucero, X. Meng, L. Cheng, J. Kim. Dipole Engineering for Controlling VTh on AlGaN/GaN Using ALD Metal Oxides, ALD Conference 2016, Dublin, Ireland (July 24 – 27, 2016
22. Jae-Gil Lee, Young-Chul Byun, Dushyant Narayan, Antonio T. Lucero, Jiyoung Kim, "Inversion behavior of ALD HfZrO2/InGaAs MOS capacitor with in-situ DEZ H2O treatment, ALD Conference 2016, Dublin, Ireland (July 24 – 27, 2016)
23. Lanxia Cheng, G. Mordi, Young Gon Lee, Jiyoung Kim, "Low-k organic dielectric engineering for graphene field effect transistors," Graphene 2016, Genova/Italy (Apr. 19-22, 2016)
24. Jaebeom Lee, Lanxia Cheng, Kayoung Yun, Antonio T. Lucero, Ho-Seok Nam, Jiyoung Kim, "Low temperature synthesis of graphite on Ni films using inductively coupled plasma enhanced CVD," 2016 TMS, Nashville, TN (Feb. 14- 18, 2016)
25. Lanxia Cheng, Jaebeom Lee, Antonio T. Lucero, YoungChol Byun, Jiyoung Kim, "Deposition and Characteristics of Al based Gate Dielectrics with Ozone treatment for MoS2 Applications," 2016 TMS, Nashville, TN (Feb. 14- 18, 2016)
26. Jaebeom Lee, Lanxia Cheng, Kayoung Yun, Antonio T. Lucero, Ho-Seok Nam, Jiyoung Kim, "Inorganic-Organic Hybrid Films Fabricated by Moleculear Atomic Layer Deposition (MALD) using $TiCl_4$ and Hydroquinone (HQ)," 2016 TMS, Nashville, TN (Feb. 14- 18, 2016)
27. Mingun Lee, Dongkyu Cha, Huang Jie, Min-Woo Ha, Jiyoung Kim, "Single TiO2 Nanotube Devices Using Ion and Electron Beam-Assisted Deposition, MNC 2015 (28th International Microprocesses and Nanotechology Conference), Toyama, Japan, Nov. 10-13, 2015
28. Jie Huang, Mingun Lee, Antonio Lucero, Lanxia Cheng, Min-Woo Ha, Jiyoung Kim, "Organic-Inorganic Hybrid Dielectric Material Fabricated by Molecular Atomic Layer Deposition," MNC 2015 (28th International Microprocesses and Nanotechology Conference), Toyama, Japan, Nov. 10-13, 2015
29. J. Kim, "ALD of Dielectrics for Advanced Channel Materials – Initial Interface Formation", 2015 IWDTF (International Workshop on Dielectric Thin Films for future electron device" Tokyo, Japan (Nov2-4. 2015)
30. Antonio T. Lucero, Young-Chul Byun, Lanxia Cheng, Xin Meng, Jagil Lee, Robert M. Wallace, J. Kim, "Advanced deposition and characterization techniques for enabling future III-V devices," Nanotech for Defense (NT4D), City of Industry, CA (Nov. 16-Nov. 19, 2015) (3rd place award on Student Presentation Awards Competition)
31. J. Kim, "Molecular-Atomic Layer Deposition (MALD) for Novel Flexible Hybrid Materials," iMRC, Cancun, Mexico (Aug. 16-21. 2015) (Invited Talk)
32. Young-Chul Byun, Jae-Gil Lee, Antonio T. Lucero, Xin Meng, Lanxia Cheng, Jiyoung Kim, "Electrical properties of O3 based ALD-ZrO2 on AlGaN/GaN on Si", 2015 US-Korea Conference, Atlanta, GA, Aug.2015 Young-Chul Byun, Antonio T. Lucero, Xin Meng, Lanxia Cheng, Jiyoung Kim, "Dipole engineering for controlling V_{th} on AlGaN/GaN using ALD metal oxides", 2015 ALD Conference, Portland/OR, (Jun. 29-Aug. 2, 2015)
33. Lanxia Cheng, Jaebeom Lee, Antonio T. Lucero, Young-Chul Byun, Jiyoung Kim, "Trimethylaluminum and ozone based high-k dielectric deposition and electrical characterization on MoS_2, 2015 ALD Conference, Portland/OR, (Jun. 29-Aug. 2, 2015)
34. Antonio T. Lucero, Young-Chul Byun, Xiaoye Qin, Lanxia Cheng, Robert M. Wallace, Jiyoung Kim, "ALD ZnO passivation of III-V semiconductors: in-situ XPS and electrical characterization, 2015 ALD Conference, Portland/OR, (Jun. 29-Aug. 2, 2015)
35. Huang Jie, Lanxia Cheng, Jiyoung Kim, "Vapour Phase Deposition of Organic-Inorganic Hybrid Thin Films Using Molecular-Atomic Layer Deposition (MALD), 4th International Conference on Multifunctional, Hybrid and Nanomaterials (Hybrid Materials 2015, HYMA 2015) Sitges, Spain, (Mar. 9 -13, 2015)

36. Lanxia Cheng, Kayoung Yun, Antonio T. Lucero, Archana Venugopal, Luigi Colombo, HoSeok Nam, Jiyoung Kim, "Low temperature synthesis of graphite on Ni films using inductively coupled plasma enhanced CVD," 2015 TMS Annual Meeting, Orlando, FL, USA, Mar. 15-19, 2015
37. Y.-C. Byun, A. Lucero, J. Kim, "Low Temperature Atomic Layer Deposited ZrO2 Films using TDMA-Zr, H2O and O3" 2015 TMS Annual Meeting, Orlando, FL, USA, Mar. 15-19, 2015
38. Antonio T. Lucero, YoungChul Byun, Xiaoye Qin, Robert M. Wallace, Jiyoung Kim, "InGaAs Passivation with an ALD ZnO Interlayer: Electrical and XPS Characterization," 2014 IEEE 45th SISC, San Diego, Dec. 10-13, 2014
39. Antonio T. Lucero, Lanxia Cheng, YoungGon Lee, Hyeon Jun Hwang, Xiaoye Qin, Robert M. Wallace, J. Kim, "Growth and Characterization of Ultrathin Silicon Dioxide Layers for Low-k Dielectrics on HOPG and Graphene," AVS National Conference, Baltimore, MD (Nov. 9- 14, 2014)
40. YoungGon Lee, Lanxia Cheng, Addou Rafik, YongHun Kim, Greg Mordi, Hyeon Jun Hwang, Antonio T. Lucero, Robert M. Wallace, Byoung Hun Lee, Jiyoung Kim, "Development of Low-k Dielectric for Graphene Devices," AVS National Conference, Baltimore, MD (Nov. 9- 14, 2014)
41. J. Kim, "Organic-Inorganic Hybrid Films Using Molecular-Atomic Layer Deposition (MALD)" SPIE, San Diego, CA (Aug. 17-21, 2014) (Invited Talk)
42. Y.-C. Byun, A. Lucero, S. Choi, H. Kim and J. Kim, "Effect of in situ ALD-ZnO interfacial passivation layer on the electrical properties of ALD-HfO2 on GaAs and InGaAs", AVS Texas Chapter Conference 2014, Dallas, USA
43. Jiyoung Kim, "Ozone Based Atomic Layer Depsotion for Gate Dielectrics," ALD conference, Kyoto, Japan (Jun. 15-18, 2014) (Invited Talk)
44. Jie Huang, Antonio Lucero, Lanxia Cheng, Jiyoung Kim, "Organic-Inorganic Hybrid Semiconducting Thin Film Deposited by MALD," ALD conference, Kyoto, Japan (Jun. 15-18, 2014)
45. Antonio Lucero, Lanxia Cheng, Min Woo Ha, TaeHui Cho, Jiyoung Kim, "Interface Engineering for Dielectric-Semiconductor Interface Passivation," ALD conference, Kyoto, Japan (Jun. 15-18, 2014)
46. Jie Huang, Antonio Lucero, Lanxia Cheng, Minwoo Ha, Jiyoung Kim, "Novel Organic-Inorganic Hybrid Semiconductors Fabricated by Moleculare-Atomic Layer Deposition (MALD)," 2014 Spring MRS, San Francisco, CA (Apr. 21-25, 2014)
47. Jie Huang, Mingun Lee, Antonio Lucero, Jiyoung Kim, "Molecule Engineering for ALD Applications," ACS conference, Dallas, TX (Mar. 15-20, 2014) (Invited Talk)
48. Antonio Lucero, TaeHui Cho, Jiyoung Kim, "Dielectric-Semiconducotr Interface Passivation Using a Nitrogen Radical Generator," ECS Spring Conference, Miami, FL (2014)
49. Jie Huang, Antonio Lucero, Lanxia Cheng, Minwoo Ha, Jiyoung Kim, "Novel Organic-Inorganic Hybrid Semicondutors Fabricated by Molecular-Atomic Layer Deposition," 2014 Spring MRS conference, San Francisco, (2014)
50. J. Kim, "Gate Dielectrics on Graphene," AVS National Conference, Long Beach, CA (Oct. 27-Nov.1, 2013) (Invited Talk)
51. Min-Woo Ha, Saungeun Park, Ogyun Seok, Min-Koo Han, and Jiyoung Kim, "GaN Schottky Barrier Diode Array with Oxygen Diffusion", US-Korea Conference, pp. I-469, New Jersey, United States, Aug., 2013
52. J. Kim, "Initial ALD half cycle study using in-situ XPS and electrical characterization," NIMS conference, Tsucuba, Japan, (Jul. 1 -4, 2013) (Invited Talk)
53. Antonio Lucero, Lanxia Cheng, Kensuke Watanabe, Jiyoung Kim, "Growth and Characterization of Radical Enhanced Atomic Layer Deposited AlN films," 2013 ALD conference, San Diego, CA (Jul. 28-Aug. 1, 2013)
54. Jie Huang, Mingun Lee, Antonio Lucero, Jiyoung Kim, "Organic-Inorganic nano-laminate deposited by moleculear-atomic layer deposition (MALD) for electronics applications", 13th International Conference on Atomic Layer Deposition, pp. 421, 2013 ALD conference, San Diego, CA (Jul. 28-Aug. 1, 2013)
55. Srikar Jandhyala, Min-Woo Ha, Greg Mordi, and Jiyoung Kim, "In-situ Electrical Studies of Atomic Layer Deposition of Dielectrics on Thin MoS2 Layers", 13th International Conference on Atomic Layer Deposition, pp. 421, 2013 ALD conference, San Diego, CA (Jul. 28-Aug. 1, 2013)
56. Antonio Lucero, Mingun Lee, Jie Huang, Jiyoung Kim, "Optimization of Titanium Dioxide Thin Film Biosensors for Streptavidin Detection", The Minerals, Metals and Materials Society (TMS), San Antonio, TX (Mar. 3-7, 2013)

57. Saungeun Park, S. Lee, S. Jandhyala, G. Mordi, J. Lee and Jiyoung Kim, "Fast triangular pulse measurement techniques for intrinsic electrical characterization of graphene field-effect transistors", The Minerals, Metals and Materials Society (TMS), San Antonio, TX (Mar. 3-7, 2013)
58. Sangchul Lee, S. Jandhyala, D. Iyore, Saungeun Park, G. Mordi and Jiyoung Kim, "High performance of transparent and flexible graphene filed-effect transistors on plastic substrates", The Minerals, Metals and Materials Society (TMS), San Antonio, TX (Mar. 3-7, 2013)
59. Jie Huang, Mingun Lee, Antonio Lucero, Jiyoung Kim, "Nano-hybrid organic-inorganic thin films using molecular layer deposition (MLD)," 142th Minerals, Metals & Materials Society (TMS) International Conderence, San Antonio, TX (Mar. 3-7, 2013)
60. Jie Huang, Mingun Lee, Antonio Lucero, and Jiyoung Kim, "Organic-Inorganic Hybrid Thin Films Prepared by Ozone Assisted Molecular-Atomic Layer Deposition (MALD)," 59th American Vacuum Society (AVS) international conference, Tampa, FL, (Oct. 28-Nov. 2, 2012)
61. A. Lucero, J. Kim, "Monolayer Nitridation of Semiconductors using a Nitrogen Radical Generator," 59th American Vacuum Society (AVS) international conference, Tampa, FL, (Oct. 28-Nov. 2, 2012)
62. S. Jandhyala, G. Mordi, R. M. Wallace and J. Kim, "Achieving Scaled Dielectrics on Graphene using Atomic Layer Deposition", AVS 59th International Symposium and Exhibition, Tampa, FL, USA (Oct. 28-Nov. 2, 2012).
63. S. Jandhyala, G. Mordi, S. Park, and J. Kim, "In-situ Electrical Studies on Atomic Layer Deposition (ALD) of Dielectrics on Graphene", 14th Premier Technical Conference (TECHCON), Austin, TX, USA (Sep. 10-11, 2012).
64. S. Jandhyala, G. Mordi, R. M. Wallace, J. Kim, "Top-Gated Graphene Field-Effect Transistors Using Inorganic and Organic Dielectrics as Gate Insulators", The 10th Nano Korea 2012 Symposium, Seoul, Korea (August 16-18, 2012).
65. J. Kim, "Top gated graphene transistors," 2012 IUMRS-ICA (Pusan, Korea) (Aug. 26-31, 2012)
66. J. Kim, "Gate Dielectric Engineering for Graphene Device Applications" ICMAP 2012 (International Conference on Microelectronics and Plasma Technology (Jeju, Korea) (July 4-6, 2012)
67. S. Jandhyala, G. Mordi, S. Park, and J. Kim, "Studies on Atomic Layer Deposition (ALD) of Dielectrics on Graphene Using Real-Time Electrical Measurements", 12th International Conference on Atomic Layer Deposition, Dresden, Germany (June 17-20, 2012).
68. Mingun Lee, Antonio Lucero, Hyunjung Shin, and Jiyoung Kim "Fabrication of TiO2 Nanotubes and Thin Films Devices for Biosensor Applications" NanoKorea 2012, Seoul, Korea (Aug. 16-18, 2012)
69. Jie Huang, Mingun Lee, Antonio Lucero, and Jiyoung Kim, "Organic-Inorganic Hybrid Thin Film Deposition by Molecular Layer Deposition (MLD)," 12th international conference on Atomic Layer Deposition (ALD), Dresden, Germany, (Jun. 17-20, 2012)
70. Mingun Lee, Antonio Lucero, Jie Huang, Moon Kim and Jiyoung Kim "Atomic Layer Deposited TiO2 Nanotubes and Thin Films for Biosensor Applications" ALD 2012, Dresden, Germany (Jun. 17-20, 2012)
71. S. McDonnell, A. Pirkle, J. Chan, S. Jandhyala, A. Azcatl, D. Hinojos, G. Mordi, C. W. Magnuson, L. Colombo, E. M. Vogel, R. S. Ruoff. J. Kim and R. M. Wallace, "Reduction of transfer induced residues for CVD graphene systems", AVS Texas Chapter Conference, Dallas, TX, USA (June 6-7, 2012).
72. Jie Huang, Mingun Lee, Antonio Lucero, and Jiyoung Kim, "Deposition of organic-inorganic-hybrid thin films using ozone based molecular layer deposition (MLD),"72nd Annual Physical Electronics Conference, The University of Texas at Dallas, Richardson, TX, (Jun, 2012)
73. S. Jandhyala, G. Mordi, S. Park, D. Hinojos, R. M. Wallace, and J. Kim, "Understanding the Interaction of Atomic Layer Deposition (ALD) Precursors on Graphene", 72nd Annual Physical Electronics Conference, The University of Texas at Dallas, Richardson, TX, USA (June 3-6, 2012).
74. G. Mordi, S. Jandhyala, J. Kim, "Low- κ organic layer as a top gate dielectric for graphene field effect transistors", 72nd Annual Physical Electronics Conference, The University of Texas at Dallas, Richardson, TX, USA (June 3-6, 2012).
75. S. McDonnell, A. Azcatl, D. Hinojos, G. Mordi, S. Jandhyala, L. Colombo, J. Kim and R. M. Wallace, "Optimizing the transfer process for CVD-grown graphene", 72nd Annual Physical Electronics Conference, The University of Texas at Dallas, Richardson, TX, USA (June 3-6, 2012).
76. H. Floresca, D. Hinojos, N. Lu, J. Chan, L. Colombo, R. Wallace, J. Wang, J. Kim, Moon Kim, "Large area mapping of graphene grain structure and orientation," E-1, 221st ECS Meeting (Seattle, WA) (May 6-10, 2012)

77. Jiyoung Kim, HyunChul Kim, Robert. M. Wallace, T. J. Park, "In-situ XPS study on ALD(Atomic Layer Deposition) of high-k dielectrics; La2O3 using La-formidinate and ozone," E-1, 221st ECS Meeting (Seattle, WA) (May 6-10, 2012)
78. J. Kim, S. Jandhyala, G. Mordi, B. Lee "*In-situ* Electrical Studies of Ozone based Atomic Layer on Graphene", E-2, 221st ECS Meeting, Seattle, WA (May 6-10, 2012).
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43 Korean Conference Presentations