CURRICULUM VITAE

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August 2022

Professor Emeritus (Distinguished Professor)
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Research Interest:

- Grain growth and microstructural evolution in polycrystals with change in interface structure and chemistry
- Theory and Practice of Sintering – microstructure control and related physical properties

Education:

- Seoul National University, B.S. in Metallurgy, 1973
- Korea Advanced Institute of Science and Technology (KAIST),
  M.S. in Materials Science, 1975
  Thesis : Effect of Chemical Compositions and Sintering Conditions on Dimensional and Magnetic Properties of Barium Ferrite Permanent Magnet
- Ecole Centrale de Paris(France), Dr.-Ing. in Materials Engineering, 1980
  Thesis : Transformation en Refroidissement Continu(TRC) des Alliages Cuivre-Aluminum-Manganèse
- Université de Paris VI(France), Dr. d'Etat ès Science Physiques, 1985
  Thesis : Contribution à l'Etude du Frittage en Phase Liquide

Professional Experience:

March 2021 – Present	: Professor Emeritus, Dept. Materials Science and Engineering, KAIST
Jan. 2021 – Dec. 2023	: Chair Professor (part time), Harbin Institute of Technology-
June 1980 – Feb. 2021	: Assistant Professor (’80.6-’85.2), Associate Professor (’85.3-’89.8), Professor (’89.9-’10.1) and Distinguished Professor (’10.3-’21.2) Department Chair (’89.9-’91.3 and ’96.3-’98.8), Dept. of Materials Science and Engineering, KAIST
Apr. 2016 – Apr. 2019	: Member, Board of Trustees of KAIST
June 2018 – June 2024	: Member, Advisory Board of the World Academy of Ceramics
Aug. 2018 – June 2022	: President-Elect and President, International Ceramic Federation
Sept. 2015 – Mar. 2018	: President, Korea Institute of Ceramic Engineering and Technology (KICET)
Dec. 2005 – Aug. 2014	: Director, Center for NanoInterface Technology (Core Research Institute, NRF), KAIST
Sept. 2008 – Nov. 2014	: Director, Samsung-KAIST Center for Advanced MLCC Manufacturing Processes (CAMMP)
June 2008 – Apr. 2016	: Leader, Development and Application of Materials Interface Technology (Doyak Program, NRF), KAIST
Feb. 2012 – July 2014	: Member, Board of the trustees, Korea Institute of Ceramic Engineering and Technology
Sept. 1999 – Aug. 2004	: Leader, Materials Interface Laboratory (National Research Lab., MOST), KAIST
Aug. 1995 – Feb. 2000	: Director, Center for Interface Science and Engineering of Materials (ERC, KOSEF), KAIST
June 2008 – Aug. 2008	: Visiting Professor, University of Tokyo (Tokyo, Japan)
Sept. 2001 – June 2002	: Visiting Professor, Australian Research Council Fellow, University of New South Wales (Sydney, Australia)
Sept. 1993 – May 1994	: Visiting Professor, Research and Development Center of Samsung Electromechanics Co. (Suwon, Korea)
Jan. 1991 – Feb. 1991	: Visiting Professor, Tokyo Institute of Technology (Tokyo, Japan)
Feb. 1988 – Jan. 1989	: Visiting Professor, Alexander-von-Humboldt Fellow, Max Planck-Institut für Metallforschung (Stuttgart, Germany)
July 1986 – Aug. 1986	: Visiting Professor, National Institute for Research in Inorganic Materials (Tsukuba, Japan)

Jan. 1985 – Feb. 1985 : Visiting Professor, Institut Supérieur des Matériaux et de la Construction Méchanique (St.-Quen, France)
June 1982 – Dec. 1983 : Visiting Professor, Max-Planck-Institut für Metallforschung (Stuttgart, Germany)

Honors and Awards:

- Academic Award (1995), Korea Advanced Institute of Science and Technology
- Academic Award (1998), Korean Institute of Metals and Materials
- Academic Award (2009), Korean Ceramic Society
- Inchon Prize (2007), Inchon Memorial Foundation
- Korea Engineering Prize (2010), President of Korea
- Chang Sung Prize (2015), Korean Powder Metallurgy Institute
- Sung Ok Prize (2018), Korean ceramic Society
- Pfeil Award (2006), Institute of Materials, Minerals and Mining (UK)
- Sosman Award (2011), American Ceramic Society
- Richard Brook Award (2015), European Ceramic Society
- Helmholtz International Fellow Award (2015), Helmholtz Gesellschaft, Germany
- Fellow (2001 – present), American Ceramic Society
- Member, Emeritus Fellow (1996 – present), Korean Academy of Science and Technology
- Member, Emeritus Fellow (2002 – present), National Academy of Engineering of Korea
- Academician (2007 – present), World Academy of Ceramics
- Member (2008 – present), International Institute for Science of Sintering
- Civil Merit Medal (2001), Ministry of Science and Technology in Korea
- Order of Compliments (Jade) (2016), Government of the Republic of Korea
- Distinguished Professor (2010 – 2021), Korea Advanced Institute of Science and Technology
- Fellow Professor (2010 – present), Ulsan University
- Fellow Professor (2010 – present), School of Engineering, University of Tokyo
- Distinguished Paper Award (1999), Korea Federation of Science and Technology Societies
- Best Paper Award (2001), Korean Institute of Metals and Materials
- Fellowships:
  - •University of Tokyo, Japan (2008)
  - •Australian Research Council (2001-2002)
  - •Japan Society for the Promotion of Sciences (1995, 1991)
  - •Alexander-von-Humboldt Foundation, Germany (1988-1989)
  - •Ministry of Education and Sciences, Japan (1986)
  - •Centre National de la Recheache Scientifique (CNRS), France (1985)
  - •Max-Planck-Gesellschaft, Germany (1983)

Graduate Students Graduated:

51 Doctors
60 Masters

Research Fellows Supervised:

14 Post-Doctors and Research Associates

Professional Societies:

- Fellow (2001 – present), American Ceramic Society
- Honorary Fellow (2017 - present), European Ceramic Society.
- President-Elect, President (2018 – 2022), International Ceramic Federation
- Member, Emeritus Fellow (1996 – present), Korean Academy of Science and Technology
- Member, Emeritus Fellow (2002 – present), National Academy of Engineering of Korea
- Academician (2007 – present), World Academy of Ceramics
- Member, Managing Board (2008 – present, 2008 – present) International Institute for Science of Sintering
- International Board Member (2007 – present), Recrystallization and Grain Growth
- International Board Member (2010 – present), Intergranular and Interphase Boudaries in Materials
- President (2006), Korean Powder Metallurgy Institute
- President (2012), Korean Ceramic Society
- President (2013 – 2014), The Asia-Oceania Ceramic Federation (AOCF)
- Reviewer for Nat. Mater., Acta Mater., J. Am. Ceram. Soc., J. Eu. Ceram. Soc., Appl. Phys. Lett., Phil. Mag., etc
- Reviewer for US DOE, US NSF, Japan JSPS, Australia Research Council, Acta Materialia Gold Medal, etc.

- Editorial Board Member (2008 – present), Science of Sintering
- Editorial Board Member (2011– present), Ceramics International
- Principal Editor, J. Materials Research (2008.3 – 2015.10)
  J. Korean Ceramic Society (2006 – 2007)
  Electronic Materials Letters (2006 – 2007)
  J. Korean Powder Metallurgy Institute (2005)
  J. Materials Research Society of Korea (1992 – 1996)
- Editor-in-Chief, J. Asian Ceramic Societies (2013.1 – 2015.12)
- Editor, Materials Transactions (2015 – present)

Conferences Organized:

International Conference, Symposium and Workshop Organizer or Co-organizer

1. Ceramics in Europe 2022 (ECerS meeting, ICC9), July 10-14 (2022) Krakow, Poland
2. 15th international Ceramics Congress, CIMTEC 2022, June 20-29, 2022, Montecatini Terme, Italy
3. 8th International Congress on Ceramics (ICC8), Apr. 25-29 (2021) Busan, Korea.
4. 8th International Conference on Sintering, Sintering 2017, Nov. 12-16 (2017) San Diego, U.S.A.
5. International Workshop on Sintering and Microstructural Evolution in Ceramics, Aug. 27-29 (2015) Daejeon, Korea.
6. 7th International Conference on Sintering, Sintering 2014, Aug 24-28 (2014) Dresden, Germany.
7. 6th International Conference on Science, Technology and Applications of Sintering (Sintering 2011), Aug. 28-Sept. 1 (2011) Jeju, Korea
8. Symposium on "Oxide-Based Ceramics" at 9th Inter. Meeting of Pacific Rim Ceramic Societies (PacRim 9), July 10-14, 2011 Cairns, Australia.
9. Symposium on "Advances in Electroceramics" ICC3 (3rd Inter. Congress on Ceramics), Nov. 14-18, 2010, Osaka, Japan.
10. Symposium on "Design, Modeling, and Simulation of Ceramic Interfaces," PACRIM 8 (8th Pacific Rim Conference on Ceramic and Glass Technology), May 31-June 5, 2009, Vancouver, Canada.
11. Symposium on "Frontiers of Materials Science" in IUMRS-ICA 2008, Dec. 9-13, 2008, Nagoya, Japan
12. 3rd International Conference on Recrystallization and Grain Growth, June 10-15, 2007, Jeju, Korea
13. 2006 Powder Metallurgy World Congress and Exhibition (PM2006), Sept. 24-28, 2006, Busan, Korea (Secretary General)
14. Symposium on "Ceramics" in 5th Pacific Rim International Conference on Materials (PRICM 5), Nov. 2-5, 2004, Beijing, China.
15. Symposium on "Mechanical Properties of Ceramics and Ceramic Matrix Composites," in IUMRS-ICAM 2003 (the 8th IUMRS International Conference on Advanced Materials), Oct. 8-13, 2003, Yokohama, Japan.
16. Symposium on "Synergy Ceramics" in PacRim 5 (The 5th International Meeting of Pacific Rim Ceramic Societies), Sept. 29-Oct. 2, 2003, Nagoya, Japan
17. Symposium on Electronic Ceramics in Austceram 2000, June 25-28, 2000, Sydney, Australia
18. 3rd International Symposium on Advanced Powder Materials (ISAPM98) Sept. 24-26, 1998, Daejeon, Korea
19. International Workshop on Ceramic Interfaces : Properties and Applications IV Sept. 16-19, 1998, Daejeon, Korea
20. International Symposium on Sintering and Microstructure Development, American Ceramic Society, May 3-6, 1998, Cincinatti, U.S.A
21. Microstructure Development in Materials (Korea-Japan-U.S. Workshop) Oct. 3-5, 1996, Daejeon, Korea
22. The 1st Korea-India Joint Seminar on Ceramics Oct. 29-30, 1995, Daejeon, Korea

International Organizing, Program, or Advisory Committee Member

1. 15th international Ceramics Congress, CIMTEC 2022, June 20-29, 2022, Montecatini Terme, Italy.
2. 12th International Conference on High Performance Ceramics (CICC-12), Nov. 14-18, 2021, Suzhou, China.
3. 16th Conference and Exhibition of the European Ceramic Society, Symposium on "High temperature processes and Advanced Sintering", June 16-20, 2019, Torino, Italy
4. 11th International Conference on High Performance Ceramics (CICC-11), May 25-29, 2019, Kunming, China.
5. 14th International Ceramics Congress, CIMTEC 2018, June 4-8, 2018, Perugia, Italy.
6. 15th International Symposium on Novel and Nano Materials, ISNNM-2018, July 1-6, 2018, Lisbon, Portugal.
7. 10th International Conference on High Performance Ceramics (CICC-10), Nov. 4-7, 2017, Nanchang, China.
8. 6th International Symposium on Advanced Ceramics and Technology for Sustainable Energy Applications (ACTSEA-2017), Oct. 31 - Nov. 3, 2017, Kaohsiung, Taiwan.
9. 14th International Symposium on Novel and Nano Materials (ISNNM-2016), July 3-8, 2016, Budapest, Hungary.
10. 13th International Conference on Ceramic Processing Science (ICCPS-13), May. 8-11, 2016, Nara, Japan..
11. 5th International Symposium on Advanced Ceramics and Technology for Sustainable Energy Applications (ACTSEA-2015), Nov. 8-11, 2015, Tainan, Taiwan.
12. 11th Pacific Rim Conference of Ceramic Societies (PACRIM11) Aug. 30-Sept. 4, 2015, Jeju, Korea.

13. 5th International Conference on the Characterization and Control of Interfaces for High Quality Advanced Materials (ICCCI 2015) July 7-10, 2015, Kurashiki, Japan.
14. 9th International Conference on High Performance Ceramics (CICC-9), Nov. 4-7 2015, Guilin, China
15. 5th International Congress on Ceramics (ICC5), Aug 17-21, 2014, Beijing, China.
16. 13th International Symposium on Novel and Nano Materials, (ISNNM-2014), June 29-July 4, 2014, Krakow, Poland.
17. 13th International Ceramics Congress, June 8-13, 2014, Montecatini Terme, Pistoia, Italy.
18. 9th Laser Ceramics Symposium: Inter. Symp. On Transparent Ceramics for Photonic Applications, Dec. 2-6 (2013) Daejeon, Korea.
19. 4th Inter. Symposium on Advanced Ceramics for Sustainable Energy Applications (ACTSEA-2013), Nov. 10-13, 2013, Taipei, China.
20. 8th Inter. Conference on High-Performance Ceramics (CICC-8), Nov. 4-7, 2013, Chongqing, China.
21. XIV Inter. Conference on Intergranular and Interphase Boundaries in Materials (iib 2013), June 23-28, 2013, Halkidiki, Greece.
22. 7th Inter. Conference on Science and Technology for Advanced Ceramics (STAC-7), June 19-21, 2013, Yokohama, Japan.
23. Symposium on "Advanced Characterization and Modeling of Ceramic Interfaces," in PacRim 10, June 2-7, 2013, San Diego, U.S.A.
24. 5th Inter. Conference on Recrystallization and Grain Growth, May 5-10, 2013, Sydney, Australia.
25. Inter. Symp. New Frontier of Advanced Si-based Ceramics and Composites (ISASC2012), Mar. 25-28, 2012, Seoul, Korea.
26. 3rd Inter. Symposium on Advanced Ceramic for Sustainable Energy Applications (ACTSEA-2011), Oct. 30 – Nov. 2, 2011, Pingtung, Taiwan.
27. 3rd Inter. Congress on Ceramics (ICC3), Nov. 14-18, 2010, Osaka, Japan.
28. 11th Inter. Conference on Ceramic Processing Science (ICCPS-11), Aug. 29-Sept.1, 2010, Zurich, Switzerland.
29. 4th Inter. Conference on Recrystallization and Grain Growth, July 4-9, 2010, Sheffield, UK.
30. 3rd Inter. Symposium on SiAlONs and Non-Oxides (ISSNOX3), June 1-4, 2010, Cappadocia, Turkey.
31. 2nd Inter. Symposium on Advanced Ceramics and Technology for Sustainable Energy Application (ACTSEA-2009) Nov. 1-4, 2009, Taipei, Taiwan.
32. Thermec 2009, International Conference on Processing and Manufacturing of Advanced Materials, Aug. 25-29, 2009, Berlin, Germany.
33. Symposium on "Basic Science" in 11th Inter. Conference and Exhibition of the European Ceramic Society, June 21-25, 2009, Krakow, Poland.
34. International Conference and Exhibition on Powder Metallurgy 09, PM09, Feb 16-18, 2009, Panjim Goa, India.
35. Sintering 2008, 5th International Conference on the Science, Technology and Applications of Sintering, Nov. 16-19, 2008, San Diego, U.S.A.
36. ISASC2008, International Symposium on New Frontier of Advanced Si-Based Ceramics and Composites, June 8-11, 2008, Jeju, Korea.
37. 10th Inter. Conference on Ceramic Processing Science, May 25-28, 2008, Inuyama, Japan.
38. 2nd Inter. Symposium on SiAlONs and Non-Oxides, Dec. 2-5, 2007, Mie, Japan
39. ISAC-3, 3rd Inter. Symposium on Advanced Ceramics, Dec. 11-15, 2006, Singapore.
40. THERMEC 2006, Inter. Conf. on Processing and Manufacturing of Advanced Materials, July 4-8, 2006, Vancouver, Canada.
41. CIMTEC 2006, Inter. Conf. on Modern Materials and Technologies, June 4-9, 2006, Acireale, Sicily, Italy.
42. ICCP-9, 9th Inter. Conference on Ceramic Processing Science, Jan. 8-11, 2006, Coral Spring, Florida, U.S.A.
43. Sintering 05, The 4th International Conference on the Science, Technology and Applications of Sintering, Aug. 29-Sept. 1, 2005, Grenoble, France
44. Austceram 2004, Nov. 29-Dec. 1, Melbourne, Australia.
45. 5th Pacific Rim International Conference on Materials (PRICM 5), Nov. 2-5, 2004, Beijing, China.
46. EnCera 04 (3rd Inter. Sysmp. on the Science of Engineering Ceramics), Oct. 31-Nov. 3, 2004, Osaka, Japan.
47. International Symposium on New Frontiers of Advanced Silicon-based Ceramics and Composites 2004 (ISASC-2004) June 20-23, 2004, Kyungju, Korea.
48. Sintering 03, The Third International Conference on the Science, Technology and Applications of Sintering, Sept. 15-17, 2003, Penn State University Park, Pennsylvania, U.S.A.
49. International Union of Pure and Applied Chemistry (IUPAC) Conference on High Temperature Materials Chemistry-XI, May 19-23, 2003, Tokyo, Japan.

50. 2nd International Symposium on Advanced Ceramics, Nov. 19-22, 2002, Shanghai, China.
51. 2nd International Conference on Mass and Charge Transport in Inorganic Materials: Fundamentals to Devices, CIMTEC 2002, July 14-19, 2002, Florence, Italy.
52. International Symposium on SiAlONs, Dec. 2-4, 2001, Chiba, Japan
53. International Workshop on Ceramic Interfaces: Properties and Applications V, Oct. 21-25, 2001, Tsukuba, Japan.
54. International Symposium on Mass and Charge Transport in Inorganic Materials: Fundamental to Devices, May 28-June 2, 2000, Venice, Italy.
55. Sintering 99, The Second International Conference on the Science, Technology, and Applications of Sintering, Nov. 1-3, 1999, Penn State University Park, Pennsylvania, U.S.A.
56. Powder Metallurgy World Congress and Exhibition 98, Oct. 18-22, 1998. Granada, Spain.
57. Ceramic Processing 97, Sept. 7-10, 1997, Santa Barbara, U.S.A.
58. International Conference on High Pressure Science and Technology Joint AIRAPT-16 & HPSJ-38, Aug. 25-29, 1997, Kyoto, Japan.
59. International Conference on the Science, Technology, and Applications of Sintering, Sept. 24-27, 1995, University Park, Pennsylvania, 1995.
60. Silicon Nitride 93, Oct. 4-6, 1993, Stuttgart, Germany.

Invited Presentations:

At International Conferences and Symposia

1. Grain Growth: the mixed control mechanism of atom transport," 12th World Round Table Conference on Sintering (WRTCS 2022) Aug. 29-Sept. 2 (2022) Herceg Novi, Montenegro (**Plenary**)
2. "Full densification in sintering, How can we achieve it?" 15th International Ceramic Congress, June 20-24 (2022) Perugia, Italy
3. "Formation/Migration of faceted grain boundaries and grain growth behavior in Ni," Sosman Symposium at MS&T2021, Oct. 17-21 (2021) Columbus, Ohio, USA.
4. "What we should consider for full densification when sintering," 11th World Round Table Conference on Sintering (WRTCS 2019) Sept. 2-6 (2019) Herceg Novi, Montenegro (**Plenary**)
5. "Sintering of Perovskites: Application of the Mixed Mechanism Principle of Microstructural Evolution," 11th International Conference on High Performance Ceramics (CICC-11) May 25-29 (2019) Kunming, China. **(Keynote)**
6. "Solid-state Growth of Piezoelectric Single Crystals and their Physical Properies," Engineering Ceramics 2019, May 12-16 (2019) Smolenice, Slovakia.
7. "Grain Growth and Mixed Control Process of Atom Transport," 7th Inter. Conf. Recrystallization and Grain Growth (ReX&GG VII) Aug. 4-9 (2019) Ghent, Belgium.
8. "Sintering and Mixed Control Processes of Material Transport," Powder Metallurgy World Congress 2018 (WorldPM2018) Sept. 16-20 (2018) Beijing, China **(Keynote)**
9. "The Interface Effect as an emerging issue in sintering fundamentals," Forum on Emerging Science and Technology for High Performance Ceramics, Sept. 12-14 (2018) Hohhot, China.
10. "Understanding Sintering Fundamentals," 15th Inter. Symp. Novel and Nano Materials (ISNNM), July 1-5 (2018) Lisbon, Portugal.
11. "Microstructure Tailoring in Perovskites with Control of the Interphase Structure," 7th AOCF (Asia-Oceania Ceramic Federation) Conference, Mar. 11-14 (2018)
12. "Strategies and Practices for Suppressing Abnormal Grain Growth during Liquid Phase Sintering," Inter. Conference on Sintering 2017, Nov. 12-16 (2017) San Diego, USA.
13. "Fundamentals of Sintering and their Future Research Directions," 15th Conference and Exhibition of the European Ceramic Society (ECerS2017) July 9-13 (2017) Budapest, Hungary.
14. "Tailoring Microstructure: a key to developing materials," 25th Anniversary Meeting of the Asia-Pacific Academy of Materials, Apr. 9-12 (2017) Sendai, Japan.
15. "The ways travelled and the ways to go in sintering, the key technology of ceramic fabrication," 41st Inter. Conference and Expo. on Advanced Ceramics (ICACC2017) Jan. 22-26 (2017) Daytona Beach, U.S.A.
16. "An explanation for the maintenance of the polyhedral shape of abnormal grains during their growth," Inter. Conference on Electronic Materials and Applications 2017 (EMA2017) Jan. 18-20 (2017) Orlando, U.S.A.
17. "Mixed Control of Boundary Migration and Microstructural Evolution in Polycrystals," Gordon Research Conference: 2016 Ceramics, Solid State Studies in, July 31-Aug. 5 (2016) Mount Holyoke College in South Hadley, MA, USA.
18. "Sintering: a Mixed Control Process of Material Transport," 14th Inter. Symposium on Novel and Nano

Materials (ISNNM-2016) July 3-8 (2016) Budapest, Hungary. **(Plenary)**

19. "How can we tailor ceramic microstructure" 13th Inter. Conference on Ceramic Processing Science (ICCPS-13) May 8-11 (2016) Nara, Japan.
20. "Sintering as a Material Transport Process Controlled by a Mixed Mechanism," Inter. Symposium of Innovative Ceramic Manufacturing Process Technology, March 4 (2016) Tokyo, Japan.
21. "Fabrication and Magnetoelectric Properties of Laser Annealed PZT Thick Film on Amorphous Magnetostrictive Metal Substrate," 10th Symposium on Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials and System in Inter. Conference and Exhibition on Advanced Ceramics and Composites (ICACC16), Jan. 24-29 (2016) Daytona Beach, U.S.A.
22. "Solid-State Conversion of Single Crystals: Principles and Practice," MS&T2015, Oct. 4-8 (2015) Columbus, Ohio, USA.
23. "Grain Growth: an enduring subject in materials science and engineering," The 11th Pacific Rim Conference of Ceramic Societies (PACRIM11) Aug. 30-Sept. 4 (2015) Jeju, Korea. **(Plenary)**
24. "Solid-State Conversion of Piezoelectric Single Crystals," The 5th Inter. Conference on the Characterization and Control of Interfaces for High Quality Advanced Materials (ICCCI 2015) July 7-10 (2015) Kurashiki, Japan.
25. "Where we stand in Understanding Microstructural Evolution," The 14th Inter. Conference of the European Ceramic Society (ECERS 2015) June 21-25 (2015) Toledo, Spain. **(Plenary, Richard Brook Award Lecture)**
26. "Densification during Liquid Phase Sintering: Contact Flattening vs. Pore Filling," Engineering Ceramics 2015, May 10-14 (2015) Smolenice, Slovakia.
27. "Strategies for Suppressing Abnormal Grain Growth during Liquid Phase Sintering," 10th Congress of the Iranian Ceramic Society, May 5-6 (2015) Tehran, Iran. **(Keynote)**
28. "Mixed Control of Boundary Migration and the Principle of Microstructural Evolution," MS&T2014, Oct. 12-16 (2014) Pittsburgh, USA.
29. "The Microstructural Evolution Principle as deduced from the Mixed Control Model of Boundary Migration," Materials Science Engineering 2014 (MSE2014) Sept. 23-25 (2014) Darmstadt, Germany. **(Keynote)**
30. "What governs Microstructural Evolution during Sintering?" Inter. Conference on Sintering 2014, Aug. 24-28 (2014), Dresden, Germany. **(Plenary)**
31. "Sintering as Boundary Structure-Dependent Material Transport Phenomena," 5th Inter. Congress on Ceramics (ICC5) Aug. 17-21 (2014) Beijing, China. **(Keynote)**
32. "Strategies for Controlling Grain Growth Behavior during Liquid Phase Sintering" 4th Inter. Symposium on SiAlONs and Non-oxides (ISSNOX4) May 25-28 (2014) Nagahama, Japan.
33. "Repetitive Abnormal Grain Growth and its Mechanism in a Nano-Structured Model System of Ni," 13th Inter. Symp. On Novel and Nano Materials (ISNNM-2014) June 29-July 4 (2014) Krakow, Poland. **(Keynote).**
34. "Evolution of Microstructure during Sintering of Ceramics," 13th Inter. Ceramic Congress (CIMTEC2014) June 8-13 (2014) Montecatini Terme, Italy.
35. "Boundary Structure-Dependent Material Transport of Sintering," Inter. Workshop on Advanced Materials Synthesis Process and nanostructure, Mar. 10-11 (2014) Sendai, Japan. **(Tutorial)**
36. "Optimization of the BaTiO3 Core/Shell Structure to Improve the Temperature Stability of the Dielectric Properties," 5th Inter. Symp. on Advanced Ceramics (ISAC-5) Dec. 9-12 (2013) Wuhan, China.
37. "Sintering Ceramics: Use of Boundary Structural Transition," 9th Laser Ceramics Symposium: Inter. Symp. On Transparent Ceramics for Photonic Applications, Dec. 2-6(2013) Daejeon, Korea.
38. "Development of Lead-free Piezoelectric Materials: Current Status and Perspectives" 4th Inter. Symp. On Advanced Ceramics and Technology for Sustainable Energy Applications (ACTSEA2013), Nov. 10-13(2013) Taipei, Taiwan.
39. "Understanding Microstructural Evolution in Ceramics," 8th Inter. Conf. High-Performance Ceramics (CICC-8) Nov. 4-7 (2013) Chongqing, China. **(Plenary)**
40. "How does Microstructure Evolve in Perovskites?" YUCOMAT 2013, Sept. 2-6 (2013) Herceg-Novi, Montenegro**. (Plenary)**
41. Mechanism of Abnormal Grain Growth in Ultra-Fine Nickel," XIV Inter. Conference on Intergranular and Interphase Boundaries in Materials (iib2013), June 23-28 (2013) Halkidiki, Greece.
42. "How Can We Avoid Abnormal Grain Growth in Cemented Carbides?" 7th Inter. Conference on Science and Technology for Advanced Ceramics (STAC-7) June 19-21 (2013) Yokohama, Japan.
43. "Prediction and Observation of Interface Structure-Dependent Grain Growth Behavior in Polycrystalline Materials," The 10th Pacific Rim Conference on Ceramic and Glass Technology (PacRim 10) June 2-7 (2013) San Diego, U.S.A.
44. "Boundary Structure Dependent Grain Growth Behavior in Polycrystals," 5th Inter. Conf.

Recrystallization and Grain Growth (ReX&GG V) May 5-10 (2013) Sydney, Australia. **(Plenary)**

45. "Fundamental Issues of Grain Growth in Polycrystals" Materials Science Week 2012 (MSW2012), Summit of Materials Science (SMS2012), Nov. 25-Dec.1 (2012) Sendai, Japan
46. "Migration Enhancement of Faceted Boundaries by Dislocations," Materials Science & Technology 2012 Conferences & Exhibition (MS&T'12) Oct. 7-11 (2012) Pittsburgh, U.S.A.
47. "Grain Growth Behavior with a Roughening Transition of Faceted Boundaries in Sintered Ultra-fine Nickel," MSE2012, Sept. 25-27 (2012) Darmstadt, Germany.
48. "Grain Boundary Structure Dependent Grain Growth Behavior in BaTiO3: Effects of Donors and Oxygen Partial Pressure," 4th Inter. Conf. on Characterization and Control of Interfaces for High Quality Advanced Materials (ICCCI2012) Sept. 2-5 (2012) Kurashiki, Japan.
49. "What else do we need to know to understand sintering phenomena?" 12th Inter. Symp. on Novel and Nano Materials (ISNNM-2012) Aug. 26-30 (2012) Istanbul, Turkey **(Plenary)**
50. "Normal and Abnormal Grain Growth in Polycrystalline Materials," 1st Inter. GIGAKU Conference in Nagaoka, Feb. 3-5 (2012) Nagaoka, Japan.
51. "How does Microstructure Evolve in Ceramics?" 28th Japan-Korea International Seminar on Ceramics, Nov. 23-26 (2011), Okayama, Japan. **(Plenary)**
52. "How does Microstructure Evolve during Sintering?" 1st International Conference on Powder Metallurgy in Asia (APMA2011), Oct. 30-Nov. 2 (2011) Jeju, Korea. **(Plenary)**
53. "Core/Shell Structure Formation in $BaTiO_3$ and Related Dielectric Properties," 7th Inter. Conference on High-Performance Ceramics (CICC-7) Nov. 4-7 (2011) Xiamen, China.
54. "Interface Structure Dependent Microstructural Evolution in Ceramics," 113th Annual Meeting of the American Ceramic Society, and Materials Science and Technology 2011 (MS&T2011) Oct. 16-20 (2011) Columbus, Ohio, U.S.A. (**Plenary, Sosman Award Lecture**)
55. "Boundary Faceting and Nonstationary Grain Growth in Ceramics" the 9th Inter. Meeting of Pacific Rim Societies (PacRim 9) July 10-14 (2011) Cairns, Australia. **(Keynote)**
56. "How does Densification Occur during Liquid Phase Sintering?" the 9th Inter. Meeting of Pacific Rim Societies (PacRim 9) July 10-14 (2011) Cairns, Australia
57. "Grain Growth in Perovskites with respect to Interface Structure and Defects," 3rd Inter. Congress on Ceramics (ICC3) Nov. 14-18 (2010) Osaka, Japan.
58. "Nonstationary Grain Growth in Cemented Carbides: Theoretical Prediction and Experimental Observations," 3rd Inter. Congress on Ceramics (ICC3) Nov. 14-18 (2010) Osaka, Japan.
59. "Microstructural Evolution in Ceramics with Control of the Interface Structure," 1st Eurasia Ceramic Congress, Oct. 6-8 (2010) Kutahya, Turkey. **(Plenary)**
60. "Solid-state Growth of Piezoelectric Single Crystals and Their Properties," 11th Inter. Conference on Ceramic Processing Science (ICCPS-11) Aug. 29-Sept. 1 (2010), Zurich, Switzerland.
61. "Nonlinear Migration of faceted Boundaries and Nonstationary Grain Growth in Ceramics," 4th Inter. Conference on Recrystallization and Grain Growth, July 4-9 (2010) Sheffield, UK.
62. "Enhanced Migration of Faceted Interfaces by Dislocations," 13th Inter. Conference on Intergranular and Interphase (iib2010) June 27-July 2 (2010) Mie, Japan.
63. "Coarsening Behavior of Faceted Grains in a Liquid Matrix: Model Calculation and Experimental Observations," 2nd Inter. Symposium on Advanced Microcopy and Theoretical Calculations," June 24-26 (2010) Nagoya, Japan.
64. "Suppression of Abnormal Grain Growth in Cemented Carbides," 3rd Inter. Symposium on SiAlONs and Non-Oxides (ISSNOX3) June 1-4 (2010) Capadocia, Turky.
65. "Microstructural Evolution in Polycrystalline Materials with Control of the Interface Structure," 20th Anniversary Symposium of MRS-Japan, Dec. 6-9(2009) Yokohama, Japan.
66. "Grain Boundary Faceting and Limiting Densification during Sintering," 9th Inter. Symposium on Nanocomposites and Nanoporous Materials (ISNNM 2009) Dec. 3-5 (2009) Deoksan, Korea.
67. "Continuum Mechanical Analysis of the Warpage Behavior of GDC/NiO-YSZ Bi lagers," 2nd Inter. Symposium on Advanced Ceramics and Technologies for Sustainable Energy Application (ACTSEA-2009), Nov.1-4 (2009) Taipei, Taiwan.
68. "Sintering Perovskites: Use of Interface Structure and Defect Control" MS&T 09, Oct. 25-29 (2009) Pittsburgh, U.S.A.
69. "Densification during Sintering with Control of the Grain Boundary Structure," The 3rd Inter. Conf. on the Characterization and Control of Interfaces for High Quality Advanced Materials, and Joining Technology for New Metallic Glasses and Inorganic Materials (ICCCI2009) Sep. 6-9 (2009) Kurashiki, Japan.
70. "Coarsening Behavior of Polyhedral Grains in a Liquid Matrix," 11th Inter. Conference and Exhibition of the European Ceramic Society, June 21-25 (2009) Krakow, Poland.
71. "Densification during Sintering by Structural Transition at Grain Boundaries" PacRim 2009, May 31-June 5 (2009) Vancouver, Canada.

72. "Microstructural Evolution in Perovskites by Oxygen Partial Pressure Change and Donor Doping," ECI Conference on Nonstoichiometric Compounds, Mar. 8-13 (2009) Jeju, Korea
73. "Microstructural Evolution in Ceramics by Structural Transition at Interfaces," 33rd Inter. Conference and Exhibition on Advanced Ceramics and Composites, Jan 18-23 (2009) Daytona Beach, U.S.A. **(Plenary Award)**
74. "Tailoring Microstructure by Use of Interface Structure Transition," International Union of Materials Societies-International Conference in Asia 2008, Dec. 9-13(2008) Nagoya, Japan. **(Plenary)**
75. "Sintering Kinetics by Structural Transition at Interfaces," Sintering 2008, Nov. 16-20 (2008) La Jolla, U.S.A.
76. "Calculation of the Coarsening of Polyhedral Grains in a Liquid Matrix," 9th Inter. Symposium on Ceramic Materials and Components for Energy and Environmental Applications, Nov. 10 -14 (2008) Shanghai, China
77. "Control of Interface Structure and Defects: The key to Microstructural Design," 32nd International Conference & Exposition on Advanced Ceramics & Composites, Jan. 27- Feb. 1 (2008) Daytona Beach, USA.
78. "Tayloring Microstructure in Sintering: Control of Interface Structure and Defects," Focused Workshop on Contemporary Topics in Sintering, Dec. 2-6 (2007) Coorg, India.
79. "Towards Nanostructure Control in Polycrystals," 2007 Inter. Conference on Nano Science and Nano Technology (GJ-NST 2007), Nov. 8-9 (2007) Gwangju, Korea.
80. "Interface Faceting and Non-stationary Grain Growth in Polycrystalline Materials," 6th Pacific Rim International Conference on Advanced Materials and Processing (PRICM-6), Nov. 5-9 (2007) Jeju Island, Korea.
81. "Acceptor Segregation and Non-linear Current-Voltage Characteristics in $SrTiO_3$" (Highlight paper) Euromat 2007, Sept. 10-13 (2007), Nürnberg, Germany.
82. "Control of Twin Formation and Design of Microstructure in Barium Titanate" 3rd International Conference on Electroceramics, July 31-Aug. 3 (2007), Arusha, Tanzania.
83. "Principles of Microstructural Design in Two Phase Systems," 3rd International Conference on Recrystallization and Grain Growth, June 10-15 (2007), Jeju, Korea.
84. "Principles of Microstructural Evolution in Ceramics," International Symposium on Electroceramics 2007, May 17-18 (2007) Seoul, Korea. **(Plenary)**
85. "Control of Nonstationary Grain Growth for Microstructural Design in Perovskites," The Fifth China International Conference on High-Performance Ceramics, May 10-13 (2007) Changsha, China.
86. "Control of Interface Structure for Microstructural Design in Polycrystalline Materials," The 8th International Symposium on Nanocomposites and Nanoporous Materials (ISNNM8), Feb. 22-24 (2007) Jeju, Korea. **(Plenary)**
87. "Microstructural Design of Polycrystals via Control of Interface Structure" PM-07 International Conference with Exhibition, Feb. 8-11 (2007) Noida, India.
88. "Nonstationary Grain Growth and Microstructural Development in Polycrystals," The 3rd International Symposium on Advanced Ceramics (ISAC-3), Dec. 11-15 (2006) Singapore.
89. "Interface Faceting and Non-stationary Grain Growth in Polycrystals," International Workshop on Interfaces in Functional Materials: From Theory to Experiments, Oct. 10-14 (2006) Macungie, PA, USA.
90. "Model Calculation of Grain Growth in Liquid Matrix," 2006 Powder Metallurgy World Congress and Exhibition, Sept. 24-29 (2006) Busan, Korea.
91. "Microstructure Design in Ceramics via Control of Interface Structure and Defects," Gordon Research Conference on Ceramics, Aug. 13-18 (2006) Proctor Academy, Andover, U.S.A.
92. "Pore Filling Theory of Liquid Phase Sintering," Thermec 2006, Inter. Conf. on Processing and Manufacturing of Advanced Materials, July 4-8 (2006) Vancouver, Canada.
93. "Grain Boundary Segregation and Nonlinear Current-Voltage Behavior in Perovskite, Titanates," CIMTEC 2006, Inter. Conf. on Modern Materials and Technologies, June 4-9 (2006) Acireale, Sicily, Italy.
94. "Challenge to Microstructure Design by Sintering," Sintering 05 (The 4th International Conference on Science, Technology and Applications of Sintering), Aug. 29-Sept. 1 (2005) Grenoble, France. **(Keynote)**
95. "Use of Defects for Microstructure Control in Ceramics," IX Conference and Exhibition of the European Ceramic Society, June 19-23 (2005) Portoroz, Slovenia. **(Keynote)**
96. "Nanostructure Control of Interface and Microstructure Design in Perovskite Ceramics," Inter. Conf. on Electroceramics, ICE-2005, June 12-16 (2005), Seoul, Korea.
97. "Microstructural Design of Ceramics by Control of Boundary Structure," 107th Am. Ceram. Soc. Annual Meeting, April 11-13 (2005) Baltimore, MD, U.S.A.
98. "Microstructural Design by Control of Grain Boundary Structure," 5th Pacific Rim International Conference on Materials (PRICM 5) Nov. 2-5 (2004), Beijing, China.

99. "Distribution of Liquid and Grain Boundary Mobility in Polycrystalline Ceramics," 3rd Inter. Sysmp. on the Science of Engineering Ceramics, EnCera 04, Oct. 31-Nov. 3 (2004) Osaka, Japan.
100. "Densification Kinetics and Sintering Diagram at Final Stage Sintering," Powder Metallurgy World Congress and Exhibition, PM 2004, Oct. 17-21 (2004) Vienna, Austria. **(Keynote)**
101. "Liquid Distribution and Grain Growth in Ceramics," Inter. Symp. on Synthesis, Processing and Applications of Advanced Ceramics in Honor of Prof. K. Komeya, Sept. 5-7 (2004) Kobuchizawa, Japan.
102. "Use of Liquid Film Migration for Measuring Reduction Kinetics and Chemical Diffusivities in Nb_2O_5-Doped $SrTiO_3$," 9th Asian Conference on Solid State Ionics (ACSSI-9), June 6-11 (2004) Jeju, Korea.
103. "Interface Structure and Microstructural Development in Polycrystalline Ceramics," 1st International Workshop for Advanced Ceramics, Nov. 7-8 (2003) Atami, Japan
104. "Application of Diffusion Induced Grain-Boundary Migration for Improving Mechanical Properties of Ceramics" IUMRS-ICAM 2003 (8th IUMRS International Conference on Advanced Materials) Oct. 8-13 (2003) Yokohama, Japan
105. "Nanostructure Control of Interface and Microstructure Development in Titanates," 5th International Meeting of Pacific Rim Ceramic Societies, Sept. 29-Oct. 2(2003) Nagoya, Japan
106. "Densification at Final Stage Sintering: Lattice and Grain Boundary Diffusion," "Sintering 03"(The 3rd International Conference on the Science, Technology and Application of Sintering) Sept. 15-17 (2003) University Park, Pennsylvania, U.S.A. **(Keynote)**
107. "Effect of Lattice Defects on Interface Morphology and Grain Growth in $SrTiO_3$," International Workshop on Ceramic Interfaces: Properties and Applications V, Oct. 21-25 (2001) Tsukuba, Japan.
108. "Mechanisms of Grain Growth in a Liquid Matrix: Correlation with Grain Shape", International Symposium on Recent Progress in Powder Metallurgy, Nov. 20 (2000), Kyoto, Japan.
109. "Interface Morphology and Grain Growth in Titanates," Austceram 2000, June 25-28 (2000) Sydney, Australia.
110. "Control of Interface Migration in Polycrystals in Chemical Inequilibrium : A New Opportunity to Improve Physical Properties of Ceramics," 7th International Conference on Ceramic Processing Science, May 15-18 (2000), Nagoya, Japan
111. "Liquid-Phase Sintering: Grain Growth Induced Densification," "Sintering 99" (The 2nd International Conference on the Science, Technology, and Application of Sintering) Nov. 1-3 (1999) University Park, Pennsylvania, U.S.A. **(Keynote)**
112. "Pore Filling Theory and Microstructure Development during Liquid Phase Sintering," Seminar lecturer "Fundamentals of Sintering," at 1998 Powder Metallurgy World Congress and Exhibition, Oct. 18-22 (1998) Granada, Spain
113. "Pore Filling Theory of Liquid Phase Sintering," CIMTEC98 (9th International Conference on Modern Materials and Technology), June 14-19 (1998) Florence, Italy.
114. "Mechanism and Control of Interface Migration in Strontium Titanate during Infiltration of Oxide Melts," International Workshop on Ceramic Interfaces: Properties and Applications III, Cairns, July 10-13 (1996).
115. "Interface Instability in Alumina under Chemical Inequilibrium," JFCC International Workshop on Fine Ceramics 96, March 15-16 (1996) Nagoya, Japan
116. "Theoretical Analysis of Final-Stage Liquid-Phase Sintering," "Sintering 95" (The 1st International Conference on the Science, Technology, and Application of Sintering) Sept. (1995) University Park, Pennsylvania, U.S.A.
117. "Interface Instability of Oxides under Chemical Inequilibrium," Am. Ceram. Soc. 97th Annual Meeting and Exposition, April 30-May 3, (1995) Cincinnati, OH, U.S.A
118. "Phase Transformation and Microstructure Development in Silicon Nitride Based Materials," International Union of Materials Research Societies—International Conference on Advanced Materials '93, Tokyo, Japan, Aug. 31-Sep. 5 (1993) (Materials Research Society of Japan).
119. "An Analysis of the Final Stage Liquid Phase Sintering," International Workshop on Sintering Mechanisms and Sintering Materials, Osaka, Japan, July 16 (1993) (Japan Society of Powder and Powder Metallurgy).
120. "Phase Transformation and Grain Growth during Liquid Phase Sintering of Si_3N_4 Ceramics," 1st International Symposium on the Science of Engineering Ceramics, Koda, Japan (A Memorial Symposium of the 100th Anniversary of the Ceramic Society of Japan), Oct. 21-23 (1991).
121. "Entrapped Gases and Densification during Sintering," Shanghai Symposium and Exhibition on New Ceramics, Shanghai, China, April 16-20 (1991).

At Other Conferences and Workshops

1. "Boundary migration and microstructural evolution: the mixed control mechanism of atom transport," Inter. Seminar Series on Microstructure of Materials, Feb. 3 (2022) World-wide on-line presentation.
2. On-line "Lectures on Sintering" to graduate students of Harbin Institute of Technology, July 12, 14, 19, 21, 28 (2021)

3. "Grain Growth and Microstructural Evolution: an Enduring Subject in Ceramic Science and Engineering," 2018 Korean Ceramic Society Fall Meeting, Nov. 14-16 (2018) Seoul, Korea **(2018 Sung-Ok Prize Memorial Lecture).**
4. "Principle of Microstructural Evolution and Solid-state Conversion of Single Crystals," 2018 Korean Powder Metallurgy Institute Fall Meeting, Nov. 12-14 (2018) Busan, Korea.
5. "Interface effect as an emerging issue in sintering fundamentals," Workshop on Emerging Technologies for High Performance Ceramics, Sept. 12-14 (2018) Hohhot, China.
6. "Sintering Fundamentals: Current Understanding and Future Research Directions," Inter. Symposium on Innovation in Materials Processing, Nov. 1-3 (2017) Jeju, Korea.
7. "Why is the Faceted Shape of Abnormal Grains Maintained during Their Growth?" International Workshop on Sintering and Microstructural Evolution in Ceramics," Aug. 27-29 (2015) Daejeon, Korea.
8. "Sintering: Boundary Structure-Dependent Microstructural Evolution," Spring Meeting of the Korean Powder Metallurgy Institute, April 2-4 (2015) Kyoungju, Korea. (**2015 Chang Sung Prize Memorial Lecture**)
9. "Tailoring of Materials Microstructure: Principles and Application," Annual Meeting of the Daeduk Gyorhuwhoe, the Korean Academy of Science and Technology, Feb. 4 (2015) Daejeon, Korea.
10. "Strategies for Suppressing Abnormal Grain Growth during Liquid Phase Sintering: Case of Cemented Carbides," 2013 Fall Meeting of the Korean Powder Metallurgy Institute, Oct. 30 - Nov. 2 (2013) Busan, Korea.
11. "How does Microstructure Evolve in Perovskites," New Materials Forum of Samsung Tech Conference 2012, Nov. 8 (2012) Yongin-si, Korea
12. "Interface Structure and Microstructural Evolution in Polycrystals," 2011 Spring Meeting of the Korean Institute of Metals and Materials, April 21-22 (2011) Daegu, Korea. **(Korea Engineering Prize Lecture).**
13. "Interface Structure and Microstructural Evolution in Ceramics," 2010 Fall Meeting of the Korean Ceramic Society, Oct. 21-22 (2010) Jeju, Korea. **(Plenary)**
14. "Strategies for Suppressing Abnormal Grain Growth in Cemented Carbides," Engineering Ceramics Symposium 2010, Korean Ceramic Society, Aug. 19-20 (2010) Kyeongju, Korea.
15. "Microstructural Evolution in Ceramics with Control of the Interface Structure," Spring Meeting of the Korean Ceramic Society, April 23-24 (2009), Pohang, Korea
16. "Microstructure Control in Perovskites by Use of Interface Structure Transition" 5th Symposium on High Dielectric Materials, Feb. 8-10 (2009) Muju, Korea. **(Plenary)**
17. "Microstructural Evolution by Boundary Structural Transition in Ceramics," Japan-Korea Conference on Advanced Science and Technology, Oct. 24-25 (2008), Tokyo, Japan.
18. "Control of Nonstationary Grain Growth: Calculation and Experiments," 6th US-Korea Workshop on Nanostructured Materials, June 4-5 (2007) Seoul, Korea.
19. "Nanostructure Control of Interface and Microstructural Design of Ceramics," 5th US-Korea Workshop on Nanostructured Materials, Aug. 8-9 (2006) UCLA, LA, USA.
20. "Control of Interface Structure for Microstructural Design," Annual Meeting of Korean Institute of Metals and Materials, Oct. 27-28 (2005), Seoul, Kintex.
21. "Control of Interface Structure for the Development of Nanostructured Materials," 4th US-Korea Workshop on Nanostructured Materials and Nanomanufacturing, April 25-26 (2005), Seoul, Korea
22. "Microstructural Design of Ceramics by Control of Boundary Structure," 2005 Spring Meeting of the Korean Ceramic Society, April 22-23 (2005) Seoul, Korea
23. "Liquid Phase Sintering : Grain Growth-Induced Densification," 2005 Spring Meeting of the Korean Powder Metallurgy Institute, April 8-9 (2005) Bucheon, Korea
24. "Nanostructure Control of Interface and Microstructural Design in Polycrystalline Materials," Korea-Mexico Symposium on Advanced Materials, Feb. 23-26 (2005) San Luis Potosi, Mexico.
25. "Nanostructure Control of Interface and Microstructural Design" Powder Materials Symposium in honor of Prof. In-Hyung Moon, Nov. 13 (2004) Yongpyeong, Korea
26. "Lattice Defect Formation and Grain Growth in Polycrystals" 2002 International Nano-Ceramic/Crystals Forum, Hanyang University (Seoul Korea) Aug. 12-15, 2002
27. "Control of Grain Boundary Migration and Improvement of Physical Properties in Ceramics" 3rd KIM-JIM Joint Symposium (Korea University, Seoul, Korea) Oct. 26-27, 2001
28. "Grain Boundary Faceting and Abnormal Grain Growth," Workshop on "Solid State Crystal Growth of Relaxor Ferroelectrics," sponsored by DARPA and AFOSR, Feb. 17 (1999) Washington D.C., U.S.A

In addition, several invited talks at National Conferences in the period of 1984 - 1998, including those at Conferences of the Korean Institute of Metals and Materials (3 times), Korean Ceramic Society (1), Korean MRS (1), Korean Powder Metallurgy Institute (3).

At Academic and Research Institutions

1. “What we should consider for full densification when sintering,” Changwon University, Jan. 13 (2022) On-line presentation
2. “Understanding of materials microstructure,” Chonnam University, Oct. 8 (2021) On-line presentation
3. On-line “Lectures on Sintering” to graduate students of Harbin Institute of Technology, July 12, 14, 19, 21, 28 (2021)
4. “Can we tailor materials microstructure? (PRINCIPLE?),” Samsung Electromechanics Co., Dec. 7 (2018) Suwon, Korea.
5. “Sintering and Microstructural Evolution (PRINCIPLE?),” Powder Metallurgy Short Course for Students and Engineers, Nov. 21 (2018) Changwon, Korea.
6. “Strategies and Practices for Suppressing Abnormal Grain Growth during Liquid Phase Sintering,” Harbin Institute of Technology, Nov. 5, (2018) Harbin, China.
7. “Understanding Sintering Fundamentals,” Harbin Institute of Technology, Nov. 4 (2018), Harbin China
8. “Strategies and Practices for Suppressing Abnormal Grain Growth during Liquid Phase Sintering,” Univ. Valenciennes, July 12 (2018) Maubeuge, France
9. “Can We Tailor Materials microstructure? (PRINCIPLE?),” Institute of Matal Research (IMR), Dec. 15 (2017) Shenyang, China
10. “Can We Tailor Materials microstructure? (PRINCIPLE?),” Postech., Dec. 6 (2017), Pohang, Korea
11. “Tailoring Microstructure: a Key to Developing Materials,” Busan National Univ., May 22 (2017) Busan, Korea
12. “How Can We Tailor Materials Microstructure?” Seoul National University, Nov. 25 (2016) Seoul, Korea.
13. “How Can We Tailor Materials Microstructure? (PRINCIPLE?)” Juelich Research Center, July 13 (2016) Juelich, Germany.
14. “Materials Engineering and Microstructure,” Kyungnam University, Apr. 26 (2016) Changwon, Korea.
15. “Understanding of Materials Microstructure: The Key to Materials Development,” Kyungsang University, Mar. 23 (2016) Jinju, Korea.
16. “Sintering of Ceramics by Control of Grain Boundary Structure,” Tsinghua University, Oct. 30 (2015) Beijing, China.
17. “Understanding of Materials Microstructure: the key to materials Development,” 2015 2nd Gyeongnam Science Forum, Oct. 27 (2015) Jinju, Korea.
18. “What governs microstructural evolution in polycrystalline materials?” Argonne National Lab., Oct. 8 (2015) Chicago, U.S.A.
19. “What governs microstructural evolution in polycrystalline materials?” KAIST, Sept. 8 (2015) Daejeon, Korea.
20. “Solid-State Conversion of Piezoelectric Single Crystals,” Instituto de Ceramica y Vidrio, CSIC, June 29 (2015) Madrid, Spain.
21. “What Governs Microstructural Evolution during Sintering,” Sandia National Lab., Oct. 10 (2014) Albuquerque, USA.
22. “How does Densification Occur during Liquid Phase Sintering,” Sandivik, Sept. 19 (2014) Stockholm, Sweden.
23. “Normal and Abnormal Grain Growth in Polycrystals: Interface Structure-Dependent Grain Growth Behavior,” Stockholm Univ., Sept. 18 (2014) Stockholm, Sweden.
24. “How does Densification Occur during Liquid Phase Sintering,” Aveiro Univ., Sep. 4 (2014) Aveiro, Portugal.
25. “Normal and Abnormal Grain Growth in Polycrystals: Interface Structure-dependent Grain Growth Behavior,”Aveiro Univ., Sep. 2 (2014) Aveiro, Portugal.
26. “Normal and Abnormal Grain Growth in Polycrystals: Interface Structure-dependent Grain Growth Behavior,” Karlsruhe Institute of Technology (KIT) June 26 (2014) Karlsruhe, Germany.
27. “Normal and Abnormal Grain Growth in Polycrystals: Interface Structure-dependent Grain Growth Behavior,” ETH Zürich, June 23 (2014) Zürich, Swiss.
28. “Normal and Abnormal Grain Growth in Polycrystals: Interface Structure-dependent Grain Growth Behavior,” Institut National Politechnique de Grendsle (INPG), June 17 (2014) Grenoble, France.
29. “How does Densification Occur during Liquid Phase Sintering,” Institut National Politechnique de Grendsle (INPG), June 18 (2014) Grenoble, France.
30. “Normal and Abnormal Grain Growth in Polycrystals: Interface Structure-dependent Grain Growth Behavior,” Samsung Electromechanics, Nov. (2013) Suwon, Korea.
31. “Normal and Abnormal Grain Growth in Polycrystals,” Samsung Advanced Institute of Technology, Oct. 28 (2013), Suwon, Korea.
32. “Normal and Abnormal Grain Growth in Polycrystals,” Josef Stephan Institute, Aug. 29 (2013) Ljublyana, Slovenia.

33. “Strategies for Suppressing Abnormal Grain Growth in Cemented Carbides,” Yokohama National University, Aug. 31 (2012) Yokohama, Japan.
34. “Normal and Abnormal Grain Growth in Ceramics,” Univ. Rennes I, June 7 (2012) Rennes, France.
35. “Normal and Abnormal Grain Growth in Ceramics,” Belgium Ceramic Research Center, June 11 (2012) Mons, Belgium.
36. “Normal and Abnormal Grain Growth in Polycrystalline Materials,” Postech, Mar. 29 (2012) Pohang, Korea.
37. “How does Microstructure Evolve in Polycrystals,” Korea Institute of Materials and Science, Aug. 11 (2011) Changwon, Korea
38. “Microstructural Evolution in Ceramics with Control of the Interface Structure,” Aachen University, May 5 (2011) Aachen, Germany.
39. “Microstructural Evolution during Sintering of Ceramics,” Samsung Corning Precision Materials, April 5 (2011) Daegu, Korea.
40. “Interface Structure and Microstructural Evolution in Polycrystals,” Yonsei Univ., Sept. 17 (2010) Seoul, Korea.
41. “Microstructural Evolution in Polycrystals with Control of the Interface Structure,” Dept. Materials Science and Engineering, Sabanci Univ., May 27 (2010) Istanbul, Turkey.
42. “Microstructural Evolution in Polycrystals with Control of the Interface Structure,” Dept. Materials Science and Engineering, UCLA, April 8 (2010), LA, U.S.A.
43. “Microstructural Evolution during Sintering with Control of the Interface Structure,” TU (Technische Universität) Berlin, June 18 (2009) Berlin, Germany.
44. “Microstructural Evolution during Sintering with Control of the Interface Structure,” Fraunhofer Geselschaft, IFAM, June 16 (2009) Dresden, Germany.
45. “Sintering and Tailoring Microstructure; Basis and Application of Sintering,” Powder Metallurgy Short Course for Students and Engineers, Nov. 27-28 (2008) Changwon, Korea.
46. “Tailoring Polycrystalline Microstructure by Use of Interface Structure Transition,” Dept. of Chemical Engineering and Materials Science, University of California at Irvine, Nov. 21 (2008) Irvine, U.S.A.
47. “Fundamentals of Sintering,” R&D Department, Glidewell Laboratories, Nov. 20 (2008) Newport Beach, U.S.A.
48. Fundamentals of Microstructure; Fundamentals of Sintering; Sintering and Tailoring Microstructure,” Iljin Diamond Co. Oct. 13 and 20 (2008).
49. “Microstructural Evolution in Ceramics by Interface Structure Transition,” Research Center, Nippon Steel Corp., Aug. 8 (2008) Futtsu, Japan.
50. “Microstructural Evolution in Ceramics by Interface Structure Transition,” Inst. Engineering Innovation University of Tokyo, July 31 (2008) Tokyo, Japan.
51. “Microstructural Evolution in Ceramics by Interface Structure Transition,” AIST-Nagoya, July 29 (2008) Nagoya, Japan
52. “Microstructural Evolution in Ceramics by Interface Structure Transition,” Japan Fine Ceramics Center, July 28 (2008) Nagoya, Japan.
53. “Microstructural Evolution in Ceramics by Interface Structure Transition,” Graduate School of Frontier Sciences, University of Tokyo, July 15 (2008) Kashiwa, Japan.
54. “Microstructural Evolution in Ceramics by Interface Structure Transition,” Nano Ceramics Center, NIMS, July 10 (2008) Tsukuba, Japan
55. “Microstructural Evolution in Ceramics by Interface Structure Transition,” Secure Materials Center, Tokyo Institute of Technology, June 26 (2008) Nagatsuda, Japan.
56. “Microstructural Design via Control of Interface Structure and Defects,” Samsung Electro-Mechanics, April 21 (2008) Suwon, Korea.
57. “Principles of Microstructural Design,” Powder Metallurgy Short-Course for Students and Engineers, Oct. 10 (2007) Changwon, Korea.
58. “Basis and Application of Sintering,” Powder Metallurgy Short-Course for Students and Engineers, Oct. 10 (2007) Changwon, Korea.
59. “Microstructural Design in Polycrystals via Control of Interface Structure and Defects,” Dec. 12 (2006) Nanyang University, Singapore.
60. “Microstructural Design in Polycrystals via Control of Interface Structure and Defects,” Dec. 10 (2006) IMRE, Singapore.
61. “Principles of Microstructural Design,” Powder Metallurgy Short-Course for Students and Engineers, Nov. 29 (2006) Suanbo, Korea.
62. “Basis and Application of Sintering,” Powder Metallurgy Short-Course for Students and Engineers, Nov. 29 (2006) Suanbo, Korea.
63. “Microstructural Design via Control of Interface Structure,” University of Tokyo, Nov. 11-15 (2005), Japan.

64. “Basis and Application of Sintering: Microstructure Development and Control,” Powder Metallurgy Short-Course for Students and Engineers; Ulsan Univ., Nov. 4 (2005) Korea.
65. “Liquid Phase Sintering: Grain Growth-Induced Densification,” Fachgebiet Nichtmetallische Anorganische Werkstoffe, Darmstadt University, June 28 (2005) Germany.
66. “Control of Interface Structure for Microstructure Design,” Dept. of Materials, Oxford Univ., June 27 (2005) U.K.
67. “Interface Structure and Microstructural Design in Polycrystalline Materials,” Dong-A Univ., July 9 (2004) Busan, Korea.
68. “Interface Structure and Microstructural Design in Polycrystalline Materials,” Seoul National Univ., May 28 (2004) Seoul, Korea.
69. “Interface Structure and Microstructural Design in Polycrystalline Materials,” Hanyang Univ., May 6 (2004) Ansan, Korea.
70. “Control of Interface Structure and Chemistry in Polycrystalline Materials,” University of Tokyo, May 21 (2003) Japan.
71. “Interface Engineering for the Development of Materials” Max-Planck-Institut für Metallforshung (Stuttgart) Sept. 5 (2002) Germany.
72. “Interface Engineering and Materials Development” Australian Nuclear Science and Technology Organization (Menai) May 30 (2002) Australia.
73. “Interface Engineering and Materials Development” Division of Materials, University of Queensland (Brisbane) May 20 (2002) Australia.
74. “Interface Engineering and Materials Development” Department of Materials Engineering, University of Wollongong (Wollongong) May 3 (2002) Australia.
75. “Control of Interface Structure and Chemistry: The Key to Materials Development” School of Physics and Materials Engineering, Monash University (Melbourne) Jan. 31 (2002) Australia.
76. “Control of Interface Structure and Chemistry: The Key to Materials Development” Ian Wark Research Institute, University of South Australia (Adelaide) Jan. 30 (2002) Australia.
77. “Interface Engineering: Technology for Materials Development” Synergy Materials Research Center, National Institute of Advanced Industrial Science and Technology (Nagoya) Dec. 6 (2001) Japan.
78. “Interface Engineering of Materials” University of New South Wales (Sydney) Nov. 13 and 20 (2001) Australia.
79. “Effect of Lattice Defects on Interface Morphology and Grain Growth in Titanates” Joint Workshop of Nano-structured Materials Research Groups, Hanyang University (Ansan) Oct. 18 (2001) Korea.
80. “Development of Materials through Control of Interface Structure and Chemistry” Changwon National University (Changwon) June 8 (2001) Korea.
81. “Development of Materials through Control of Interface Structure and Chemistry” Korea Institute of Machinery and Metals (Changwon) June 8 (2001) Korea.

In addition, more than 25 invited talks at other institutions in the period of 1986 - 2000, including those at Tohoku University ('86), National Institute for Research in Inorganic Materials ('86), University of Leeds ('87), Osaka University ('91), Tokyo Institute of Technology ('91), National Institute of Standards and Technology ('95), Ecole des Mines de Paris ('97), Univ. Pennsylvania ('99), Korea Institute of Machinary and Metals (3 times), Seoul National University (3), Postech (2), Kyungbook National University (1), Ulsan University (2), Korea University (1), Kyungsang National University (1), Changwon National University (1), Busan National University (1), Dong-Suh Industries Co. (1), and Samsung Advanced Institute of Technology (1).

List of Publications of Suk-Joong L. Kang

Books:

1. "Sintering: Densification, Grain Growth and Microstructure" (ISBN 9780750663854), Elsevier, Oxford (2005), "소결: 치밀화, 입자성장과 미세조직" (ISBN 89-87603-00-8-93530, in Korean), Kwahakmoonwha-Sa, Daejeon (1997).
2. "Ceramic Interfaces 2" (ISBN 9781861251183), H.-I. Yoo and S.-J. L. Kang (eds), The University Press, Cambridge (2001).
3. "Powder Materials Technology (in Korean)" S.-J. L. Kang and S.-Y. Jang (eds), Korean Powder Metallurgy Institute, Seoul (2004).
4. "Theory and Practice of Sintering," Chap. 6 in Powdeer Materials and Technology, S.-J. L. Kang and S.-Y. Jang (eds), Korean Powder Metallurgy Institute, Seoul (2004).
5. "Zeitschrift für Metallkunde," vol. 96, no.2, S.-J. L. Kang and S. B. Lee (eds), Carl Hanser Verlag, München (2005)
6. "Progress in Powder Metallurgy," (ISBN-13 9780878494194) D. Y. Yoon, S.-J. L. Kang, K. Y. Eun and Y. S. Kim (eds), Trans. Tech. Pub., Zürich (2007).
7. "Recrystallization and Grain Growth III" (ISBN-13 9780878494439) S.-J. L. Kang, M. Y. Huh, N. M. Hwang, H. Homma, K. Ushioda and Y. Ikuhara (eds), Trans. Tech. Pub., Zürich (2007).
8. "Advances in Sintering Science and Technology II," (ISBN-9761118273753) Ceramic Transactions vol. 232, S.-J. L. Kang, R. Bordia, E. Olevsky and D. Bouvard (eds), Wiley, Hoboken, NJ (2012).
9. "Liquid Phase Sintering" Chapter 5 in "Sintering of Advanced Materials" pp. 110-129, Z. Z. Fang (ed), Woodhead Pub. Ltd (2010).
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