

INVITED PRESENTATIONS (over 120)

1. “Growth of ferroic metal oxide films with desired properties by polymer-assisted deposition,” (virtual presentation) 5th IEEE Electron Devices Technology and Manufacturing (EDTM) Conf. 2021, Chengdu, China, April 8 - 11, 2021.
2. “Tunable magnetotransport properties of epitaxial nanocomposite films,” MRS Fall Meeting, Boston, MA, Dec. 1 - 6, 2019.
3. “New era of innovation in discovery and development of advanced materials,” IEEE Buffalo Section, Buffalo, NY, Nov. 14, 2019.
4. “Formation of conducting interface in amorphous/crystalline TiO₂ homojunction,” the 5th International Conf. on Adv. Electromaterials, Jeju, Korea, Nov. 5 - 8, 2019.
5. “Interplay between Interface and functionalities in epitaxial nanocomposite films,” McMaster University, Hamilton, Ontario, Canada, Sept. 23, 2019.
6. “Epitaxial growth of complex oxide films with desired properties by a polymer-assisted deposition,” the ICCGE-19/OMVPE-19 Conf. on Crystal Growth & Epitaxy, Keystone, CO, July 28 - Aug. 2, 2019.
7. “Interface engineering for tunable properties in epitaxial nanocomposite films,” University of Virginia, Charlottesville, VA, April 1, 2019.
8. “Growth and characterization of epitaxial nanocomposite films,” (*Plenary talk*) European Advanced Materials Congress, Stockholm, Sweden, Aug. 20 - 23, 2018.
9. “Epitaxial nanocomposite: A pathway for tunable functionalities,” Center for Nanoscale Materials, Argonne National Laboratory, Argonne, Chicago, IL, July 25, 2018.
10. “Nucleation and growth of epitaxial films based on a polymer-assisted deposition,” Los Alamos National Laboratory, Los Alamos, NM, July 10, 2018.
11. “A pathway for tunable functionalities in metal oxide films,” Yonsei University, Seoul, Korea, June 29, 2018.
12. “Synthesis of electronic materials via a chemical solution approach,” Collaborative Conf. on Materials Research (CCMR) 2018, Incheon, Korea, June 25 - 29, 2018.
13. “Epitaxial nanocomposite complex metal oxide films: A pathway for exotic properties,” (*Plenary talk*) The 10th International Conf. on Adv. Mater. & Devices (ICAMD), Jeju, Korea, Dec. 5 - 8, 2017.
14. “Critical role of interface strain in physical properties of epitaxial nanoscaffolding ferroic films,” MRS Fall Meeting, Boston, MA, Nov. 26 - Dec. 1, 2017.
15. “Toward tunable functionalities using epitaxial nanoscaffolding films,” University of Alabama at Birmingham, Birmingham, AB, Oct. 6, 2017.
16. “Oxygen vacancy induced changes in structural, electronic, and magnetic properties of perovskite metal-oxide films,” Collaborative Conf. on Materials Research (CCMR) 2017, Jeju Island, Korea, June 26 - 30, 2017.
17. “Interface engineering to control functionalities of epitaxial nanocomposite films,” Alfred University, Alfred, NY, April 27, 2017.

18. "Polymer-assisted deposition: A simple process for a wider range of electronic materials," 253rd American Chemical Society National Meeting & Exposition, San Francisco, CA, April 2 - 6, 2017.
19. "Rational design and control of functionalities in epitaxial nanocomposite films," Boise State University, Boise, ID, April. 7, 2017.
20. "Tuning functionalities in nanocomposite metal-oxide films by strain engineering," Electronic Materials and Applications, Orlando, FL, Jan. 18 - 20, 2017.
21. "Nanomaterials integration: A pathway to materials design and technological innovation," (*Keynote speech*) Workshop of High-energy and Ultrafast x-ray Imaging Technologies and Applications, Santa Fe, NM, Aug. 2 - 3, 2016.
22. "The roles of disorders, interfaces, and heterogeneity on the functionalities of epitaxial films," Q-mat Seminar, Los Alamos National Laboratory, Los Alamos, NM, April 26, 2016.
23. "Synthesis and characterization of epitaxial nanocomposite films: Effects of interface on the functionalities," Electronic Materials and Applications, Orlando, FL, Jan. 20 - 22, 2016.
24. "Role of interfaces on competing interactions of ferroic films," MRS Fall Meeting, Boston, MA, Nov. 29 - Dec. 4, 2015.
25. "Nanomaterials integration for multifunctionalities: A pathway to materials design and innovation," Materials Research Day at Univ. of Texas, San Antonio, TX, Aug. 24, 2015.
26. "Control and manipulation of competing interactions of ferroic films," International Mater. Res. Congress, Cancun, Mexico, Aug. 16 - 20, 2015.
27. "The role of interfaces on the functionalities of complex metal-oxide films," Quantum Matter Workshop, Santa Fe, NM, May 18 - 21, 2015.
28. "Understanding, exploiting, and controlling competing interactions of complex metal-oxide films," University at Buffalo, Buffalo, NY, March 16, 2015
29. "Effect of interfaces on competing interactions of functional complex metal-oxides," University of Connecticut, Storrs, CT, Oct. 17, 2014.
30. "Microstructural evolution in ion irradiated heteroepitaxial dielectric films," the Mater. Sci. & Technol. 2014 Conf. & Exhibition, Pittsburgh, PA, Oct. 12 - 16, 2014.
31. "Effect of interfaces on ferroic properties of composite films," Int'l Symp. on Emerging Multifunctional & Bio-Directed Mater., San Antonio, TX, Oct. 10 - 11, 2104.
32. "Pushing the limits of polymer-assisted deposition for a wide range of electronic materials," (*Distinguished lecture*) University at Buffalo, Buffalo, NY, Oct. 1, 2014.
33. "Polymer-assisted deposition: one simple process, a large number of electronic materials," Summer Lecture Series, Laboratory's National Security Education Center, Los Alamos National Laboratory, Los Alamos, NM, July 18, 2014.
34. "Electronic materials synthesized by a polymer-assisted deposition," University of Illinois at Urbana Champaign, Urbana, IL, May 2, 2014.
35. "Self-assembled epitaxial nanocomposite films: their strain control and functionalities," New Mexico Tech, Socorro, NM, March 7, 2014.

36. "Polymer-assisted deposition for a wide range of epitaxial ferroic metal-oxide films," Electronic Materials and Applications, Orlando, FL, Jan. 22 - 24, 2014.
37. "Nucleation and growth of epitaxial films using polymer-assisted deposition," University of Texas at San Antonio, San Antonio, TX, Nov. 7, 2013.
38. "Toward tunable functionalities using epitaxial nanoscaffolding films," the Mater. Sci. & Technol. Conf. & Exhibition, Montreal, Quebec, Canada, Oct. 27 - 31, 2013.
39. "Carbon nanomaterials and their derived nanocomposites for improved functionalities," 24th Modern Engineering & Technology Seminar (METS 2012), Taipei, Taiwan, Nov. 11 - 14, 2012.
40. "Designing and understanding enhanced functionalities in epitaxial nanocomposite metal-oxide films," Materials Science & Technology Conference and Exhibition - MS&T'12, Pittsburgh, Pennsylvania, Oct. 7 - 11, 2012.
41. "Polymer-assisted deposition: one simple process, a vast number of materials," Workshop on Advanced Manufacturing, Materials Design Institute, Los Alamos National Laboratory, Los Alamos, NM, July 25 - 26, 2012.
42. "Chemical solution deposition of electronic materials," Institute of Electrical Engineering, Chinese Academy of Sciences, Beijing, China, July 2, 2012.
43. "Effect of lattice strain on the physical properties of complex metal-oxide films," Institute of Semiconductors, Chinese Academy of Sciences, Beijing, China, June 29, 2012.
44. "Synthesis and characterization of thin films by a chemical solution deposition," Texas A&M University, College Station, TX, Feb. 9, 2012.
45. "Synthesis and characterization of metal-oxide, -nitride, and -carbide thin films deposited by a polymer assisted deposition," (*Plenary talk*) 15th US-Japan Seminar on Dielectric and Piezoelectric Ceramics, Kagoshima, Japan, Nov. 6 - 9, 2011.
46. "Effect of interface on the transport properties of superconducting nanocomposites," the Superconductivity at Oxide Interfaces, The Kavli Royal Society International Center, Chicheley Hall, Buckinghamshire, UK, Sept. 14 - 15, 2011.
47. "Understanding, exploring, and controlling competing interactions in complex oxides," the New Science of Oxide Interfaces, The Royal Society, London, UK, Sept. 12 - 13, 2011.
48. "Chemical solution deposition of thin film electronic materials," Osaka University, Osaka, Japan, Nov. 18, 2010.
49. "Growth and characterization of thin film electronic ceramic materials by polymer-assisted deposition," 3rd International Congress on Ceramics, Osaka, Japan, Nov. 14 - 18, 2010.
50. "Pushing the limit of IBAD template for high performance coated conductors," Joint International Conference on the 7th Asian Meeting on Ferroelectricity and the 7th Asian Meeting on Electroceramics, Jeju, Korea, June 28 - July 1, 2010.
51. "Synthesis and characterization of nanocomposite films," MRS Spring Meeting, San Francisco, CA, April 5 - 9, 2010.
52. "Lattice strain and physical properties of self-assembled epitaxial nanocomposite films," University of Texas at Arlington, Arlington, TX, Feb. 17, 2010.

53. "Tunable lattice strain in self-assembled epitaxial nanocomposite films," New Mexico State University, Los Cruces, NM, Feb. 12, 2010.
54. "Control of lattice strain and electrical properties of epitaxial nanocomposite films," Electronic Materials and Applications 2010, Lake Buena Vista, FL, Jan. 20 - 22, 2010.
55. "Synthesis of electronic materials by polymer-assisted deposition," Konkuk University, Seoul, Korea, Nov. 12, 2009.
56. "Synthesis of electronic materials by a polymer-assisted deposition," International Workshop on Piezoelectric Materials & Applications in Actuators & International Symposium on Electroceramics, Jeju, Korea, Nov. 8 - 11, 2009.
57. "Synthesis of electronic materials by polymer-assisted deposition," Seoul National University, Seoul, Korea, Nov. 12, 2009.
58. "Electronic materials by a polymer-assisted deposition," Xian Jiaotong Univ., Xian, China, Aug. 28, 2009.
59. "Epitaxial nanocomposite films: their strain control and electrical properties," 12th International Meeting on Ferroelectricity and 18th IEEE International Symposium on Applications of Ferroelectrics, Xi'an, China, Aug. 23 - 27, 2009.
60. "Growth and application of ferroelectric thin films," Tutorial Lecture at the 12th International Meeting on Ferroelectricity and 18th IEEE International Symposium on Applications of Ferroelectrics, Xi'an, China, Aug. 23, 2009.
61. "Epitaxial growth of metal-oxide films," Symposium on Correlated Electron Physics, Santa Fe, NM, Aug. 25 - 28, 2008.
62. "Polymer-assisted deposition: an alternative approach to epitaxial growth of metal-oxide films," Department of Physics, The Ohio State University, Columbus, OH, Oct. 16, 2008.
63. "Epitaxial growth of metal-oxide films," Symposium on Correlated Electron Physics, Santa Fe, NM, Aug. 25 - 28, 2008.
64. "Epitaxial growth of simple and complex metal-oxide films by a polymer-assisted deposition," Institute of Semiconductors, Chinese Academy of Science, Beijing, China, June 19, 2008.
65. "Superconducting films with high current carrying capability for 2-G conductors," General Research Institute for Nonferrous Metals, Beijing, China, June 18, 2008.
66. "Epitaxial growth of metal-oxide films by a polymer-assisted deposition," MRS International Materials Research Conf., Chongqing, China, June 9 - 12, 2008
67. "Self-assembled and vertically aligned nanocomposite films: their strain control and electrical properties," Univ. of Electronic Sci. & Technol. of China, Chengdu, China, June 2, 2008.
68. "Synthesis and characterization of metal-oxide films by a solution approach," Xian Jiaotong Univ., Xian, China, May 30, 2008.
69. "Polymer-assisted deposition of metal-oxide films," 17th International Symposium on the Applications of Ferroelectrics (ISAF), Santa Fe, New Mexico, Feb. 24 - 27, 2008.

70. "Epitaxial growth of metal-oxide films by a chemical solution method," Colloquium, Department of Materials Sci. & Eng., North Carolina State Univ., Raleigh, NC, Dec. 7, 2007.
71. "Manipulation of pinning properties in superconducting films through different approaches," Materials Science & Technology Conference and Exhibition - MS&T'07, Detroit, MI, Sept. 16 - 20, 2007.
72. "Novel approach to grow metal-oxide films for electronic devices," International Conference on Materials for Advanced Technologies (ICMAT), Singapore, July 1 - 6, 2007.
73. "Chemical solution approach for high quality metal-oxide films," Seminar Series on Energy Materials and Storage, Lujan Neutron Scattering Center, Los Alamos National Laboratory, Los Alamos, NM, May 24, 2007.
74. "A chemical solution method for the deposition of metal-oxide films," Department of Materials Science & Engineering, The Pennsylvania State University, University Park, PA, Nov. 2, 2006.
75. "Issues related to thickness dependent critical current density in high temperature superconducting films," Materials Science & Technology Conference and Exhibition - MS&T'06, Cincinnati, OH, Oct. 15 - 19, 2006.
76. "Metal-oxide films grown by a chemical solution deposition," Materials Science & Technology Conference and Exhibition - MS&T'06, Cincinnati, OH, Oct. 15 - 19, 2006.
77. "High quality superconducting films for coated conductors," Univ. of Electronic Sci. & Technol. of China, Chengdu, China, June 30, 2006.
78. "Nonlinear dielectric thin films for tunable microwave devices," Univ. of Electronic Sci. & Technol. of China, Chengdu, China, June 30, 2006.
79. "Functional metal-oxide films by polymer-assisted deposition," The E-MRS Spring Meeting (E-MRS - IUMRS - ICEM 06), Nice, France, May 29 - June 2, 2006.
80. "Structural and electrical/magnetic properties of metal-oxide films grown by polymer-assisted deposition," University of Cambridge, Cambridge, UK, May 24, 2006.
81. "Issues Related to the growth of thick high performance superconducting films," MRS Spring Meeting, San Francisco, CA, April 17 - 21, 2006.
82. "Multiferroic oxide films for device applications," Multiferroics Workshop, Lujan Neutron Scattering Center, Los Alamos National Laboratory, Los Alamos, NM, Nov. 8, 2005.
83. "Thickness dependent critical current density in high quality coated conductors," 6th Pacific Rim Conference on Ceramic and Glass Technology, Maui, HI, Sept. 11 - 16, 2005.
84. "Epitaxial growth of multiferroic films for device application," DARPA Workshop on Multiferroics & Magneto-Electric Heterostructures, Arlington, VA, June 30, 2005.
85. "Growth of metal-oxide films by polymer-assisted deposition," The New Mexico American Vacuum Society Chapter Symposium, Albuquerque, NM, May 23 - 25, 2005.
86. "Epitaxial growth of both simple and complex metal-oxide films by polymer-assisted deposition," 107th ACerS Annual Meeting, Baltimore, Maryland, April 18 - 21, 2005.

87. "Limiting factors for high performance second-generation coated conductors," Colloquium, Department of Electrical Eng. at State University of New York at Buffalo, Buffalo, NY, April 8, 2005.
88. "Buffer layers for coated conductors," Wire Development Workshop, St. Petersburg, FL, Jan. 19-20, 2005.
89. "Nonlinear dielectric for microwave applications – materials issues," International Microwave Symposium, Fort Worth, Texas, June 6 - 11, 2004.
90. "Superconducting films with high critical current density for coated conductors," 106th ACerS Annual Meeting, Indianapolis, Indiana, April 18 - 21, 2004.
91. "Effect of the surface and interface on the superconducting properties of REBa₂Cu₃O₇ films," 204th Meeting of Electrochemical Society, Orlando, FL, Oct. 12 - 17, 2003.
92. "Effects of strain on the dielectric properties of barium strontium titanate thin films," 204th Meeting of Electrochemical Society, Orlando, FL, Oct. 12 - 17, 2003.
93. "Nonlinear dielectric materials for high frequency electronic devices," Institute of Materials Research and Engineering, Singapore, Aug. 14, 2003.
94. "Barium strontium titanate for tunable microwave devices," School of Electrical & Electronic Eng., Nanyang Technological Univ., Singapore, Aug. 12, 2003.
95. "Growth and characterization of superconducting films for coated conductors," 105th ACerS Annual Meeting, Nashville, Tennessee, April 27 - 30, 2003.
96. "Growth and characterization of barium strontium titanate based thin films for tunable microwave devices," 105th ACerS Annual Meeting, Nashville, Tennessee, April 27 - 30, 2003.
97. "Structural and superconducting properties of rare-earth barium copper oxides," AFOSR HTS Coated Conductor Review, St. Petersburg, FL, Jan. 22-24, 2003.
98. "Issues of buffer layer on IBAD-MgO template for coated conductors," Wire Development Workshop, St. Petersburg, FL, Jan. 21-22, 2003.
99. "Deposition and characterization of superconducting ReBa₂Cu₃O₇ films," MRS Fall Meeting, Boston, Massachusetts, Dec. 2 - 6, 2002.
100. "Monolithic integration of high temperature superconductor with ferroelectric and ferrite for microwave devices," News, IEEE Council on Superconductivity, Oct. 2002 (*invited* www.ewh.ieee.org/tc/csc/).
101. "Materials issues for the optimization of barium strontium titanate thin film ferroelectric-based tunable microwave devices," Ferroelectric Workshop in Puerto Rico, San Juan, Puerto Rico, June 1 - 2, 2001.
102. "Optimization of dielectric and structural properties of Ba_{1-x}Sr_xTiO₃ films for tunable microwave devices," MRS Spring Meeting, San Francisco, CA, USA, April 16 - 20, 2001.
103. "Metal oxide thin films for electronic devices," Tutorial lecture at the MRS Spring Meeting, San Francisco, CA, USA, April 16-20, 2001.
104. "Structural and dielectric properties of BST films for tunable microwave devices," MRS Fall Meeting, Boston, Massachusetts, Nov. 27 - Dec. 1, 2000.

105. "Monolithic integration of metal-oxides with complimentary functionalities," American Superconductor, Westborough, MA, Sept. 11, 2000.
106. "Film thickness dependence of structural and superconducting properties in coated conductors," International Workshop on Superconductivity, Co-sponsored by ISTEK and MRS, Matsue-Shi, Shimane, Japan, June 19 - 22, 2000.
107. "Tunable microwave devices based on nonlinear dielectrics - materials issues," 102nd ACerS Annual Meeting, St. Louis, Missouri, April 30 - May 3, 2000.
108. "Integrated metal oxide thin films for electronic devices," Colloquium, MSE Department at University of Michigan, Detroit, MI, Nov. 5, 1999.
109. "Josephson junctions and SQUIDs based on different high-temperature superconducting thin films," Workshop on Electronic, Photonic, Electro-optical, and Electro-magnetic Materials, Redstone Arsenal, AL, Oct. 6 & 7, 1999.
110. "Alternative materials for ramp-edge junctions," International Workshop on Superconductivity, Co-sponsored by ISTEK and MRS, Kauai, HI, June 27 - 30, 1999.
111. "Dielectric thin films for electronic devices," Motorola, Albuquerque, NM, June 8, 1999.
112. "Integration of superconducting YBCO and nonlinear dielectric $Ba_{1-x}Sr_xTiO_3$ films with polycrystalline ferrite for tunable microwave devices," 101st ACerS Annual Meeting, Indianapolis, Indiana, April 25 - 28, 1999.
113. "Processing and application of superconducting YBCO thin and thick films," Midwest Superconductivity Consortium Summer Group Meeting and Summer School, Columbia, Missouri, July 29 - 31, 1998.
114. "Ag-doping YBCO on the improvement of junction and SQUID performance," Workshop of Flux, Quantum, and Mesoscopic Effects in Superconducting Materials and Devices, Santa Fe, New Mexico, Aug. 4 - 8, 1997.
115. "Integrated thin films for Josephson junctions, SQUIDs, and electrically tunable microwave devices," 99th ACerS Annual Meeting, Cincinnati, Ohio, May 4 - 7, 1997.
116. "Integrated thin film devices based on conductive oxides and nonlinear dielectric materials," School of Electronic and Informational Engineering, Xian Jiaotong University, Xian, China, Dec. 26, 1996.
117. "Material and processing development in the fabrication of edge-geometry SNS HTS junctions and DC SQUIDs," Dept. of Physics, Peking University, Peking, China, Dec. 9, 1996.
118. "Development and fabrication of ramp edge-geometry SNS HTS Josephson junctions and DC SQUIDs," Institute of Physics, Chinese Academy of Sciences, Peking, China, Dec. 9, 1996.
119. "Material and device engineering in the fabrication of edge-geometry SNS junctions and SQUIDs," TRW, Redondo Beach, CA, Jan. 5, 1996.
120. "Development and fabrication of high performance ramp-edge SNS junctions and SQUIDs," Los Alamos National Laboratory, Nov. 8, 1995.
121. "Thin film oxides and their related devices," NZ Applied Technologies Corporation, Woburn, MA, June 26, 1995.

122. "Research on high T_c superconducting devices in SUNY at Buffalo," Dept. of Electrical Eng., Kumamoto University, Kumamoto, Japan, May 10, 1993.
123. "RuO₂ thin film resistors," Ohmtek, Inc., Niagara Falls, NY, Aug. 15, 1991.
124. "Thin films for semiconductor/superconductor applications using magnetron sputtering," Dept. of Electrical Eng., Texas A&M University, College Station, TX, June 7, 1991.