US PATENTS (*50 issued with 16 licensed by US industry*)

1. P. Dowden and Q. X. Jia, "High temperature substrate heater for use in high and ultra-high vacuum systems," United States Patent No. 10,945,311, March 9, 2021.
2. X. J. Lü, J. Howard, L. Daemen, Y. S. Zhao, and Q. X. Jia, "Methods for growth of lithium-rich antiperovskite electrolyte films and use thereof," United States Patent No. 10,044,061, Aug. 7, 2018.
3. P. C. Dowden and Q. X. Jia, "Stabilizing laser energy density on a target during pulsed laser deposition of thin films," United States Patent No. 9,353,435, May 31, 2016.
4. J. L. Driscoll, S. B. Lee, and Q. X. Jia, "Memristor comprising film with comb-like structure of nanocolumns of metal oxide embedded in a metal oxide matrix," United States Patent No. 9,029,985, May 12, 2015.
5. L. Boulaevskii, D. M. Feldmann, Q. X. Jia, A. Koshelev, and N. A. Moody, "Tunable terahertz radiation source," United States Patent No. 8,633,472, Jan. 21, 2014.
6. T. M. McCleskey, A. K. Burrell, Q. X. Jia, and Y. Lin, "Precursors for the polymer-assisted deposition of films," United States Patent No. 8,530,554, Sept. 10, 2013.
7. H. M. Luo, Q. W. Li, E. Bauer, A. K. Burrell, T. M. McCleskey, and Q. X. Jia, "Polymer-assisted deposition of films and preparation of carbon nanotube arrays using the films," United States Patent No. 8,487,028, July 16, 2013.
8. A. K. Burrell, T. M. McCleskey, Q. X. Jia, A. H. Mueller, and H. M. Luo, "Cubic nitride templates," United States Patent No. 8,431,253, April 30, 2013.
9. Q. X. Jia, A. K. Burrell, E. Bauer, F. Ronning, T. M. McCleskey, and G. Zou, "Germanium films by polymer-assisted deposition," United States Patent No. 8,354,046, Jan. 15, 2013.
10. H. M. Luo, Q. W. Li, E. Bauer, A. K. Burrell, T. M. McCleskey, and Q. X. Jia, "Polymer-assisted deposition of films and preparation of carbon nanotube arrays using the films," United States Patent No. 8,278,380, Oct. 2, 2012.
11. A. K. Burrell, T. M. McCleskey, Q. X. Jia, E. Bauer, and A. H. Mueller, "Porous light-emitting compositions," United States Patent No. 8,158,247, April 17, 2012.
12. T. M. McCleskey, A. K. Burrell, Q. X. Jia, and Y. Lin, "Polymer-assisted deposition of films," United States Patent No. 8,124,176, Feb. 28, 2012.
13. H. Peng, Y. T. Zhu, D. E. Peterson, and Q. X. Jia, "Fibrous composites comprising carbon nanotubes and silica," United States Patent No. 8,034,448, Oct. 11, 2011.
14. L. Stan, Q. X. Jia, and S. R. Foltyn, "Buffer layers for coated conductors," United States Patent No. 8,003,571, Aug. 23, 2011.
15. H. Peng, Y. T. Zhu, D. E. Peterson, and Q. X. Jia, "Carbon microtubes," United States Patent No. 7,959,889, June 14, 2011.
16. P. N. Arendt, L. Stan, Q. X. Jia, R. F. DePaula, and I. O. Usov, "Wide band gap semiconductor templates," United States Patent No. 7,851,412, Dec. 14, 2010.
17. Y. Duan, Q. X. Jia, and W. Cao, "Hydrogen sensor," United States Patent No. 7,839,499, Nov. 23, 2010.

18. S. R. Foltyn, Q. X. Jia, P. N. Arendt, and H. Wang, "Buffer layer for thin film structures," United States Patent No. 7,736,761, June 15, 2010.

19. A. T. Findikoglu, Q. X. Jia, P. N. Arendt, V. Matias, and W. Choi, "Near single-crystalline, high-carrier-mobility silicon thin film on a polycrystalline/amorphous substrate," United States Patent No. 7,608,335, Oct. 27, 2009.

20. T. M. McCleskey, A. K. Burrell, Q. X. Jia, and Y. Lin, "Polymer-assisted deposition of films," United States Patent No. 7,604,839, Oct. 20, 2009.

21. S. R. Foltyn, Q. X. Jia, P. N. Arendt, T. G. Holesinger, and H. Wang, "Segmented superconducting tape having reduced AC losses and method of making," United States Patent No. 7,593,758, Sept. 22, 2009.

22. T. M. McCleskey, A. K. Burrell, Q. X. Jia, and Y. Lin, "Polymer-assisted deposition of films," United States Patent No. 7,365,118, April 29, 2008.

23. S. R. Foltyn, Q. X. Jia, and P. N. Arendt, "High rate buffer layer for IBAD MgO coated conductors," United States Patent No. 7,258,927, Aug. 21, 2007.

24. S. R. Foltyn, Q. X. Jia, P. N. Arendt, and H. Wang, "Buffer layer for thin film structures," United States Patent No. 7,129,196, Oct. 31, 2006.

25. T. G. Holesinger and Q. X. Jia, "Multilayer composites and manufacture of same," United States Patent No. 6,994,775, Feb. 7, 2006.

26. C. Kwon, Q. X. Jia, and S. R. Foltyn, "Superconducting structure," United States Patent No. 6,943,136, Sept. 13, 2005.

27. P. N. Arendt, S. R. Foltyn, J. R. Groves, T. G. Holesinger, and Q. X. Jia, "High temperature superconducting films," United States Patent No. 6,933,065, Aug. 23, 2005.

28. P. N. Arendt, S. R. Foltyn, J. R. Groves, and Q. X. Jia, "Substrate structure for growth of highly oriented and/or epitaxial layers thereon," United States Patent No. 6,921,741, July 26, 2005.

29. T. G. Holesinger, S. R. Foltyn, P. N. Arendt, J. R. Groves, Q. X. Jia, and A. Ayala, "High temperature superconducting composite conductors," United States Patent No. 6,843,898, Jan. 18, 2005.

30. Q. X. Jia, S. R. Foltyn, P. N. Arendt, and J. R. Groves, "Buffer layers on metal alloy substrates for superconducting tapes," United States Patent No. 6,800,591, Oct. 5, 2004.

31. Q. X. Jia, S. R. Foltyn, P. N. Arendt, and J. R. Groves, "Buffer layers on metal alloy substrates for superconducting tapes," United States Patent No. 6,756,139, June 29, 2004.

32. A. T. Findikoglu, S. F. Hahn, and Q. X. Jia, "Dynamic time expansion and compression using nonlinear waveguides," United States Patent No. 6,753,741, June 22, 2004.

33. Q. X. Jia and P. N. Arendt, "Oriented conductive oxide electrodes on SiO_2/Si and glass," United States Patent No. 6,743,292, June 1, 2004.

34. T. G. Holesinger, S. R. Foltyn, P. N. Arendt, J. R. Groves, Q. X. Jia, and A. Ayala, "High temperature superconducting composite conductors," United States Patent No. 6,716,545, April 6, 2004.

35. L. S. Li and Q. X. Jia, "Preparation of energy storage materials," United States Patent No. 6,656,390, Dec. 2, 2003.

36. T. G. Holesinger, Q. X. Jia, and S. R. Foltyn, "High critical current superconducting tapes," United States Patent No. 6,624,122, Sept. 23, 2003.

37. C. Kwon, Q. X. Jia, S. R. Foltyn, J. L. Smith, E. J. Peterson, and W. L. Hults, "Superconducting structure including mixed rare earth barium-copper oxide compounds," United States Patent No. 6,602,588, Aug. 5, 2003.

38. D. Q. Li and Q. X. Jia, "Polymer-assisted aqueous deposition of metal oxide films," United States Patent No. 6,589,457, July 8, 2003.

39. C. Kwon, Q. X. Jia, and S. R. Foltyn, "Superconducting structure," United States Patent No. 6,541,136, April 1, 2003.

40. L. S. Li and Q. X. Jia, "Preparation of energy storage materials," United States Patent No. 6,508,959, Jan. 21, 2003.

41. Q. X. Jia, X. D. Wu, S. R. Foltyn, and D. Reagor, "High temperature superconductor Josephson junctions and SQUIDs," United States Patent No. 6,476,413, Nov. 5, 2002.

42. C. Kwon and Q. X. Jia, "Ramp-edge structured tunneling devices using ferromagnet electrodes," United States Patent No. 6,445,024, Sept. 3, 2002.

43. Q. X. Jia, B. J. Gibbons, A. T. Findikoglu, and B. H. Park, "Thin film dielectric composite materials," United States Patent No. 6,444,336, Sept. 3, 2002.

44. Q. X. Jia and S. R. Foltyn, "Architecture for high critical current superconducting thick films," United States Patent No. 6,383,989, May 7, 2002.

45. Q. X. Jia and P. N. Arendt, "Highly oriented conducting layers on SiO_2/Si and glass," United States Patent No. 6,312,819, Nov. 6, 2001.

46. Q. X. Jia and A. T. Findikoglu, "Formation of nonlinear dielectric films for electrically tunable microwave devices," United States Patent No. 6,045,932, April 4, 2000.

47. Q. X. Jia, "Epitaxial oxides on amorphous SiO_2 on single crystal silicon," United States Patent No. 5,912,068, June 15, 1999.

48. W. A. Anderson, Q. X. Jia, J. Yi, and L. H. Chang, "Nanocrystalline layer thin film capacitors," United States Patent No. 5,587,870, Dec. 24, 1996.

49. W. A. Anderson, F. M. Collins, Q. X. Jia, K. L. Jiao, and H. J. Lee, "Thin film resistors comprising ruthenium oxide," United States Patent No. 5,585,776, Dec. 17, 1996.

50. W. A. Anderson, R. S. Hamilton, Q. X. Jia, and Z. Q. Shi, "Thin film capacitors," United States Patent No. 5,390,072, Feb. 14, 1995.