章嵩 简历

武汉理工大学，材料复合新技术国家重点实验室，副研究员

教育经历：

2007/9 - 2010/6，武汉理工大学，材料加工工程，博士，导师：张联盟

2004/9 - 2007/7，武汉理工大学，材料学，硕士，导师：张联盟

2000/9 - 2004/6，武汉理工大学，材料科学，学士

工作经历：

2012/12 - 至今，武汉理工大学，材料复合新技术国家重点实验室，副研究员

2011/1 - 2012/10，（日本）东北大学，金属材料研究所，助理研究员

2010/10 - 2012/10，华中科技大学，光学与电子信息学院，讲师

【主持科研项目】

1、 国家科技部国际合作专项项目，2014DFA53090、大尺寸碳化硅的激光化学气相沉积技术及应用合作研发、2014/12-2017/11、284万元、在研、主持。

2、 国际企业委托项目（揖斐电株式会社），卤化物化学气相沉积法制备Ti-Si-C复合材料厚膜成型技术、2015/01-2015/12、4700万日元（约256万元）、在研、主持。

3、 国家自然科学基金项目（青年基金），51102101、基于脉冲激光沉积富硼B-C 薄膜的关键技术研究、2012/01-2014/12、24万元、已结题、主持。

4、 湖北省自然科学基金面上项目，2014CFB870、3C-SiC晶体缺陷表征与控制研究、2014/01-2015/12、3万元、在研、主持。

5、 事业委托项目，制备高致密度、细晶粒B-C陶瓷、2013/06-2013/12、2.2万元、已结题、主持。

【参加科研项目】

1、 国家自然科学基金面上项目，51372188、高温超导氧化物薄膜的激光化学气相沉积技术、2014/01-2017/12、80万元、在研、参加。

2、 湖北省创新群体项目，2016CFA006，功能薄膜材料的结构与性能调控、2016/09-2019/09、30万元、在研、参加。

【人才计划项目】

1、湖北省楚天学者（楚天学子，2013年，材料加工工程）。

2、武汉理工大学 青年拔尖人才（第二批次，2016年）

近5年主要研究成果

【期刊论文】

1、Hong Cheng, Rong Tu, **Song Zhang***, Mingxu Han, Takashi Goto, Lianmeng Zhang, Preparation of highly oriented β-SiC bulks by halide laser chemical vapor deposition, ***Journal of the European Ceramic Society***, 37(2) 509-515, 2017

2、Rong Tu, Dinghen Zheng, Hong Cheng, Mingwei, **Song Zhang***, Mingxu Han, Takashi Goto, Lianmeng Zhang, Effect of $CH_4/SiCl_4$ ratio on the composition and microstructure of <110>-oriented β-SiC bulks by halide CVD, ***Journal of the European Ceramic Society***, 37(4) 1217-1223, 2017

3、Peipei Zhu, Qingfang Xu, Ruyi Chen, **Song Zhang***, Meijun Yang, Rong Tu, Lianmeng Zhang, Takashi Goto, Jiasheng Yan, Shusen Li, Structural study of β-SiC(001) films on Si(001) by laser chemical vapor deposition, ***Journal of the American Ceramic Society***, Proofed, 2017

4、Rong Tu, Dinghen Zheng, Mingxu Han, **Song Zhang***, Zhiying Hu, Takashi Goto, Lianmeng Zhang, Ultra-Fast Fabrication of <110>-Oriented β-SiC Wafers by Halide CVD, ***Journal of the American Ceramic Society***, 99(1) 84-88, 2016

5、**Song Zhang**, Qingfang Xu, Zhiying Hu, Peipei Zhu, Rong Tu*, Lianmeng Zhang, Mingxu Han, Takashi Goto, Jiasheng Yan, Sijun Luo, Ultra-fast epitaxial growth of β-SiC films on α(4H)-SiC using hexamethyldisilane (HMDS) at low temperature, ***Ceramics International***, 42(3) 4632-4635, 2016

6、**Song Zhang**, Qingfang Xu, Qingyun Sun, Peipei Zhu, Rong Tu*, Zhiying Hu, Mingxu Han, Takashi Goto, Lianmeng Zhang, Jiasheng Yan, Shusen Li, Effect of Pressure on Microstructure of <111>-Oriented β-SiC Films: Research Via Electron Backscatter Diffraction, ***Journal of the American Ceramic Society***, 98(12) 3713-3718, 2015

7、**Song Zhang**, Qingfang Xu, Rong Tu, Takashi Goto, Lianmeng Zhang, Growth Mechanism and Defects of <111>-Oriented β-SiC Films Deposited by Laser Chemical Vapor Deposition, ***Journal of the American Ceramic Society***, 98(1) 214-222, 2015

8、Rong Tu, Qingyun Sun, **Song Zhang***, Mingxu Han, Qizhong Li, Hedenori

Hirayama, Lianmeng Zhang, Takashi Goto, Oxidation Behavior of ZrB_2-SiC Composites at Low Pressures, ***Journal of the American Ceramic Society***, 98(1) 214-222, 2015

9、 **Song Zhang**, Qingfang Xu, Rong Tu*, Takashi Goto, Lianmeng Zhang, High-speed preparation of <111>- and <110>-oriented β-SiC films by laser chemical vapor deposition, ***Journal of the American Ceramic Society***, 97(3) 952-958, 2014

10、 Rong Tu, Peipei Zhu, **Song Zhang***, Peng Xu, Lianmeng Zhang, Hiroshi Hanekawa, Takashi Goto, Comparison of CVD-deposited Ni and Dry-blended Ni Powder as Sintering Aids for TiN Powder, ***Journal of the European Ceramic Society***, 34(8) 1955-1961, 2014

11、 **Song Zhang**, Zhiqiang He, Xiaoli Ji, Wenzhong Lu, Chuanbin Wang, Qiang Shen, Lianmeng Zhang, Understanding the deposition mechanism of pulsed laser deposited B-C films using dual-targets, ***Journal of Applied Physics***, 115(15) 154906, 2014

12、 Qizhong Li, **Song Zhang***, Chuanbin Wang, Qiang Shen, Wenzhong Lu, Lianmeng Zhang, Structural Evolution of B-C Thin Films Deposited from SPSed-Target and Dual-Target, ***Journal of the American Ceramic Society***, 97(5) 1367-1370, 2014

13、 Chuanbin Wang, Xiaoshuang Luo, **Song Zhang***, Qiang Shen, Lianmeng Zhang, Effects of Nitrogen Gas Ratio on Magnetron Sputtering Deposited Boron Nitride Films, ***Vacuum,*** 103 (3) 68-71, 2014

14、 Xiaoli Ji, Shijiang Wu, **Song Zhang***, Xiujian Zhao, Study on the Reaction Mechanism of Potassium Titanate Fibers, ***Integrated Ferroelectrics***, 153(1) 156-163, 2014

15、 Xiaoli Ji, Shijiang Wu, **Song Zhang***, Xiujian Zhao, Preparation of layered potassium titanate whiskers with large length-diameter ratio by KDC method, ***Journal of Wuhan University of Technology-Mater. Sci. Ed.***, 153(1) 156-163, 2014

16、 Xiaoli Ji, Chengcheng Zhai, **Song Zhang***, Preparation and Study of $0.7(Mg_{0.8}Zn_{0.2})TiO_3 \cdot 0.3\{Ba_4Nd_{28/3}Ti_{18}O_{54} \cdot zBi_2O_3\}$ Microwave Dielectric Ceramics, ***Advanced Materials Research***, 924(1) 115-122, 2014

17、 Xiaoli Ji, Fang Yi, **Song Zhang***, Chengcheng Zhai, Pengfei Hu, Effects of ZnO Addition and Sintering Temperature on Dielectric Properties of $MgTiO_3$ Ceramic, ***Key Engineering Materials***, 616(1) 145-152, 2014

18、 Xiaoli Ji, Pengfei Hu, **Song Zhang***, Chengcheng Zhai, Fang Yi, Preparation and Study of $(1-m)(Mg_{0.8}Zn_{0.2})TiO_3 \cdot m\{Ba_4Nd_{28/3}Ti_{18}O_{54} \cdot 0.18Bi_2O_3\}$ Microwave Dielectric Ceramics, ***Key Engineering Materials***, 616(1) 166-173, 2014

19、 Mingxu Han, Wei Zhou, Dingheng Zheng, Rong Tu, **Song Zhang**, Takashi Goto, Effects of C/Si Ratio on the Structure of β-SiC Film by Halide CVD, ***Key Engineering Materials***, 616(1) 227-231, 2014

20、 Mingxu Han, Wei Zhou, Dingheng Zheng, Rong Tu, **Song Zhang**, Takashi Goto, High-Speed Deposition of SiC Thick Film by Halide Precursor, ***Key Engineering Materials***, 616(1) 37-42, 2014

21、 **Song Zhang***, Wenzhong Lu, Chuanbin Wang, Qiang Shen, Lianmeng Zhang, Stoichiometric controlling of boron carbide thin films by using boron-carbon dual-targets, ***Applied Physics Letters***, 101(14)1602-1-4, 2012

22、 **Song Zhang**, Rong Tu*, Takashi Goto. High-speed epitaxial growth of β-SiC film on Si(111) single crystal by laser chemical vapor deposition, ***Journal of the American Ceramic Society***, 95(9)2782-2784, 2012

23、 **Song Zhang***, Wenzhong Lu, Chuanbin Wang, Qiang Shen, Lianmeng Zhang, Investigation of planar defects in pulsed electric current sintered $B_{13}C_2$ boron carbide ceramic, ***Ceramics International***, 38(1)817-819, 2012

24、 **Song Zhang***, Wenzhong Lu, Chuanbin Wang, Qiang Shen, Lianmeng Zhang, Synthesis and characterization of $B_{13}C_2$ boron carbide ceramic by pulsed electric current sintering, ***Ceramics International***, 38(2)895-900, 2012

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26、 Xiaoli Ji, Shijiang Wu, **Song Zhang***, Xiujiang Zhao, Study on the reaction mechanism of potassium titanate fibers, ***Integrated Ferroelctrics***, accepted.

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potassium titanate whiskers with large length-diameter ratio by KDC method, ***Journal of Wuhan University of Technology-Materials Science Edition***, accepted.

28、 Sijun Luo*, Chuanbin Wang, **Song Zhang**, Rong Tu, Shulong Liu, Xinfeng Tang, Qiang Shen, Fei Chen, and Lianmeng Zhang, Epitaxial integration of (100) $Bi_4Ti_3O_{12}$ with (0001) ZnO through long-range lattice matching, ***Applied Physics Express***, 5(8)5801-5803, 2012

29、 Sijun Luo*, Chuanbin Wang, **Song Zhang**, Rong Tu, Qiang Shen, Fei Chen, and Lianmeng Zhang, Preparation and characterization of transparent $Bi_{3.6}Ho_{0.4}Ti_3O_{12}$/ZnO:Al ferroelectric-semiconductor heterostructure by pulsed laser deposition, ***Materials Letters***, 79(2) 173-176, 2012

【申请专利】

1、 **章嵩**、徐青芳、涂溶、(日)後藤 孝（Takashi GOTO）、张联盟，一种立方碳化硅薄膜的制备方法，2014，中国，201410317559.7

2、 **章嵩**、贺志强、涂溶、张联盟、王传彬、沈强，一种组分可控的碳化硼的制备方法，2014，中国，201410712152.4

3、 **章嵩**、贺志强、涂溶、张联盟、王传彬、沈强，用于预测多元拼合靶材制备的薄膜成分的预测方法，2014，中国，201410708998.0

4、 涂溶、朱佩佩、**章嵩**、(日)後藤 孝（Takashi GOTO）、张联盟，碳化硅膜的制备方法，2014，中国，201410162587.6

5、 涂溶、朱佩佩、**章嵩**、(日)後藤 孝（Takashi GOTO）、张联盟，一种TiN-Ni复合陶瓷的制备方法，2014，中国，201410301100.8

6、 涂溶、孙清云、**章嵩**、张联盟，快速制备 3C-SiC外延膜方法，2014，中国，201410423183.8

7、 **章嵩**、王传彬、沈强、张联盟、涂溶，脉冲激光沉积装置，2013，中国，201310619627.0