CURRICULUM VITAE

XINFENG TANG

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Sex: male
Birth day: Born on August 27th 1962

Educational background:

September 1979~July 1983
Dalian Jiaotong University, Engineering Bachelor
September 1985~April 1988
Southwest Jiaotong University, Engineering Master
September 1997~October 2001
Institute of Materials Research, Tohoku University, Japan, Ph.D

Work background:

August 1983~September 1985
Assistant, School of science and technology of materials in Southwest Jiaotong University
June 1988~August 1997
Associate Professor, State Key Laboratory of Advanced Technology for Materials Synthesis and Processing in Wuhan University of Technology
September 1997~March 2001
Research Assistant,
Institute of Materials Research, Tohoku University, Japan
June 2001~Present
Professor, Wuhan University of Technology
Director, Advanced Materials Research Institute
Executive Vice Director, State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology
November 2009~May 2010
Visiting Scholar, Physics Department, University of Michigan, Ann Arbor, USA

Research Realm:

Thermoelectric Materials
Functionally Graded Materials
Nanocomposites

Patent: 8

1. A synthesis method of Bi_2Te_3 thermoelectrics with high performance Xinfeng Tang, Wenjie Xie *et al*, Chinese patent No. ZL200610019607.X
2. A synthesis method of nanostructured $CoSb_3$ powder by Non-aqueous co-precipitation Xinfeng Tang, Ying Chu *et al*, Chinese patent No. ZL200710051876.9
3. A synthesis method of nanostructured $CoSb_3$ powder by cross-coprecipitation. Xinfeng Tang, Ying Chu *et al*, Chinese patent No. ZL 200510019463.3
4. A synthesis method of nanostructured $CoSb_3$ powder by ethanol sol-gel method. Xinfeng Tang, Ying Chu *et al*, Chinese patent No. ZL 200510019916.2
5. A synthesis method of nanostructured thermoelectric semiconductor by the Crystallization of Amorphous Alloy. Xinfeng Tang, Bo Song *et al*, Chinese patent No. ZL 200410013394.0
6. A synthesis method of TiCoSb based thermoelectric compound. Xinfeng Tang, Wenjie Xie *et al*, Chinese patent No. ZL200610019184.1
7. A synthesis method of $Na_xCo_2O_4$ powder with laminate structure. Xinfeng Tang, Li Zhang *et al*, Chinese patent No.ZL 200710053015.4
8. A synthesis method of $NaxCo_2O_4$ powder by simple sodium alginate gel method. Xinfeng Tang, Li Zhang *et al*, Chinese patent No. 200710168426.8

Publications: more than 130
Papers (representative):

1. Jingjing Xu, Han Li, Baoli Du, **Xinfeng Tang**, Qingjie Zhang and Ctirad Uher, High Thermoelectric Figure of Merit and Nanostructuring in Bulk $AgSbTe_2$, ***J. Mater. Chem***. (2010) (In press).
2. Junjie Li, **Xinfeng Tang**, Han Li, Yonggao Yan and Qingjie Zhang, Synthesis and thermoelectric properties of hydrochloric acid-doped polyaniline, ***Synth. Met.***, (2010). (In press).
3. XianLi Su, Han Li and **Xinfeng** Tang, Synthesis and thermoelectric properties of p-type Zn-doped $Zn_xIn_{1-x}Sb$ compounds**, *J. Phys. D: Appl. Phys.***,43 (2010), 015403.
4. Wei Liu, **Xinfeng Tang** and Jeff Sharp, Low-temperature solid state reaction synthesis and thermoelectric properties of high-performance and low-cost Sb-doped $Mg_2Si_{0.6}Sn_{0.4}$, ***J. Phys. D: Appl. Phys.***, 43 (2010), 085406.
5. Wenjie Xie, Song Zhu, **Xinfeng Tang**, Jian He, Yonggao Yan, V Ponnambalam, Qingjie Zhang, S Joseph Poon and Terry Tritt**,** Synthesis and thermoelectric properties of (Ti,Zr,Hf)(Co,Pd)Sb half-Heusler compounds, ***J. Phys. D: Appl. Phys.***,42 (2009), 235407.

6. H. Y. Lv, H. J. Liu, L. Pan, Y. W. Wen, X. J. Tan, J. Shi, and **X. F. Tang**, Enhanced thermoelectric performance of $(Sb_{0.75}Bi_{0.25})_2Te_3$ compound from first-principles calculations, ***Appl. Phys. Lett.***, 94(2009), 142101.

7. L. L. Wang, L. Miao, Z. Y. Wang, W. Wei, R. Xiong, H. J. Liu, J. Shi, and **X. F. Tang**, Thermoelectric performance of half-Heusler compounds TiNiSn and TiCoSb, ***J. Appl. Phys***., 105(2009), 013709.

8. Y. Yan, **X. Tang**, P. Li and Q. Zhang， Microstructure and Thermoelectric Transport Properties of Type I Clathrates $Ba_8Sb_2Ga_{14}Ge_{30}$ Prepared by Ultrarapid Solidification， ***Journal of Electronic Materials***, 38 (2009), 1278-1281.

9. Y. Yan, **X. Tang,** H. Liu and Q. Zhang，Preparation and Thermoelectric Properties of $Ag_{0.5}In_{0.5-x}Pb_5Sn_4Te_{10}$， ***Journal of Electronic Materials,*** 38 (2009), 1273-1277.

10. LI ZHANG, **XINFENG TANG**, and WENBIN GAO, Preparation of Well-Tiled γ-$Na_xCo_2O_4$ by a Novel and Simple Sodium Alginate Gel Method and Its Electrical Properties， ***Journal of Electronic Materials***, 38 (2009), 1229-1233.

11. H. LI, **X. TANG**, and Q. ZHANG, Microstructure and Thermoelectric Properties of Yb-Filled Skutterudites Prepared by Rapid Solidification, ***J. Electronic Materials,*** 38 (2009), 1224-1228.

12. Han Lıı, **Xinfeng Tang**, Xianli Su, Qingjie Zhang, and Ctirad Uher, Nanostructured bulk $Yb_xCo_4Sb_{12}$ with high thermoelectric performance prepared by rapid solidification method, ***J. Phys. D: Appl. Phys.***,42 (2009), 145409.

13. Wenjie Xie, **Xinfeng Tang**, Yonggao Yan, Qinjie Zhang, Terry Tritt, High Thermoelectric Performance BiSbTe Alloy with Unique Low-Dimensional Structure, ***J. Appl. Phys.,*** 105(2009), 113713.

14. Li Zhang, **Xinfeng Tang**, and Wenbin Gao，Formation and Growth Mechanism of Highly Tiled γ-$Na_xCo_2O_4$ Crystals by a Novel Sodium Alginate Gel Template Method, ***J. Phys. Chem.,*** 113(2009), 7930–7934.

15. Han Li , **Xinfeng Tang**, Qinjie Zhang, Ctirad Uher, High performance $In_xCe_yCo_4Sb_{12}$ thermoelectric materials with in-situ forming nanostructured InSb phase, ***Appl. Phys. Lett***., 94(2009), 102114.

16. Wenjie Xie, **Xinfeng Tang**, Yonggao Yan , Qinjie Zhang , Terry Tritt, Unique Nanostructures and Enhanced Thermoelectric Performance of Melt-spun BiSbTe Alloys, ***Appl. Phys. Lett***., 94(2009), 102111.

17. Li Han , **Tang Xin-Feng**, Cao Wei-Qiang, Zhang Qing-Jie,Quick preparation and thermal transport properties of nanostructured β-$FeSi_2$ bulk material, ***Chinese Physics B,*** 18**(** 2009), 0287-0292.

18. Han Li, **Xinfeng Tang**, Qingjie Zhang. Rapid preparation method of bulk nanostructured $Yb_{0.3}Co_4Sb_{12+y}$ compounds and their improved thermoelectric performance, ***Appl. Phys. Lett***., 93(2008), 252109

19. Wei-Qiang Cao, Yong-Gao Yan, **Xin-Feng Tang** and Shu-Kang Deng, The effects of In isoelectronic substitution for Ga on the thermoelectric properties of $Sr_8Ga_{16-x}In_xGe_{30}$ type-I clathrates, ***J. Phys. D: Appl. Phys.***, 41 (2008), 215105.

20. **Xinfeng Tang**, Peng Li, Shukang Deng, and Qingjie Zhang，High temperature thermoelectric transport properties of double-atom-filled clathrate compounds $Yb_xBa_{8-x}Ga_{16}Ge_{30}$， ***J. Appl. Phys.,***104 (2008), 013706.

21. Li Zhang, **Xinfeng Tang**, and Wenbin Gao, Growth Mechanism of Layer-by-Layer Nanostructured γ-$Na_xCo_2O_4$ Hexagonal Crystals via a Novel Protein Adsorption Method, ***Crystal Growth & Design***, 8 (2008), 2489-2492.

22. Ying CHU, **Xinfeng TANG**, Wenyu ZHAO and Qingjie ZHANG, Synthesis and Growth of Rod-like and Spherical Nanostructures $CoSb_3$ via Ethanol Sol-Gel Method, ***Crystal Growth & Design***, 8 (2008), 208-210.

23. Han Li, **Xinfeng Tang**, Xianli Su, and Qingjie Zhang, Preparation and thermoelectric properties of high-performance Sb additional $Yb_{0.2}Co_4Sb_{12+y}$ bulk materials with nanostructure, ***Appl. Phys. Lett***., 92 (2008), 202114.

24. Shukang Deng, **Xinfeng Tang**, Peng Li, and Qingjie Zhang，High temperature thermoelectric transport properties of p-type $Ba_8Ga_{16}Al_xGe_{30-x}$ type-I clathrates with high performance， ***J. Appl. Phys.,*** 103 (2008), 073503.

25. Wenjie Xie, Qiao Jin, and **Xinfeng Tang**， The preparation and thermoelectric properties of $Ti_{0.5}Zr_{0.25}Hf_{0.25}Co_{1-x}NixSb$ half-Heusler compounds, ***J. Appl. Phys.,*** 103 (2008), 043711.

26. Xie Wen-Jie, **Tang Xin-Feng**, and Zhang Qing-Jie, Fast preparation and thermal transport property of TiCoSb-based half-Heusler compounds, Chinese Physics, 16 (2007), 3549-3552.

27. Shukang Deng, **Xinfeng Tang**, and Qinjie Zhang, Synthesis and Thermoelectric Properties of P-type $Ba_8Ga_{16}Zn_xGe_{30-x}$ Type-I clathrates, ***J. Appl. Phys.,*** 102 (2007), 043702.

28. **Xinfeng Tang,** Wenjie Xie, Han Li, Wenyu Zhao, Qingjie Zhang and Masayuki Niino, Preparation and thermoelectric transport properties of high-performance P-type Bi_2Te_3 with

layered nanostructure, ***Appl. Phys. Lett***., **90** (2007), 012102-1-3.

29. **Xinfeng Tang**, Han Li, Qingjie Zhang, Masayuki Niino and Takashi Goto, Synthesis and thermoelectric properties of double-atom-filled skutterudite compounds $Ca_mCe_nFe_xCo_{4-x}Sb_{12}$ ***J. Appl. Phys.,*** 100 (2006), 123702-1-8.

30. Wen-Yu Zhao, Qing-Jie Zhang, **Xin-Feng Tang**, Hai-Bin Cheng, and Peng-Cheng Zhai Nanostructural M-type barium hexaferrite synthesized by spark plasma sintering method ***J.Appl.Phys.***, **99** (2006), 08E909-1-3

31. P. C. Zhai, W. Y. Zhao, Y. Li, L. S. Liu, **X. F. Tang,** Q. J. Zhang and M. Niino Nanostructures and enhanced thermoelectric properties in Ce-filled skutterudite bulk materials, ***Appl.Phys.Lett.***, **89** (2006), 052111-1-3

Awards and Honors

2001 Enhancement of thermoelectric properties of filled skutterudites, the first prize of Advancement Award, Japan society of powder and powder metallurgy.

2003 The theory on design and form and structure control of heterogeneous materials, the first prize of Natural Science Award of Hubei province, the government of Hubei province, China.

2009 My PhD candidate Han Li won the Goldsmid Award at the 28th International Conference on Thermoelectrics 2009, International Thermoelectric Society.

Current Grants

1. Title: Low Dimensional Structure and Properties of Thermoelectric Materials
   Agency: National Program on Key Basic Research Project (973 Program), the Ministry of Science and Technology of China
   Amount: ¥ 5,700,000
   Grant Number: 2007CB607501
   Duration: Jun. 2007 – Aug. 2012
   Role: Principal Investigator

2. Title: The Key Technology of High Efficiency and Low Cost Thermoelectric-Photovoltaic Multiplexed System for Solar Generation and 5~10 KW Distributed Power Stations
   Agency: National Key Technologies R & D Program of China，Ministry of Education of China
   Amount: ¥ 2,000,000
   Grant Number: 705035
   Duration: Jan. 2008 –Dec. 2010
   Role: Co-Principal Investigator

3. Title: High Performance Nanocomposite Thermoelectric Materials
   Agency: the National Natural Science Foundation of China

Amount: ¥ 250,000
Grant Number: 20091j0016
Duration: Jan. 2009 –Dec. 2012
Role: Principal Investigator

4. Title: Non-equilibrium Preparation and Electron-Phonon Coordinate Transportation of High performance Thermoelectric Materials
   Agency: National Natural Science Foundation of China (Key Program)
   Amount: ¥ 500,000
   Grant Number: 50731006
   Duration: Jan. 2008 –Dec. 2011
   Role: Principal Investigator

5. Title: The Research and Development of High Performance Filled Skutterudites Materials and Devices
   Agency: National High-Tech R&D Program of China (863 Program)
   Amount: ¥ 300,000
   Grant Number: 20081g0011
   Duration: Dec. 2007 –Nov. 2010
   Role: Co-Principal Investigator