

温广武

工学博士

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主要研究方向

主要开展航天耐热及生物医学工程陶瓷的基础研究与应用研究，包括：

1. 新型硅基、硼基、碳基陶瓷及其复合材料；
2. 耐高温多元硅基玻璃（SiBON、SiBONC、SiAlONC等）；
3. 准一维纳米陶瓷材料（SiC、Si₃N₄、Sialon、BN等）；
4. 生物玻璃、生物陶瓷；
5. 碳-石墨材料、碳-陶瓷材料；
6. 上述材料的有机先驱体转化法合成、固相反应烧结、半固态成型等制备工艺，以及纳米、非晶和复相结构控制工艺研究。

社会兼职

中国机械工程学会工程陶瓷材料专业委员会副主任委员；

全国口腔材料和器械设备标准化技术委员会委员；

中国电工技术学会炭·石墨材料专业委员会委员；

中国硅酸盐学会陶瓷分会常务理事；

《炭素》、《炭素技术》、《陶瓷科学与艺术》杂志编委；

黑龙江省政府科技顾问委员会专家组成员；

哈尔滨工业大学（威海）材料加工工程山东省重点学科负责人；

哈尔滨工业大学优秀科技创新团队（生物与医用材料）负责人。

主要学术成果

1. **G. Wen**, T. Zhang, X.X. Huang, B. Zhong, X.D. Zhang, H.M. Yu. Synthesis of bulk quantity BN nanotubes with uniform morphology. **Scripta Mater.**, 2010, 62 (1): 25-28 (SCI, IF 2.887)
2. L. Xia, **G. Wen**, L. Song, X. Wang. The crystallization behavior and thermal expansion properties of beta-eucryptite prepared by sol-gel route. **Mater. Chem. Phys.** 2010, 119: 495-498 (SCI, IF 1.799)
3. L. Xia, **G. Wen**, L. Song, X. Wang. The effect of aluminum sources on synthesis of low expansion glass-ceramics in lithia-alumina-silica system by sol-gel route. **J. Non-Crystalline Solids**. 2009, 355(48-49):2349-2354 (SCI, IF 1.449)
4. L. Xia, **G. Wen**, L. Song, X. Wang. Sol-gel synthesis and crystallization behaviour of β -spodumene. **J. Sol-Gel Sci. Tech.** 2009, 52(1):134-139 (SCI, IF 1.433)
5. X. Zheng, **G. Wen**, L. Song. The microstructure and mechanical properties of lithium disilicate by hot-pressed technology. **Acta Mater.** 2008, 56 (3): 549-558 (SCI, IF 3.729)
6. **G. Wen**, X. Zheng and L. Song. Effects of P₂O₅ and sintering temperature on microstructure and mechanical properties of lithium disilicate glass-ceramics. **Acta Mater.** 2007, 55 (10): 3585-3591 (SCI, IF 3.729)
7. F. Li, **G. Wen**. A novel method for massive fabrication of *b*-SiC nanowires. **J. Mater. Sci.** 2007, 42:4125-4130 (SCI, IF 1.181)
8. F. Li, **G. Wen**, H.W. Bai and L. Song. Synthesis and structural characterization of amorphous nano-sized SiBONC ceramic powders via polymer pyrolysis. **J. Non-Crystalline Solids**, 2007,353(4): 379-383 (SCI, IF 1.449)
9. X.X. Huang, **G.W. Wen**, X.M. Cheng and B.Y. Zhang. Oxidation behavior of Al₄SiC₄ ceramic up to 1700 C. **Corrosion Science**, 2007, 49(5): 2059-2070 (SCI, IF 2.293)
10. X.X. Huang, **G. Wen**. Mechanical properties of Al₄SiC₄ bulk ceramics produced by solid state reaction. **Ceram. Inter.** 2007, 33(3): 453-458 (SCI, IF 1.369)
11. Y. Lv, **G. Wen** and T.Q. Lei. Improvement in air oxidation resistance of carbon materials by W₂B₅ ceramic reinforcement. **Mater. Chem. Phys.** 2007,102(2-3):111-117 (SCI, IF 1.799)
12. Y. Lv, **G. Wen**, L. Song and T.Q. Lei. Wear performance of C-W₂B₅ composite sliding against bearing steel. **Wear**, 2007, 262(5-6): 592-599 (IF 1.509)
13. Y. Lv, **G. Wen**, T.Q. Lei. Friction and wear behavior of C-based composites in situ reinforced with W₂B₅. **J. Euro. Ceram. Soc.** 2006, 26(15): 3477-3486 (SCI, IF 1.58)
14. **G. Wen**, F. Li, L. Song. Structural characterization and mechanical properties of SiBONC ceramics derived from polymeric precursors. **Mater. Sci. Eng. A.** 2006, 432(1-2): 40-46 (SCI, IF 1.806)
15. **G. Wen**, Y. Lv, T.Q. Lei. Reaction-formed W₂B₅/C composites with high performance. **Carbon**. 2006, 44: 1005-1012 (SCI, IF 4.373)
16. **G.W. Wen**, X.X. Huang. Increased High Temperature Strength and Excellent Oxidation Resistance of Al₄SiC₄ Ceramics. **J. Euro. Ceram. Soc.** 2006, 26 (7) : 1281-1286 (SCI, IF 1.58)
17. F. Li, **G. Wen**, L. Song. Growth of nanowires from annealing SiBONC nanopowders. **J. Cryst. Growth**. 2006, 290 (2) : 466-472 (SCI, IF 1.757)
18. Y. Lv, **G. Wen**, T.Q. Lei. Tribological behavior of W₂B₅ particulate reinforced carbon matrix composites. **Mater. Lett.** 2006, 60: 541-545 (SCI, IF 1.748)
19. Y. Lv, **G. Wen**, B.Y. Zhang, T.Q. Lei. Mechanical properties and electrical conductivity of W-B-C composites fabricated by in situ reaction. **Mater. Chem. Phys.** 2006, 97(2-3): 277-282 (SCI, IF 1.799)
20. X.X. Huang, **G.W. Wen**. Reaction synthesis of aluminum silicon carbide ceramics. **Mater. Chem. Phys.** 2006, 97(1): 193-199 (SCI, IF 1.799)
21. J. Wang, **G.W. Wen**, Q.C. Meng. Preparation of BN/SiO₂ ceramics by PIP method. **J. Cent. South Univ.Tech.** 2005, 12(1): 31-34 (SCI, IF 0.283)
22. S.B. Li, **G.W. Wen**, B.S. Zhang. Effect of additive-Si₃N₄ on mechanical properties of Ti-B-C composites. **Mater. Sci. Eng. A.** 2002, 332 (1-2): 37-40 (SCI, IF 1.806)
23. G.M. Song, Q. Li, **G.W. Wen**, Y. Zhou. Mechanical properties of short carbon fiber-reinforced TiC composites produced by hot pressing. **Mater. Sci. Eng. A.** 2002,326(2): 240-248 (SCI, IF 1.806)
24. J.B. Zhang, T.Q. Lei, **G.W. Wen**. Densification and crystallisation behaviour of Si-B-O-N ceramics prepared by hot pressing with organic precursors. **Mater. Sci. Tech -Lond.** 2002,18 (4): 445-448 (SCI, IF 0.894)
25. J.B. Zhang, T.Q. Lei, **G.W. Wen**. Synthesis and ceramic conversion of polysiloxanzane to silicon oxynitride. **J. Mater. Sci. Tech.** 2001,17(1):3-4 (SCI, IF 0.869)
26. **G. Wen**, S.B. Li, B.S. Zhang, Z.X. Guo. Reaction synthesis of TiB₂-TiC composites with enhanced toughness. **Acta Mater.** 2001, 49 (8): 1463-1470 (SCI, IF 3.729)
27. **G. Wen**, G.L.Wu, T.Q. Lei, Z.X. Guo. Co-operative Enhancement of Fused Silica and BN Ceramics for High-Temperature Dielectric Applications. **J. Euro. Ceram. Soc.** 2000, 20 (12): 1923-1928 (SCI, IF 1.58)
28. **G. Wen**, Z.X.Guo, C.K.L. Davies. Microstructural Characterization of Electroless-Nickel Coatings on Zirconia Powder. **Scripta Mater.** 2000, 43 (4): 307-311 (SCI, IF 2.887)
29. **G. Wen**, S.B. Li, B.S. Zhang, Z.X. Guo. Processing of in situ toughened B-W-C composites by reaction hot pressing of B₄C and WC. **Scripta Mater.** 2000, 43 (9): 853-857 (SCI, IF 2.887)
30. **G.W. Wen**, Z.X. Guo, C.K.L. Davies. Electroless plating for the enhancement of material performance. **Mater. Tech.** 1999, 14 (4): 210-217 (SCI, IF 0.288)

授权发明专利：

1. 温广武、李敏、宋亮、王鑫宇、文磊、郑佩琦. SiC-BN-C 复合材料及其制备方法. ZL 200710016886.9
2. 温广武 张晓东. 一种制备超长 SiC 纳米的方法. ZL 200610151079.3
3. 温广武 张晓东. 一种含有伴生非晶态球状结构的碳化硅纳米线及其制备方法. ZL 200610151102.9
4. 王静, 温广武, 孟庆昌, 李慕勤, 孟祥才. 纳米羟基磷灰石/丝素蛋白-壳聚糖复合支架及其制备方法. ZL200610009993.4
5. 温广武, 覃春林. Sialon 准一维纳米材料及其制备方法. ZL 200610146280.2
6. 温广武, 李峰, 白宏伟, 韩兆祥. 一种高温稳定的 SiBONC 陶瓷的制备方法. ZL200510010085.2
7. 温广武, 李峰, 韩兆祥. 一种碳化硅纳米纤维的制备方法. ZL200510010086.7
8. 温广武, 李峰, 张俊宝, 宋亮. 一种高温结构陶瓷材料 SiBONC 的制备方法. ZL200510075767.1
9. 温广武, 覃春林. 用含氢硅油和 Al 粉制备的 SiAlONC 陶瓷及其制备方法. ZL200410044158.5
10. 温广武, 黄小萧, 宋亮. 一种 Al₄SiC₄陶瓷的制备方法. ZL200410013683.0
11. 温广武, 王静, 宋亮. 先驱体浸渍裂解制备 BN / SiO₂ 复合陶瓷的方法. ZL200410013684.5
12. 温广武, 李峰, 张俊宝, 宋亮. 一种高温结构陶瓷材料 SiBONC 及其制备方法. ZL200410013682.6
13. 韩欢庆, 葛启录, 雷廷权, 温广武, 周玉. 一种熔石英陶瓷材料. ZL97100842.6