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主要研究方向

先进陶瓷涂层；稀土能源材料；减摩耐磨陶瓷材料；极限环境下材料的损伤行为

社会兼职

美国陶瓷学会会员；中国机械工程学会热处理学会理事；黑龙江省表面工程学会副理事长；国家高技术 863 项目评审专家；国家自然科学基金项目通讯评审专家

主要学术成果

1. Xiao-Liang Xia, Zhan-Guo Liu, **Jia-Hu Ouyang**, Order-disorder transformation and enhanced oxide-ionic conductivity of $(\text{Sm}_{1-x}\text{Dy}_x)_2\text{Zr}_2\text{O}_7$ ceramics, *Journal of Power Sources*, 2011, 196, 1840.
2. Zhan-Guo Liu, Xian-Zhong Xiong, **Jia-Hu Ouyang**, Jun Xiang, The effect of co-doping with MgO and Yb_2O_3 on the structure and electrical conductivity of the $\text{Sm}_2\text{Zr}_2\text{O}_7$ pyrochlore, *Electrochimica Acta*, 2011, 56, 2837.
3. Zhan-Guo Liu, **Jia-Hu Ouyang**, Kening Sun, Xiao-Liang Xia, Structural evolution and electrical conductivity measurement of $\text{NdYb}_{1-x}\text{Gd}_x\text{Zr}_2\text{O}_7$ ($0 \leq x \leq 1.0$) ceramics, *Electrochimica Acta*, 2010, 55, 8466.
4. Xiao-Liang Xia, Shuai Gao, Zhan-Guo Liu, **Jia-Hu Ouyang**, Sa Li, The influence of pentavalent Nb substitution for Zr on electrical property of oxide-ion conductor $\text{Gd}_2\text{Zr}_2\text{O}_7$, *Electrochimica Acta*, 2010, 55, 5301.
5. Xiao-Liang Xia, **Jia-Hu Ouyang**, Zhan-Guo Liu, Shuai Gao, Sa Li, Preparation and Improved Grain Conductivity of $(\text{Sm}_{1-x}\text{Y}_x)_2\text{Zr}_2\text{O}_7$ Ceramics, *Journal of the Electrochemical Society*, 2010, 157, B470.
6. Zhan-Guo Liu, **Jia-Hu Ouyang**, Yu Zhou, Xiao-Liang Xia, Electrical conductivity and thermal expansion of neodymium-ytterbium zirconate ceramics, *Journal of Power Sources*, 2010, 195, 3261.
7. **Jia-Hu Ouyang**, Yu-Feng Li, Ya-Ming Wang, Yu Zhou, T. Murakami, S. Sasaki, Microstructure and tribological properties of $\text{ZrO}_2(\text{Y}_2\text{O}_3)$ matrix composites doped with different solid lubricants from room temperature to 800°C , *Wear*, 2009, 267, 1353.
8. Zhan-Guo Liu, **Jia-Hu Ouyang**, Yu Zhou, Xiao-Liang Xia, Electrical conductivity of samarium-ytterbium zirconate ceramics, *Electrochimica Acta*, 2009, 54, 3968.
9. Xiao-Liang Xia, **Jia-Hu Ouyang**, Zhan-Guo Liu, Influence of CaO on structure and electrical conductivity of pyrochlore-type $\text{Sm}_2\text{Zr}_2\text{O}_7$, *Journal of Power Sources*, 2009, 472, 319.
10. Zhan-Guo Liu, **Jia-Hu Ouyang**, Yu Zhou, Qing-Chang Meng, Xiao-Liang Xia, Order-disorder transition and thermal conductivity of $(\text{Yb}_x\text{Nd}_{1-x})_2\text{Zr}_2\text{O}_7$ solid solutions, *Philosophical Magazine*, 2009, 89, 553.
11. Zhan-Guo Liu, **Jia-Hu Ouyang**, Yu Zhou, Jing Li, Xiao-Liang Xia, Influence of ytterbium- and samarium-oxides codoping on structure and thermal conductivity of zirconate ceramics, *Journal of the European Ceramic Society*, 2009, 29, 647.
12. **Jia-Hu Ouyang**, Shinya Sasaki, Takashi Murakami, Yu Zhou, Jian Zhang, Mechanical and unlubricated tribological properties of titanium-containing diamond like carbon coatings, *Wear*, 2009, 266, 96.
13. Zhan-Guo Liu, **Jia-Hu Ouyang**, Yu Zhou, Xiao-Liang Xia, Effect of Sm substitution for Gd on the electrical conductivity of fluorite-type $\text{Gd}_2\text{Zr}_2\text{O}_7$ ceramics, *Journal of Power Sources*, 2008, 185, 876.
14. **J.H. Ouyang**, T. Murakami, S. Sasaki, High-temperature tribological properties of a cathodic arc ion-plated (V,Ti)N coating, *Wear*, 2007, 263, 1347.
15. **J. H. Ouyang**, S. Sasaki, T. Murakami, K. Umeda, Tribological properties of spark plasma sintered (SPS) $\text{ZrO}_2(\text{Y}_2\text{O}_3)$ - CaF_2 -Ag composites at elevated temperatures, *Wear*, 2005, 258, 1444.
16. **J.H. Ouyang**, S. Sasaki, Friction and wear characteristics of a Ti-containing diamond-like carbon coating with a SRV tester at high contact load and elevated temperature, *Surface & Coating Technology*, 2005, 195, 234.
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18. **J.H. Ouyang**, S. Sasaki, Microstructure and high temperature tribological characteristics of $\text{ZrO}_2\text{-Y}_2\text{O}_3$ ceramic coating deposited by laser-assisted plasma hybrid spraying, *Tribology International*, 2002, 35, 255.
19. **J.H. Ouyang**, R. Kovacevic, Material flow and microstructure of the friction stir butt welds of the same and dissimilar aluminum alloys, *Journal of Material Engineering and Performance*, 2002, 11, 51.
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