

Zhilin Xie

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Education

- B.S. Process Equipment and Control Engineering, China University of Petroleum, 2006-2010.
- M.S. Mechanical Engineering, University of Central Florida, 2010-2012.
- PhD. Mechanical Engineering, University of Central Florida, working on.

Research experience

- M.S. Thesis “Re, Os, Al and Mg Boron Rich Ceramic Compounds for Structural Application”
Mechanochemically synthesized ReB_2 powder, and characterized it by SEM, TEM, Raman spectroscopy and SIMS; Synthesized superhard hex- OsB_2 and AlMgB_{14} .
- B.S. Thesis “Stress Analysis of Plate-fin Structure”
Performed a stress analysis to plate-fin structure by the theoretical method and finite element method; Obtained stress calculation formulas for plate-fin structure.

Working experience

- Graduate Teaching Assistant, University of Central Florida, August 2010 – Present.
- Internship at Qilu Co. Ltd. of China Petroleum & Chemical Corporation Limited, Shandong, China, July to August 2008.

Publications/Presentations/Patents

- [1] N. Orlovskaya, Z. Xie, M. Klimov, H. Heinrich, D. Restrepo, R. Blair and C. Suryanarayana, Mechanochemical synthesis of ReB_2 powder, *J. Mater. Res.*, 14(2011), 2772-2779.
- [2] Z. Xie, N. Orlovskaya, E.A. Payzant, D.A. Cullen, D.T. Restrepo and R.G. Blair, Mechanochemical synthesis of hexagonal OsB_2 , *J. Solid State Chem.*, submitted.
- [3] Z. Xie, N. Orlovskaya, V. DeLucca, R. A. Haber, D. T. Restrepo, J. Todd and R. G. Blair, Synthesis of superhard AlMgB_{14} , in preparing.
- [4] N. Orlovskaya, Z. Xie, D.T. Restrepo and R.G. Blair, Mechanochemical synthesis of ReB_2 powder, Poster Presentation, 36th ICACC Conference, Daytona Beach, FL, January 2012.
- [5] Z. Xie, N. Orlovskaya, E.A. Payzant, D.A. Cullen, D.T. Restrepo and R.G. Blair, Mechanochemical synthesis of hexagonal OsB_2 , Gordon Research Conference, South Hadley, MA, August 2012.
- [6] N. Orlovskaya, Z. Xie, R. G. Blair, Mechanochemical synthesis of hexagonal OsB_2 , U.S. Serial No. 61/753,163, filed on January 16, 2013.

Honors

- 2010-2014 Graduate Dean’s Fellowship, University of Central Florida.
- July 2012 Award to participate International Neutron Scattering Instrumentation School (INSIS), INFN - Laboratori Nazionali di Frascati, Rome, Italy.
- 2007-2008 National Endeavourers Fellowship, China University of Petroleum.

Skills

- ABAQUS, AutoCAD, SolidWorks, ProE.
- X-ray diffraction, Scanning electron microscope, Transmission electron microscope, Raman spectroscopy

Advisors

- Prof. Nina Orlovskaya, Department of Mechanical and Aerospace Engineering, University of Central Florida.
- Prof. Richard G. Blair, Department of Chemistry, University of Central Florida.