



Personal Information

Name	Wei-guo Mao	
Date of Birth	May 14, 1979	
Nationality	China	
Degree	Doctor	
Title	Assistant Professor	
Languages	Chinese, English	
Hobby	Basketball, Football	
E-mail	ssamao@xtu.edu.cn, ssamao@yahoo.com	
Current address	Faculty of Materials, Optoelectronics and Physics, Xiangtan University, Hunan, 411105, China	

Objective

To obtain challenging chance and creative work experience as my postdoctoral or visiting research.

Education

- ※ B.E. in Measurement & Control Technology and Instrumentations, July 2001, Xiangtan University, Hunan, China.
- ※ M.S. in Material Physics & Chemistry, August 2003, Xiangtan University, Hunan, China.
- ※ Doctor's degree in Material Physics & Chemistry, December 2006, Xiangtan University, Hunan, China.

Research Interest

- ★ Mechanics of Materials, Engineering Mechanics
- ★ Materials Science and Engineering,
- ★ Failure Mechanism Investigation Of Film/Coating Materials
- ★ Preparation Method Of Film/Coating Materials
- ★ Theoretical Calculation

Relevant Primary Courses Pursued

- ◆ Mechanics of Solids
- ◆ Mechanics of Engineering
- ◆ Continuum Medium Materials Mechanics



- ◆ Tensor Analyses and Calculation
- ◆ Engineering Mechanical Graphics
- ◆ Method of Mathematic and Physics
- ◆ Physics of Solids
- ◆ Theory of Solids
- ◆ Modern Experimental Method of Materials
- ◆ Electronic Micrology & X-ray

Course Taught

- ◆ Graduate Course: Mechanics of Materials, Computer Network

Professional Experience

- ◆ Research Assistant, Xiangtan University, Xiangtan, Nov. 2004-July 2008.
- ◆ Assistant Professor, Xiangtan University, Xiangtan, Aug. 2008-Present

Publications

- [1] **W. G. Mao**, C. Y. Dai, L. Yang, Q. X. Liu, Y. C. Zhou, Interface fracture characteristic and crack propagation investigations of thermal barrier coatings under tensile tests at elevated temperature, International Journal of Fracture, 2008. (In Press).
- [2] **W. G. Mao**, C. Y. Dai, Y. C. Zhou, X. H. Yu, Thermo-mechanical buckling failure of thermal barrier coatings with arbitrary delamination location, Advances In Vibration Engineering, 2007, 6(2):149-164.
- [3] **W. G. Mao**, Y. C. Zhou, L. Yang, X. H. Yu, Modeling of Residual Stresses Variation with Thermal Cycling in Thermal Barrier Coatings, Mechanics of Materials, 2006, 38: 1118-1127.
- [4] **W. G. Mao**, C. Y. Dai, Y. C. Zhou, Q. X. Liu, An experimental investigation on thermo-mechanical buckling delamination failure characteristic of air plasma sprayed thermal barrier coatings, Surface coating and Technology, 2007, 201:6217-6227.
- [5] **W. G. Mao**, Y. C. Zhou, Failure of Thermal Barrier Ceramic Coating Induced By Buckling Due to Temperature Gradient and Creep, Advance Materials Research, 2005, 9: 21-30.
- [6] **W. G. Mao**, C. Y. Dai, Y. C. Zhou, Q. X. Liu, An experimental investigation of the interface fracture characteristic in air plasma sprayed



- thermal barrier coating system at ambient and different high temperatures, Key Engineering Materials, 2007, 353:239-242.
- [7] **W. G. Mao**, C. Y. Dai, Y. C. Zhou, Prediction of Residual Stress in Thermal Barrier Coating During the Deposition Process, Natural Science Journal of Xiangtan University, 2005, 27(4): 46-52. (Chinese Journal)
- [8] **W. G. Mao**, Y. C. Zhou, Prediction of residual stress in thermal barrier coating under thermal cycles, Natural Science Journal of Xiangtan University, 2003, 25(3): 39-47. (Chinese Journal)
- [9] **W. G. Mao**, Y.C. Zhou, Thermo-mechanical buckling failure of multilayered beam-plate with arbitrary delamination location, The 11th international Conference on Fracture, Turin (Italy), March 20-25, 2005.
- [10] L. Yang, Y. C. Zhou, **W. G. Mao**, Q. X. Liu, Acoustic emission evaluation of the fracture behavior of APS-TBCs subjected to bondcoating oxidation, Surface and Interface Analysis, 2007, 39: 761-769.
- [11] L. Yang, Y. C. Zhou, **W. G. Mao**, Q. X. Liu, Nondestructive impedance spectroscopy evaluation of the bond coat oxidation in thermal barrier coatings, Surface Review and Letters, 2007, 14(5): 935-943.

International Conferences

- [1] Macro-, Meso-, Micro- and Nano-Mechanics of Materials (MM2003), Organized by Department of Mechanical Engineering, Hong Kong University of Science and Technology, 8-10 Dec. 2003.
- [2] The 11th International Conference on Fracture, Organized by Professor Alberto Carpinteri in Turin (Italy), 20-25 March, 2005
- [3] The Eighth International Conference on Fundamentals of Fracture (ICFF VIII), Organized by Professor Tong-yi Zhang in Hong Kong and Zhuangzhou, China, 3-7, Jan. 2008

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technology Department, China (No:08JJ3003).

- 4) The Scientific Research Fund of Hunan Provincial Education Department, China (No: 08B084).

Referees:

(1) Chair Professor Tong-Yi Zhang

Department of Mechanical Engineering
Hong Kong University of Science and Technology
Clear Water Bay
Kowloon
Hong Kong
Tel. (852) 2358-7192
Fax (852) 2358-1543

(2) Joseph Cummings Professor Yonggang Huang

Dept. of Civil/Environmental Eng.
and Dept. of Mechanical Engineering
Northwestern University
2145 Sheridan Road
Evanston, IL 60208
Phone: (847) 467-3165
Fax: (847) 491-4011
Email: y-huang@northwestern.edu

(3) Professor Yi-chun Zhou

Faculty of Materials, Optoelectric and Physics,
Xiangtan University, 411105
Hunan Province, China
Tel:+86-732-8293586, Fax:+86-732-8293586
E-mail: zhouyc@xtu.edu.cn

(4) Professor Jiangyu Li

Assistant Professor of Mechanical Engineering
University of Washington
Box 352600, Seattle, WA 98196-2600
Tel: 206-685-2429
Fax: 206-685-8047
Email: Jiangyuli@yahoo.com