

2005 Publications

Journals and Chapters

Y. T. Chen, H. Chen, J. Zhang, H. T. Hsieh, "Modeling Corrosion and Precipitation in Non-isothermal LBE Pipe/Loop Systems," JOURNAL OF NUCLEAR SCIENCE AND TECHNOLOGY, 2005, 42 (11): 970-978.

H. Chen, Y. Chen, J. Zhang, H. T. Hsieh, "Improved Applications of a Kinetic Corrosion Model in Non-isothermal Loop/pipe Systems," TRANSACTIONS OF THE AMERICAN NUCLEAR SOCIETY, 2005, 92, 137-138.

J. Zheng, N. Li, and Y. T. Chen, "Dynamics of High Temperature Oxidation Accompanied by Scale Removal and Implications for Technological Applications," JOURNAL OF NUCLEAR MATERIALS, 342 (2005), pp.1-7.

D. Pepper and Y. T. Chen, "Heat Transfer Analysis of Nuclear Waste Casks Stored in the Yucca Mountain Repository," NUM. HEAT TRANSFER, Part A, 47:671-690, 2005.

J. Zheng, N. Li, Y. Chen, and A.E. Rusanov, "Corrosion Behaviors of US Steels in Flowing Lead-bismuth Eutectic (LBE)," JOURNAL OF NUCLEAR MATERIALS, 336 (2005), pp.1-10.

Refereed Conference Papers

H. Chen, Y. T. Chen, H. T. Hsieh, and J. Zhang, "Numerical Analysis of Corrosion Behavior and Oxygen Transport in the Nature Convective Lead-bismuth Flow," Proceedings of IMECE2005 ASME INTERNATIONAL MECHANICAL ENGINEERING CONGRESS, November 5-11, 2005, Orlando, FL, USA.

T. Tan, H. Chen, Y. T. Chen, S. Hsieh, and J. Zhang, "Theoretical Modeling and Numerical Simulation of the Corrosion/Precipitation Process in Non-isothermal Pipe Systems," Proceedings of IMECE2005 ASME INTERNATIONAL MECHANICAL ENGINEERING CONGRESS, November 5-11, 2005, Orlando, FL, USA.

K. Kwan, M. Hodges, S. Hsieh, and Y. T. Chen, "An Object-Oriented Systems Engineering Model Design for Integrating Spent Fuel Extraction and System Process," Proceedings of IMECE2005 ASME INTERNATIONAL MECHANICAL ENGINEERING CONGRESS, November 5-11, 2005, Orlando, FL, USA.

K. K. Muramalla, Y. T. Chen, and A. Hechanova, "Simulation and Optimization of Homogeneous Decomposition of Sulfur-trioxide Gas on a Coated Platinum Surface," Proceedings of IMECE2005 ASME INTERNATIONAL MECHANICAL ENGINEERING CONGRESS, November 5-11, 2005, Orlando, FL, USA.

V. Ponyavin, Y. T. Chen, A. Hechanova, and P. Peterson, "Stress Analysis of High Temperature Heat Exchanger," Proceedings of IMECE2005 ASME INTERNATIONAL MECHANICAL ENGINEERING CONGRESS, November 5-11, 2005, Orlando, FL, USA.

S. Subramanian, V. Ponyavin, C. De Losier, Y. T. Chen, Anthony Hechanova, and Per Peterson, "The Effect of Fin Geometry on Design of Compact Off-set Strip Fin High Temperature Heat Exchanger,"

Proceedings of IMECE2005 ASME INTERNATIONAL MECHANICAL ENGINEERING CONGRESS, November 5-11, 2005, Orlando, FL, USA.

K. K. Muramalla, Y. T. Chen, and A. Hechanova, "Simulation of Decomposition of Sulfur Trioxide Gas on Self-Catalytic Metallic Material," AIChE Annual Conference, October 30-November 4, 2005, Cincinnati Convention Center, Cincinnati, OH.

T. Gemci, V. Ponyavin, Y. T. Chen, and Richard Collins, "Oscillatory Flow in an Anatomically Realistic 17-generation Human Bronchial Airway Model," 10th Jubilee National Congress on Theoretical and Applied Mechanics, September 13-16, 2005, Varna, Bulgaria.

S. Subramanian, V. Ponyavin, C. R. DeLosier, Y. T. Chen, and Anthony E. Hechanova, 2005, "Design Considerations for Compact Ceramic Offset Strip-fin High Temperature Heat Exchangers," Fifth International Conference on Enhanced, Compact and Ultra-Compact Heat Exchangers: Science, Engineering and Technology, September 11-16, 2005, Whistler, British Columbia, Canada

E. Wilkinson, R. Boehm, Zero energy house for the southern Nevada area, Proceeding of ISEC2005, Solar Energy Conference, Orlando, August 6-12, 2005.

Sahm, A. Gray, R. Boehm, K. Stone, Cleanliness maintenance for an Amonix lens system, Proceeding of ISEC2005, Solar Energy Conference, Orlando, August 6-12, 2005.

H. Chen, Y. T. Chen, H. T. Hsieh, and T. Tan, "Theoretical Analysis of High Prandtl Number Heat Transfer in Non-isothermal Pipe Flow," ASME National Summer Heat Transfer Conference, July 17-22, 2005, San Francisco, CA, USA.

V. Ponyavin, S. Subramanian, C. R. DeLosier, Y. T. Chen, Anthony E. Hechanova, and Per Peterson, "The Flow Calculations in the High Temperature Heat Exchanger with the Manufacturing Geometrical Effects," ASME National Summer Heat Transfer Conference, July 17-22, 2005, San Francisco, CA, USA

S. Subramanian, R. Akberov, C. R. DeLosier, Y. T. Chen, Anthony E. Hechanova, and Per Peterson, "Design Considerations for Compact Off-set Strip Fin High Temperature Heat Exchangers," ASME Turbo Expo 2005: Power for Land, Sea and Air, June 6-9, 2005, Reno-Tahoe, NV, USA

V. Ponyavin, Y. T. Chen, and D. Pepper, "Numerical Modeling of Unsteady Gas Flow Around the Projectile in the Second Stage of the Light Gas Gun," 17th Computational Fluid Dynamics Conference, June 6-9, 2005, Toronto, Canada

H. Chen, Y. T. Chen, J. Zhang, and H. T. Hsieh, "Improved Applications of a Kinetic Corrosion Model in Non-isothermal Loop/Pipe Systems," ANS Conference, June 5-9, 2005, San Diego, CA, USA

V. Ponyavin, Y. T. Chen, and D. Pepper, "Numerical Calculation of the Unsteady Gas Flow Around a Projectile Moving Through a Gun Barrel," Computational Ballistics, May 18-20, 2005, Cordoba, Spain

L. Sun, L. Kwan, H. T. Hsieh, Y. T. Chen, and R. Clarksean, "An Object-oriented Systems Engineering Model Development for Improving Design Factors of the Spent Fuel Extraction Process," Waste Management Conference, February 27 – March 3, 2005, Tucson, AZ, USA

P. Chinnasamy and Y. T. Chen, "Application of Computational Fluid Dynamics on Smart Wing Design," 43rd AIAA Aerospace Sciences Meeting and Exhibit, January 10-13, 2005, Reno, NV, USA

X. Wang, D. W. Pepper, Y. T. Chen, and H. T. Hsieh, "A Three Dimensional Finite Element Model for Emergency Response," 43rd AIAA Aerospace Sciences Meeting and Exhibit, January 10-13, 2005, Reno, NV, USA