



HANWEI ZHANG

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Research Interests

Thermal conversion of municipal solid waste to energy;

Numerical Analysis of High Temperature Process by Computational Fluid Dynamics;

Education

Ph.D. 2002, Environmental Engineering, Columbia University

M.Sc. 1990, Chemical Engineering, Sichuan University

B.Sc. 1987, Chemical Metallurgy, Sichuan University

Professional Experience

Covanta Energy Corporation

Director, Research & Development

Principle Engineer

Senior Engineer

Morristown, NJ

2010~Present

2008~2010

2005~2008

American Ref-fuel

Engineering Consultant

Montvale, NJ

2003~2005

Earth Engineering Center, Columbia University

Postdoctoral Research Associate

Research Assistant

New York, NY

2002~2003

1998~2002

Department of Chemical Engineering, Sichuan University

Assistant Professor

Chengdu, China

1994 ~1998

Sichuan Institute of Light Industry

Research Engineer

Chengdu, China

1990 ~1994

Patents

- ZHANG_HANWEI: System and method for gasification-combustion process using post combustor. Covanta Energy Jan, 21 2010: US 20100012006
- BROGLIO RON, ZHANG HANWEI: Gasification combustion system. COVANTA ENERGY, April 29th, 2014: US 8701573

Selected Publications

- [1] Goff, S., Hahn, J., Zhang, H. and Nadgauda S.(2008). MSW Gasification – Understanding the Challenges. Proceedings of NAWTEC16, 16th Annual North American Waste-to-Energy Conference May 19-21, 2008, Philadelphia, Pennsylvania, USA
- [2] Epelbaum, G. and Zhang, H (2007). New development in EfW boiler process modeling: Fully Integrated CFD Model, 15th North American Waste to Energy Conference, Tempa, FL
- [3] Epelbaum, G. and Zhang, H (2007). Process Simulation of a large Mass Burn Waste-To-Energy boiler by the combination of CFD software programs, Progress in Computational Fluid Dynamics vol 7, No. 1, pp 9-16
- [4]. Nakamura, K., Zhang, H. & Themelis, N. J. (2003). Modeling of Waste-to-Energy Combustion with Continuous Variation of the Solid Waste Fuel, 2003 ASME International Mechanical Engineering Congress & Exposition, Washington, D.C., November 16-21, 2003
- [5]. Zhang, H., Vardelle, A. M., Themelis, N. J. (2003). In-flight oxidation and Evaporation of plasma-sprayed Iron Particles, Journal of High Temperature materials Process, Volume 7, Issue 3, Pages 277-298
- [6]. Klein, A., Zhang, H. & Themelis, N. J. (2003). A Waste-To-Energy Power Plant with CO₂ Sequestration, 11th North American Waste to Energy Conference, Tempa, FL
- [7]. Vardelle, A., Vardelle, M., Zhang, H., Themelis, N. J. & Gross, K. (2002). Fume formation in plasma spraying. Journal of Thermal Spray Technology, Volume 11, Issue 2, June 2002, Pages 244-252.
- [8]. Vardelle, A. M., Zhang, H. & Themelis, N. J. (July 2001). Modeling of on-flight oxidation and evaporation of plasma-sprayed iron particles, Proc. Int. Conf. On Plasma Chemistry, Orlean,
- [9]. Vardelle, A. M., Zhang, H. & Themelis, N. J. (May 2000). Metal volatilization and fume formation in plasma sprays, 15th International Thermal Spray Conference, Montreal, Canada.
- [10]. Zhang, H., Espie, G., Themelis, N. J. & Vardelle, A. M. (August 1999). Evaporation and oxidation of iron droplets in a plasma jet, 14th International Symposium on plasma Chemistry, Prague, 2775~2784