Zhiwei Yang
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EDUCATION

University of Delaware
Sep 99 - Feb 05 • Ph.D. Mechanical Engineering

Tsinghua University, Beijing, China
Sep 96 - Jul 99 • M.S., Thermal Engineering

Xi'an Jiaotong University, Shaanxi, China
Sep 92 - Jul 96 • B.S., Turbo-machinery

WORK EXPERIENCE

Princeton University
Sep 07 - • Postdoctoral Research Fellow, Dept. of Mechanical and Aerospace Engineering

University of Utah
Jan 05- Aug 07 • Postdoctoral Research Associate, Dept. of Chemical Engineering

University of Delaware
Sep 99- Dec 04 • Research Associate, Dept. of Mechanical Engineering

PROJECT WORK

- **Ph.D. Dissertation**: Experiments and Modeling of Incipient Soot Formation and Growth in Flames.
- **M.S. thesis:** Experimental study of supersonic and transonic flow fields using Particle Image Velocimetry.
- **B.S. thesis**: Numerical calculation of the thermal cycle of 200MW power plant turbine to increase efficiency.

PUBLICATIONS

1. **Yang, Z.**, Zhang, H. R., Eddings, E.G., Sarofim, A.F., "Selection of inception species for soot modeling in premixed flames", the 5th US Combustion Meeting, March 25-28, 2007, F22.
2. **Yang, Z.**, Wang, C., Wang, T., "PIV measurement of supersonic and transonic jet flow fields", Experiments and Measurements in Fluid Mechanics, Vol. 14, No.2, pp. 92-97, 2000. (**Times cited: 1**)
3. Zhao, B., **Yang, Z.**, Johnston, M. V., Wang, H., Wexler, A. S., Balthasar, M., and Kraft, M., "Measurement and numerical simulation of soot particle size distribution functions in a laminar premixed ethylene-oxygen-argon flame," Combustion and Flame, 133, pp. 173-188, 2003. (**Times cited: 25**)
4. Zhao, B., **Yang, Z.**, Wang, J., Johnston, M. V. and Wang, H., "Analysis of soot nanoparticles in a laminar premixed ethylene flame by scanning mobility particle sizer," Aerosol Science and Technology, 37, pp. 611-620, 2003. (**Times cited: 15**)
5. Hirasawa, T., Sung, C. J., Joshi, A., **Yang, Z.**, Wang, H. and Law, C. K., "Determination of laminar flame speeds of fuel blends using digital particle image velocimetry: ethylene, n-butane, and toluene flames," Proceedings of the Combustion Institute, 29, pp. 1427-1434, 2002. (**Times cited: 4**)

6. **Yang, Z.**, Zhao, B., and Wang, H., "Study of particle inception near and below sooting limit by Scanning Mobility Particle Sizer," in Chemical and Physical Processes in Combustion, 2003 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Pennsylvania State University, University Park, Pennsylvania, October 26-29, 2003, pp. 81-84.
7. **Yang, Z.**, Zhao, B., and Wang, H., "Effect of flame temperature on particle size distribution functions of soot in laminar premixed ethylene flames," Third Joint Meeting of the US Sections of the Combustion Institute, Chicago, Illinois, March 2003, paper PH8.6.
8. Thierley, M., Grotheer, H.-H., Aigner, M., **Yang, Z.**, Zhao, B., Wang, H., "On the existence of nanoparticles below sooting threshold", Proceedings of the Combustion Institutes, 31, pp639-647, 2007.
9. Zhang, H. R., **Yang, Z.**, Eddings, E. G., Sarofim, A. F., "Pollutant Formation in Premixed and Diffusion Flames of Paraffinic Fuels Using the Reduced Utah Surrogate Mechanisms", Preprints of Symposia - American Chemical Society, Division of Fuel Chemistry, 52 (1), pp.144- (2007).
10. Zhao, B., **Yang, Z.**, Li, Z., Johnston, M. V., and Wang, H., "Particles Size Distribution Function of Incipient Soot in Laminar Premixed Ethylene Flames: Effect of Flame Temperature," Proceedings of the Combustion Institute, 30, pp1441-1448, 2004.
11. **Yang, Z.**, Yang, B. and Wang, H., "The influence of H-atom diffusion coefficient on laminar flame simulation," Proceedings of the Second Joint Meeting of the U.S. Sections of The Combustion Institute, March 2001, Berkeley, California, Paper 237.
12. Hirasawa, T., Sung, C.-J., **Yang, Z.**, Joshi, A., and Wang, H., "Effect of ferrocene addition on sooting limits in ethylene/oxygen/argon laminar premixed flames," Combustion and Flame, 139, pp. 288-299, 2004.