

Tsutomu Shimizu

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Current Position:

Research Assistant, Prof. Hai Wang, Department of Aerospace and Mechanical Engineering, University of Southern California, 2006-present

Education:

- M.S. Mechanical Engineering, UC San Diego, 2004
- M.Eng. Aerospace Engineering, Osaka Prefecture University, 2002

Positions Held:

- Teaching Assistant, Principles of Combustion, Prof. Fokion N. Egolfopoulos, USC, 2006
- Research Assistant, Prof. Forman A. Williams, UC San Diego, 2003-2004
- Rotary International Scholar, UC San Diego, 2002-2003
- Spring Intern, Denso co., *Aichi*, Japan, 2001

Publication:

Journal Papers:

- Van Devener, B., Anderson, S. L., Shimizu, T., Wang, H., Nabity, J., Engel, J., Yu, J., Wickham, D., and Williams, S., 'In Situ Generation of Pd/PdO Nanoparticles Methane Combustion Catalyst from a Fuel-Soluble Organometallic Precursor', *Journal of Physical Chemistry C*, submitted, 2009
- Shimizu, T., Abid, A.D., Poskrebyshev, G., Wang, H., Nabity, J., Engel, J., Yu, J., Wickham, D., Van Devener, B., and Anderson, S. L., 'Methane Ignition Catalyzed by In Situ Generated Palladium Nanoparticles', *Combustion and Flame*, in press, 2009
- Shimizu, T., Frassoldati, A., and Williams, F.A., 'Concentrations of Nitric Oxide in Laminar Counterflow Methane/Air Diffusion Flames', *Journal of Propulsion and Power*, Vol.21, No.6, November-December issue, 2005

Conference Papers:

- Shimizu, T. and Wang, H., 'Temperature-Dependent Chemical Kinetic Model of Methane Oxidation over Palladium Surfaces', 2009 Fall Technical Meeting of the Western States Section of the Combustion Institute, *Irvine*, CA, October, 2009
- Shimizu, T., Abid, A.D., Poskrebyshev, G., Wang, H., Nabity, J., Engel, J., Yu, J., Wickham, D., Van Devener, B., and Anderson, S. L., 'Experimental and Numerical Studies on Methane Ignition Catalyzed by In Situ Generated Palladium Nanoparticles in a Laminar Flow Reactor', The 6th US National Combustion Meeting, *Combustion Institute, Ann Arbor*, MI, May, 2009
- Theiss, N., Liu, J.B., Levin, J., Zhao, J., Shimizu, T., Wang, F., Gundersen, M.A., and Ronney, P.D., 'Transient Plasma Discharge Ignition for Internal Combustion Engines', The 4th Joint US Sections Meeting, *Combustion Institute, Philadelphia*, PA, March, 2005
- Shimizu, T., Frassoldati, A., and Williams, F.A., 'Concentrations of Nitric Oxide in Laminar Counterflow Methane/Air Diffusion Flames', The 43rd AIAA Aerospace Sciences Meeting and Exhibit, *Reno*, NV, January, 2005
- Shimizu, T., Kaneko, K., and Tsujikawa, Y., '3D Numerical Analysis of Natural Convection Heat Transfer on a Vertical Array of Plate Fins', *JASME Thermal Engineering Conference, Okayama*, Japan, November, 2001