Stanford

Hai Wang

Silas Palmer Professor of Engineering

Mechanical Engineering

CONTACT INFORMATION

- **Administrative Contact**

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Bio

BIO

Hai Wang is Silas H. Palmer Professor of Engineering in the Department of Mechanical Engineering at Stanford University. His research interests are high-speed propulsion, combustion, and renewable energy conversion. His current research topics include combustion chemistry of conventional and renewable fuels, detonation, high-speed propulsion, quantum-chemistry guided battery materials design, and transport theories. He is the author and coauthor of recent papers in scholarly journals, including "Stable sodium-sulfur electrochemistry enabled by phosphorus-based complexation" in PNAS, “Geometric modeling and analysis of detonation cellular stability" in Proceedings of the Combustion Institute, "Flame-formed carbon nanoparticles exhibit quantum dot behaviors" in PNAS, "Nanoparticles in dilute gases: Equivalence of momentum accommodation and surface adsorption" in Physical Review E, "A Physics-based approach to modeling real-fuel combustion chemistry. I. Evidence from experiments, and thermodynamic, chemical kinetic and statistical considerations" in Combustion and Flame, and “Formation of nascent soot and other condensed-phase materials in flames” in Proceedings of the Combustion Institute. He was the Editor-in-Chief of Progress in Energy and Combustion Science, a highly influential energy journal published by Elsevier with an impact factor of 35.3 (2021). Currently, he serves as the President of the Combustion Institute - an international, non-profit, educational and scientific society that promotes and disseminates research activities in all areas of combustion science and technology for the advancement of many communities around the world.

ACADEMIC APPOINTMENTS

- Professor, Mechanical Engineering

ADMINISTRATIVE APPOINTMENTS

- Silas H. Palmer Professor of Engineering, Stanford University, (2025- present)
- Professor, Department of Mechanical Engineering, Stanford University, (2013- present)
- Co-Founder, Hestia Tec, LLC, (2010-2014)
- Northrop Chair in Engineering, University of Southern California, (2010-2013)
- Associate Chair, Department of Aerospace and Mechanical Engineering, University of Southern California, (2008-2009)
- Professor, Department of Aerospace and Mechanical Engineering, University of Southern California, (2007-2013)
- Co-Founder, TISOL, LLC, (2007-2011)

- Associate Professor, Department of Aerospace and Mechanical Engineering, University of Southern California, (2004-2007)
- Associate Professor, Department of Mechanical Engineering, University of Delaware, (2001-2004)
- Assistant Professor, Department of Mechanical Engineering, University of Delaware, (1997-2001)
- Professional Research Staff, Department of Mechanical and Aerospace Engineering, Princeton University, (1994-1996)
- Postdoctoral Research Associate, Fuel Science Program, Department of Materials Science and Engineering, Pennsylvania State University, (1992-1994)

HONORS AND AWARDS

- Humboldt Senior Research Award, Alexander von Humboldt Foundation (2019)
- Mercator Fellow, The German Research Foundation (DFG) (2019)
- Fellow, The Combustion Institute (2018)
- Fellow, American Society of Mechanical Engineers (ASME) (2018)
- Propellants and Combustion Award, AIAA (2018)
- Distinguished Paper Award, Thirty-Fifth International Symposium on Combustion (2014)
- Senior Research Award, Viterbi School of Engineering, USC (2011)
- Changjiang Scholar, Ministry of Education, China (2010)
- Northrop Chair in Engineering, University of Southern California (2010)
- Combustion and Flame Most Cited Author 2005-2008, Elsevier (2009)
- Distinguished Paper Award, Thirty-First International Symposium on Combustion (2006)
- CAREER Award, National Science Foundation (1999)
- C.C.Wright Award for Excellence in Graduate Study, Fuel Science, Pennsylvania State University (1992)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, The Combustion Institute (2024 - present)
- Vice President, The Combustion Institute (2020 - 2024)
- Co-Chair, 37th International Symposium on Combustion (2016 - present)
- Editor-in-Chief, Progress in Energy and Combustion Science (2015 - present)
- Member of the Editorial Board, Frontiers in Energy (2012 - present)
- Associate Editor, Proceedings of the Combustion Institute (2008 - 2014)
- Member of the Editorial Board, Progress in Energy and Combustion Science (2006 - 2015)
- Member of the Editorial Board, Combustion and Flame (2003 - 2008)
- Member of the Editorial Advisory Board, International Journal of Chemical Kinetics (2001 - 2003)
- Member of the Committee on Biological and Physical Sciences in Space, National Academies of Sciences, Engineering and Medicine (2016 - present)
- Rockets Team Faculty Advisor and Member of the Advisory Board, Stanford Space Initiative (SSI) (2015 - present)
- Member of the Awards Portfolio Committee, The Combustion Institute (2015 - 2015)
- Chair, Heterogeneous Reaction Processes, NASA CombustionLab & its Workshop (2014 - 2014)
- Member of the Board of Visitors, Mechanical Sciences Division, Army ReseaRCH OFFICE (2013 - 2013)
- Member of the Advisory Board, National Center for Hypersonic Combined Cycle Propulsion (2013 - 2014)
- Thrust leader, Combustion Energy Frontier Research Center (CEFRC) (2010 - 2014)
- Member of the Steering Committee, Combustion Energy Frontier Research Center (CEFRC) (2010 - 2014)

- Member of the Fuel Cells Working Group, The State of Delaware (2002 - 2003)

PROFESSIONAL EDUCATION

- Ph.D., Pennsylvania State University, University Park, Pennsylvania , Fuel Science (1992)
- M.S., Michigan Technological University, Houghton, Michigan , Chemical Engineering (1986)
- B.Eng., East China University of Science and Technology , Polymer Materials Science and Engineering (1984)

PATENTS

- Hai Wang, Lee-Yang Wang, Erin N. Kampschroer. "United States Patent 9,314,800 Apparatus and process for high throughput powder production", Apr 19, 2016
- Hai Wang, Denis Phares. "United States Patent 8329071 Multicomponent Nanoparticle Materials and Process and Apparatus Therefor", Dec 11, 2012
- Hai Wang, Denis J. Phares, Erik Tolmachoff. "United States Patent 8329251 Method for Preparing Metal Oxide Crystalline Nanoparticle Films for Dye Sensitized Solar Cell Photoanodes", Dec 11, 2012
- Hai Wang, Denis Phares. "United States Patent 8197908 Method for preparing electrically conducting materials", Jun 12, 2012

LINKS

- Personal Web Page: https://web.stanford.edu/~haiwang
- Lab Web Page: https://nanoenergy.stanford.edu
- Google Scholar page: https://scholar.google.com/citations?user=J4XiHbsAAAAJ&hl=en

Teaching

COURSES

2025-26

- Combustion Fundamentals: ME 371 (Win)
- Intermediate Thermodynamics: ME 132 (Aut)

2024-25

- Combustion Applications: ME 372 (Spr)
- Combustion Fundamentals: ME 371 (Win)
- Intermediate Thermodynamics: ME 132 (Aut)

2023-24

- Combustion Fundamentals: ME 371 (Win)
- Dynamics and Kinetics of Nanoparticles: ME 374 (Spr)
- Engineering Thermodynamics: ME 30 (Aut)
- Thermofluids, Energy, and Propulsion Research Seminar: ME 390A (Aut)

2022-23

- Combustion Applications: ME 372 (Spr)
- Dynamics and Kinetics of Nanoparticles: ME 374 (Win)
- The Future of Mechanical Engineering: CS 226, ME 228 (Win)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Pujan Biswas, Dongwon Ka, Andrew Klingberg, Taemin Yong

Orals Chair

Andrew Bartolo

Postdoctoral Faculty Sponsor

Amitesh Jayaraman, Andrea Nobili, Juyoung Oh

Doctoral Dissertation Advisor (AC)

Ghufran Alkhamis, Ethan Genter, Jackson Kennedy, Lauren Kramer, Naomi Lutz, Nick Montes, Michael Pascal

Master's Program Advisor

Simon Casper, Francisco Cerda, Erin Daly, Siolé Mayeski, Orianna Min, Akansha Singh

Doctoral (Program)

Omar Allahham, Luke Min, Weiyi Zhang

Publications

PUBLICATIONS

- **Coping with eco-anxiety: An interdisciplinary perspective for collective learning and strategic communication** *The Journal of Climate Change and Health*
  Wang, H., Safer, D. L., Cosentino , M., Cooper, R., Van Susteren , L., Coren, E., Nosek, G., Lertzmann, R., Sutton, S.
  2023
- **A deep learning-based system for survival benefit prediction of tyrosine kinase inhibitors and immune checkpoint inhibitors in stage IV non-small cell lung cancer patients: A multicenter, prognostic study** *eClinicalMedicine*
  Deng, K., Wang, L., Liu, Y., Li, X., Hou, Q., Cao, M., Ng, N. N., Wang, H., Chen, H., Yeom, K. W., Zhao, M., Wu, N., Gao, et al
  2022; 51: 1-14
- **Navigating the Crossroads of Cell Therapy and Natural Heart Regeneration** *Frontiers in Cell and Developmental Biology*
  Elde, S., Wang, H., Woo, Y.
  2021: 674180
- **The Expanding Armamentarium of Innovative Bioengineered Strategies to Augment Cardiovascular Repair and Regeneration** *Frontiers in Bioengineering and Biotechnology*
  Elde, S., Wang, H., Woo, Y.
  2021: 674172
- **The distillation curve and sooting propensity of a typical jet fuel** *Fuel*
  Saggese, C., Singh, A. V., Xue, X., Chu, C., Kholghy, M. R., Zhang, T., Camacho, J., Giaccai, J., Miller, H., Thomson, M. J., Sung, C., Wang, H.
  2019; 235
- **TRY plant trait database - enhanced coverage and open access** *Global Change Biology*
  Kattge, J., et al
  2019
- **Asiatic Acid Attenuates Bone Loss by Regulating Osteoclastic Differentiation** *Calcified Tissue International*
  Huang, J., Wang, H., Huang, M., Zong, Z., Wu, X., Xu, J., Lan, H., Zheng, J., Zhang, X., Lee, Y., Wei, B., Cui, L., Li, et al
  2019
- **Critical kinetic uncertainties in modeling hydrogen/carbon monoxide, methane, methanol, formaldehyde, and ethylene combustion** *COMBUSTION AND FLAME*
  Tao, Y., Smith, G. P., Wang, H.
  2018; 195: 18–29
- **Bottom-up modeling using the rate-controlled constrained-equilibrium theory: The n-butane combustion chemistry** *COMBUSTION AND FLAME*
  Janbozorgi, M., Wang, H.

2018; 194: 223–32

- **A physics-based approach to modeling real-fuel combustion chemistry - II. Reaction kinetic models of jet and rocket fuels** *COMBUSTION AND FLAME*
  Xu, R., Wang, K., Banerjee, S., Shao, J., Parise, T., Zhu, Y., Wang, S., Movaghar, A., Lee, D., Zhao, R., Han, X., Gao, Y., Lu, et al
  2018; 193: 520–37
- **Including real fuel chemistry in LES of turbulent spray combustion** *COMBUSTION AND FLAME*
  Felden, A., Esclapez, L., Riber, E., Cuenot, B., Wang, H.
  2018; 193: 397–416
- **A physics-based approach to modeling real-fuel combustion chemistry - I. Evidence from experiments, and thermodynamic, chemical kinetic and statistical considerations** *COMBUSTION AND FLAME*
  Wang, H., Xu, R., Wang, K., Bowman, C. T., Hanson, R. K., Davidson, D. F., Brezinsky, K., Egolfopoulos, F. N.
  2018; 193: 502–19
- **Effect of n-dodecane decomposition on its fundamental flame properties** *COMBUSTION AND FLAME*
  Smolke, J., Carbone, F., Egolfopoulos, F. N., Wang, H.
  2018; 190: 65–73
- **Editorial** *PROGRESS IN ENERGY AND COMBUSTION SCIENCE*
  Schulz, C., Wang, H.
  2018; 64: 1
- **p4v: practical verification for programmable data planes** *SIGCOMM '18 Proceedings of the 2018 Conference of the ACM Special Interest Group on Data Communication*
  Liu, J., Hallahan, W., Schlesinger, C., Sharif, M., Lee, J., Soulé, R., Wang, H., Caşcaval, C., McKeown, N., Foster, N.
  2018: 490-503
- **Plant exploitation of the first farmers in Northwest China: Microbotanical evidence from Dadiwan** *Quaternary International*
  Wang, J., Zhao, X., Wang, H., Liu, L.
  2018
- **A New Overall-Subgroup Simultaneous Test for Optimal Inference in Biomarker-Targeted Confirmatory Trials** *Statistics in Biosciences*
  Belitskaya, I., Wang, H., Shih, M., Tian, L., Doros, G., Lew, R. A., Lu, Y.
  2017
- **Mobility size distributions of soot in premixed propene flames** *COMBUSTION AND FLAME*
  Lin, H., Gu, C., Camacho, J., Lin, B., Shao, C., Li, R., Gu, H., Guan, B., Wang, H., Huang, Z.
  2016; 172: 365-373
- **Chemical kinetic model uncertainty minimization through laminar flame speed measurements** *COMBUSTION AND FLAME*
  Park, O., Veloo, P. S., Sheen, D. A., Tao, Y., Egolfopoulus, F. N., Wang, H.
  2016; 172: 136-152
- **Particle size distribution of nascent soot in lightly and heavily sooting premixed ethylene flames** *COMBUSTION AND FLAME*
  Gu, C., Lin, H., Camacho, J., Lin, B., Shao, C., Li, R., Gu, H., Guan, B., Huang, Z., Wang, H.
  2016; 165: 177-187
- **An experimental and kinetic modeling study of n-dodecane pyrolysis and oxidation** *COMBUSTION AND FLAME*
  Banerjee, S., Tangko, R., Sheen, D. A., Wang, H., Bowman, C. T.
  2016; 163: 12-30
- **Mobility size and mass of nascent soot particles in a benchmark premixed ethylene flame** *COMBUSTION AND FLAME*
  Camacho, J., Liu, C., Gu, C., Lin, H., Huang, Z., Tang, Q., You, X., Saggese, C., Li, Y., Jung, H., Deng, L., Wlokas, I., Wang, et al
  2015; 162 (10): 3810-3822
- **In situ X-ray Scattering and Dynamical Modeling of Pd Catalyst Nanoparticles Formed in Flames** *JOURNAL OF PHYSICAL CHEMISTRY C*
  Wang, J., Seifert, S., Winans, R. E., Tolmachoff, E., Xin, Y., Chen, D., Wang, H., Anderson, S. L.
  2015; 119 (33): 19073-19082

- **Numerical simulation and parametric sensitivity study of particle size distributions in a burner-stabilised stagnation flame** *COMBUSTION AND FLAME*
  Yapp, E. K., Chen, D., Akroyd, J., Mosbach, S., Kraft, M., Camacho, J., Wang, H.
  2015; 162 (6): 2569-2581
- **Analysis of segregation and bifurcation in turbulent spray flames: A 3D counterflow configuration** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Vie, A., Franzelli, B., Gao, Y., Lu, T., Wang, H., Ihme, M.
  2015; 35: 1675-1683
- **Morphology of nascent soot in ethylene flames** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Schenk, M., Lieb, S., Vieker, H., Beyer, A., Goelzhaeuser, A., Wang, H., Kohse-Hoeinghaus, K.
  2015; 35: 1879-1886
- **Kinetics of nascent soot oxidation by molecular oxygen in a flow reactor** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Camacho, J., Tao, Y., Wang, H.
  2015; 35: 1887-1894
- **Skeletal reaction model generation, uncertainty quantification and minimization: Combustion of butane** *COMBUSTION AND FLAME*
  Xin, Y., Sheen, D. A., Wang, H., Law, C. K.
  2014; 161 (12): 3031-3039
- **Properties of Complexes Formed by Na+, Mg2+, and Fe2+ Binding with Benzene Molecules** *JOURNAL OF PHYSICAL CHEMISTRY A*
  Kolakkandy, S., Pratihar, S., Aquino, A. J., Wang, H., Hase, W. L.
  2014; 118 (40): 9500-9511
- **Kinetics of catalytic oxidation of methane, ethane and propane over palladium oxide** *COMBUSTION AND FLAME*
  Xin, Y., Wang, H., Law, C. K.
  2014; 161 (4): 1048-1054
- **Imaging Nanocarbon Materials: Soot Particles in Flames are Not Structurally Homogeneous** *CHEMPHYSCHEM*
  Schenk, M., Lieb, S., Vieker, H., Beyer, A., Goelzhaeuser, A., Wang, H., Kohse-Hoeinghaus, K.
  2013; 14 (14): 3248-3254
- **Kinetics of Catalytic Oxidation of Methane over Palladium Oxide by Wire Microcalorimetry** *JOURNAL OF PHYSICAL CHEMISTRY C*
  Xin, Y., Lieb, S., Wang, H., Law, C. K.
  2013; 117 (38): 19499-19507
- **On potential energy landscape and combustion chemistry modeling** *COMBUSTION AND FLAME*
  Wang, H.
  2013; 160 (1): 222-223
- **Flexible polymer transistors with high pressure sensitivity for application in electronic skin and health monitoring** *Nature Comm.*
  Schwartz, G., Tee, B., C-K., Mei, J., Appleton, A., L., Kim, H., D, Wang, H., Bao, Z.
  2013; 4: 1859
- **Dye sensitized solar cells prepared by flames stabilized on a rotating surface** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Nikraz, S., Wang, H.
  2013; 34: 2171-2178
- **Isomerization kinetics of benzylic and methylphenyl type radicals in single-ring aromatics** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Dames, E., Wang, H.
  2013; 34: 307-314
- **Evolution of size distribution of nascent soot in n- and i-butanol flames** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Camacho, J., Lieb, S., Wang, H.
  2013; 34: 1853-1860
- **Mesoporous Titania Films Prepared by Flame Stabilized on a Rotating Surface: Application in Dye Sensitized Solar Cells** *JOURNAL OF PHYSICAL CHEMISTRY C*

Nikraz, S., Phares, D. J., Wang, H.
2012; 116 (9): 5342-5351

- **Propagation and extinction of benzene and alkylated benzene flames** *COMBUSTION AND FLAME*
  Ji, C., Dames, E., Wang, H., Egolfopoulos, F. N.
  2012; 159 (3): 1070-1081
- **Tunneling in Hydrogen-Transfer Isomerization of n-Alkyl Radicals** *JOURNAL OF PHYSICAL CHEMISTRY A*
  Sirjean, B., Dames, E., Wang, H., Tsang, W.
  2012; 116 (1): 319-332
- **Chemical kinetic uncertainty minimization through laminar flame speed measurements** *Spring Technical Meeting of the Western States Sections of the Combustion Institute, Arizona State University*
  Park, O., Veloo, P. S., Wang, H., Egolfopoulos, F. N.
  2012
- **Nanoporous titania gas sensing films prepared using flame stabilized on a rotating surface (FSRS)** *Fall MRS Meeting and Exhibits*
  Tolmachoff, E. D., Nikraz, S., Wang, H.
  2012
- **Characteristics of dye sensitized solar cells made with flame stabilized on a rotating surface (FSRS)** *2012 Fall MRS Meeting and Exhibits*
  Nikraz, S., Wang, H.
  2012
- **Study of the formation and structure of Pd nanoparticles in flames by SAXS and simulation** *Fall MRS Meeting and Exhibits*
  Winans, R. E., Wang, J. L., Seifeit, J., Anderson, S. L., Wang, H., Lieb, S., Tolmachoff, E.
  2012
- **On AFM probing of nascent soot structure** *34th International Symposium on Combustion*
  Lieb, S., Wang, H.
  2012
- **Probing nascent soot in burned stabilized ethylene flames: a comparison of several microscopic techniques** *34th International Symposium on Combustion*
  Schenk, M., Vieker, S., Beyer, H., GšlzhŠuser, A., Wang, H., Kohse-Hoeinghaus, K.
  2012
- **The method of uncertainty quantification and minimization using polynomial chaos expansions** *COMBUSTION AND FLAME*
  Sheen, D. A., Wang, H.
  2011; 158 (12): 2358-2374
- **Nanoporous Titania Gas Sensing Films Prepared in a Premixed Stagnation Flame** *JOURNAL OF PHYSICAL CHEMISTRY C*
  Tolmachoff, E., Memarzadeh, S., Wang, H.
  2011; 115 (44): 21620-21628
- **Combustion kinetic modeling using multispecies time histories in shock-tube oxidation of heptane** *COMBUSTION AND FLAME*
  Sheen, D. A., Wang, H.
  2011; 158 (4): 645-656
- **Formation of nascent soot and other condensed-phase materials in flames** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Wang, H.
  2011; 33: 41-67
- **Extinction of lean near-limit methane/air flames at elevated pressures under normal- and reduced-gravity** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Zhang, H., Fan, R., Wang, S., Tian, X., Xu, K., Wan, S., Egolfopoulos, F. N.
  2011; 33: 1171-1178
- **An experimental and modeling study of the propagation of cyclohexane and mono-alkylated cyclohexane flames** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Ji, C., Dames, E., Sirjean, B., Wang, H., Egolfopoulos, F. N.

2011; 33: 971-978

- **Properties of nanocrystalline TiO2 synthesized in premixed flames stabilized on a rotating surface** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Memarzadeh, S., Tolmachoff, E. D., Phares, D. J., Wang, H.
  2011; 33: 1917-1924
- **Internal structure, hygroscopic and reactive properties of mixed sodium methanesulfonate-sodium chloride particles** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*
  Liu, Y., Minofar, B., Desyaterik, Y., Dames, E., Zhu, Z., Cain, J. P., Hopkins, R. J., Gilles, M. K., Wang, H., Jungwirth, P., Laskin, A.
  2011; 13 (25): 11846-11857
- **Evidence of aliphatics in nascent soot particles in premixed ethylene flames** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Cain, J. P., Camacho, J., Phares, D. J., Wang, H., Laskin, A.
  2011; 33: 533-540
- **Temperature-dependent gas-surface chemical kinetic model for methane ignition catalyzed by in situ generated palladium nanoparticles** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Shimizu, T., Wang, H.
  2011; 33: 1859-1866
- **Products of the Benzene + O(P-3) Reaction** *JOURNAL OF PHYSICAL CHEMISTRY A*
  Taatjes, C. A., Osborn, D. L., Selby, T. M., Meloni, G., Trevitt, A. J., Epifanovsky, E., Krylov, A. I., Sirjean, B., Dames, E., Wang, H.
  2010; 114 (9): 3355-3370
- **Methane ignition catalyzed by in situ generated palladium nanoparticles** *COMBUSTION AND FLAME*
  Shimizu, T., ABID, A. D., Poskrebyshev, G., Wang, H., Nabity, J., Engel, J., Yu, J., Wickham, D., Van Devener, B., Anderson, S. L., Williams, S.
  2010; 157 (3): 421-435
- **Propagation and extinction of premixed C-5-C-12 n-alkane flames** *COMBUSTION AND FLAME*
  Ji, C., Dames, E., Wang, Y. L., Wang, H., Egolfopoulos, F. N.
  2010; 157 (2): 277-287
- **Weakly Bound Carbon-Carbon Bonds in Acenaphthene Derivatives and Hexaphenylethane** *JOURNAL OF PHYSICAL CHEMISTRY A*
  Dames, E., Sirjean, B., Wang, H.
  2010; 114 (2): 1161-1168
- **Micro-FTIR study of soot chemical composition-evidence of aliphatic hydrocarbons on nascent soot surfaces** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*
  Cain, J. P., Gassman, P. L., Wang, H., Laskin, A.
  2010; 12 (20): 5206-5218
- **A high-temperature chemical kinetic model of n-alkane (up to n-dodecane), cyclohexane, and methyl-, ethyl-, n-propyl and n-butyl-cyclohexane oxidation at high temperatures** *JetSurF version 2.0, (http://melchior.usc.edu/JetSurF/JetSurF2.0).*
  Wang, H., Dames, E., Sirjean, B., Sheen, D., A., Tango, R., Violi, A.
  2010
- **In Situ Generation of Pd/PdO Nanoparticle Methane Combustion Catalyst: Correlation of Particle Surface Chemistry with Ignition** *JOURNAL OF PHYSICAL CHEMISTRY C*
  Van Devener, B., Anderson, S. L., Shimizu, T., Wang, H., Nabity, J., Engel, J., Yu, J., Wickham, D., Williams, S.
  2009; 113 (48): 20632-20639
- **Quantitative measurement of soot particle size distribution in premixed flames - The burner-stabilized stagnation flame approach** *COMBUSTION AND FLAME*
  Abid, A. D., Camacho, J., Sheen, D. A., Wang, H.
  2009; 156 (10): 1862-1870
- **Evolution of Soot Particle Size Distribution Function in Burner-Stabilized Stagnation n-Dodecane-Oxygen-Argon Flames** *ENERGY & FUELS*
  Abid, A. D., Camacho, J., Sheen, D. A., Wang, H.
  2009; 23: 4286-4294

- **Detailed and simplified kinetic models of n-dodecane oxidation: The role of fuel cracking in aliphatic hydrocarbon combustion** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  You, X., Egolfopoulos, F. N., Wang, H.
  2009; 32: 403-410
- **A high-temperature chemical kinetic model of cyclohexane and its derivatives** *JetSurF version 1.1, (http://melchior.usc.edu/JetSurF/Version1_1 /Index.html).*
  Sirjean, B., Dames, E., Sheen, D., A., Egolfopoulos, F., N., Wang, H., Davidson, D., F.
  2009
- **Combustion Generated Fine Carbonaceous Particles**
  edited by Bockhorn, H., D'Anna, A., Sarofim, A. F., Wang, H.
  Karlsruhe University Press.2009
- **Size distribution and chemical composition measurements of nascent soot formed in premixed ethylene flames** *Combustion Generated Fine Carbonaceous Particles*
  Abid, A. D., Wang, H.
  edited by Bockhorn, H., D'Anna, A., Sarofim, A. F., Wang, H.
  Karlsruhe University Press.2009: 467–484
- **A high-temperature chemical kinetic model of n-alkane oxidation with quantifiable uncertainties** *JetSurF version 1.0, (http://melchior.usc.edu/JetSurF/Version1_0 /Index.html).*
  Sirjean, B., Dames, E., Sheen, D., A., You, X., Q., Sung, C., Holley, A., T., Wang, H.
  2009
- **Synthesis of nano-phase TiO2 crystalline films over premixed stagnation flames** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Tolmachoff, E. D., Abid, A. D., Phares, D. J., Campbell, C. S., Wang, H.
  2009; 32: 1839-1845
- **Sensitivity of propagation and extinction of large hydrocarbon flames to fuel diffusion** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Holley, A. T., You, X. Q., Dames, E., Wang, H., Egolfopoulos, F. N.
  2009; 32: 1157-1163
- **Transport Properties of Small Spherical Particles** *5th Interdisciplinary Transport Phenomena - Fluid, Thermal, Biological, Materials and Space Sciences*
  Wang, H.
  WILEY-BLACKWELL.2009: 484–493
- **Size distribution and morphology of nascent soot in premixed ethylene flames with and without benzene doping** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  ABID, A. D., Tolmachoff, E. D., Phares, D. J., Wang, H., Liu, Y., Laskin, A.
  2009; 32: 681-688
- **Experimental and modeling study of laminar flame speed and non-premixed counterflow ignition of n-heptane** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Smallbone, A. J., Liu, W., Law, C. K., You, X. Q., Wang, H.
  2009; 32: 1245-1252
- **Spectral uncertainty quantification, propagation and optimization of a detailed kinetic model for ethylene combustion** *PROCEEDINGS OF THE COMBUSTION INSTITUTE*
  Sheen, D. A., You, X., Wang, H., Lovas, T.
  2009; 32: 535-542
- **Hygroscopic behavior of substrate-deposited particles studied by micro-FT-IR spectroscopy and complementary methods of particle analysis (vol 80, pg 633, 2008)** *ANALYTICAL CHEMISTRY*
  Liu, Y., Yang, Z., Desyaterik, Y., Gassman, P. L., Wang, H., Laskin, A., Kim, S. J., Han, J.
  2008; 80 (18): 7179-7179
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  SERAGELDIN, M. A., Wang, H.
  1990; 171: 193-206
- **Detailed modeling of silicon powder nucleation and growth in aerosol reactors** *American Association for Aerosol Research 1990 Annual Meeting*
  Wang, H., Ting, L., Frenklach, M.
  1990
- **The role of hydrogen and oxygen in diamond growth** *SDIO/IST-ONR Diamond Technology Initiative Symposium*
  Frenklach, M., Wang, H.
  1989
- **A THERMOGRAVIMETRIC STUDY OF THE DECOMPOSITION RATE OF CHLORINATED POLYETHYLENES UNDER IGNITION CONDITIONS** *THERMOCHIMICA ACTA*
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  SERAGELDIN, M. A., Wang, H.
  1987; 117: 157-166
- **Effect of chlorine level on the rate of decomposition and combustion of chlorinated polyethylenes** *Forty-Second ACS Fall Scientific Meeting*
  Serageldin, M. A., Wang, H.
  1986
- **Variance in the value of time to decomposition of chlorinated polyethylenes—effect of operating parameters** *Forty-Second ACS Fall Scientific Meeting*
  Serageldin, M. A., Wang, H.
  1986
- **Kinetics of nascent soot oxidation in a flow reactor** *8th US National Combustion Meeting*
  Camacho, J., Wang, H.
  2013
- **Pressure dependence in the competitive thermal isomerization/ decomposition of the cyclohexyl radical** *poster paper presented at 1st High-Pressure Flame Chemistry Workshop*
  Dames, E., Wang, H.
  2012
- **Probing deliquescence, efflorescence and hygroscopic growth of aerosols using micro-FTIR spectroscopy** *Fall 2006 Meeting of the American Geophysical Union (AGU)*
  Liu, Y., Yang, Z., Gassman, P. L., Wang, H., Laskin, A.
  2006
- **Multi-channel chemically activated reactions: Comparison of Troe's weak collision model and solution of collisional energy transfer by Monte Carlo method** *227th ACS National Meeting*
  Joshi, A. V., Davis, S. G., Wang, H.
  2004
- **Experimental and computational study of sooting limits of ferrocene-doped ethylene/oxygen/argon premixed flames** *poster paper presented at the 2002 Annual AAAR Meeting*
  Hirasawa, T., Sung, C. J., Yang, Z., Wang, H.
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- **Multi-channel chemically activated reactions: Comparison of Troe's weak collision model and solution of collisional energy transfer by Monte Carlo method** *227th ACS National Meeting*
  Joshi, A. V., Davis, S. G., Wang, H.
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- **Experimental and computational study of sooting limits of ferrocene-doped ethylene/oxygen/argon premixed flames** *poster paper presented at the 2002 Annual AAAR Meeting*
  Hirasawa, T., Sung, C. J., Yang, Z., Wang, H.
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- **The role of cracking in the combustion of JP-8** *2007 Fall Meeting of the Western States Section of the Combustion Institute, Livermore, CA*
  You, X., Egolfopoulos, F. N., Wang, H.
  2007
- **Flame synthesis of nano-phase TiO2 crystalline films** *5th Joint States Section of the Combustion Institute Meeting, San Diego, CA*
  Tolmachoff, E. D., Garcia, G., Phares, D. J., Campbell, C. S., Wang, H.
  2007
- **Bioengineered fuel cells: optimization via genetic approaches and multi-scale modeling** *PowerMEMS 2006 Workshop on Micro and Nanotechnology for Power Generation and Energy Conversion Applications, Berkeley, CA*
  Bretschger, O., Finkel, S., Iverson, L., Kim, B., Mansfeld, F., Nealson, K., Prakash, S., Ronney, P., Wang, H., LŸttge, A.
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- **Burning velocities of sooting premixed ethylene/air flames** *4th Joint Meeting of the U.S. Sections of the Combustion Institute, Drexel University, Philadelphia, PA*
  Ibarreta, A. F., Sung, C. J., Wang, H.
  2005
- **Computational study of the oxidation of ethylene oxide: potential energy surface, master equation analysis and detailed kinetic modeling** *4th Joint Meeting of the U.S. Sections of the Combustion Institute, Drexel University, Philadelphia, PA*
  Joshi, A., You, X., Barckholtz, T., Wang, H.,
  2005
- **Bimodal particle size distribution and morphology of soot in a laminar premixed ethylene flame** *4th Joint Meeting of the U.S. Sections of the Combustion Institute, Drexel University, Philadelphia, PA*
  Zhao, B., Uchikawa, K., Wang, H.
  2005
- **Multi-channel chemically activated reactions: Comparison of Troe's weak collision model and exact solution of the master equation by monte carlo method** *2004 Spring Technical Meeting of the Western States of the Combustion Institute, University of California at Davis, Davis, CA*
  Joshi, A. V., Wang, H., Davis, S. G.
  2004
- **Effect of flame temperature on particle size distribution functions of soot in laminar premixed ethylene flames** *3rd Joint Meeting of the US Sections of the Combustion Institute, Chicago, IL*
  Yang, Z., Zhao, B., Wang, H.
  2003
- **Experimental and numerical studies of flame extinction: validation of chemical kinetics** *3rd Joint Meeting of the US Sections of the Combustion Institute, Chicago, IL*
  Dong, Y., Andac, G. M., Egolfopoulos, F. N., Davis, S. G., Wang, H.
  2003
- **A comprehensive mechanism of C2Hx and C3Hx fuel combustion** *1999 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Raleigh, NC*
  Wang, H., Laskin, A., Djurisic, Z. M., Law, C. K., Davis, S. G., Zhu, D. L.
  1999
- **Binary CF3Br- and CHF3-inert flame suppressants and influence of flame temperature on inhibition effectiveness of CF3Br and CHF3** *1st Joint Meeting of the U.S. Sections of The Combustion Institute, Washington, DC*
  Saso, Y., Ogawa, Y., Saito, N., Wang, H.

1999

- **Soot formation in counterflow diffusion flames containing chloromethane** *1st Joint Meeting of the U.S. Sections of The Combustion Institute, Washington, DC*
  Leylegian, J. C., Law, C. K., Wang, H.
  1999
- **A theoretical study of the chemically activated reactions on the C3H5 potential energy surface** *1st Joint Meeting of the U.S. Sections of The Combustion Institute, Washington, DC*
  Davis, S. G., Law, C. K., Wang, H.
  1999
- **Laminar flame speeds and oxidation kinetics of dichloromethane and trichloromethane** *1996 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Hilton Head, SC*
  Leylegian, J. C., Wang, H., Zhu, D. L., Law, C. K.
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- **A computational study of sooting limits in laminar premixed ethane/oxygen/nitrogen flames** *1991 Fall Technical Meeting of the Eastern States Section of The Combustion Institute*
  Markatou, P., Wang, H., Frenklach, M.
  1991
- **Uncertainty estimation of reduced chemical models** *13th International Conference on Numerical Combustion, Corfu, Greece*
  Lovas, T., Shaw, R. C., Brownbridge, G., Mosbach, S., Kraft, M., Sheen, D. A., Wang, H.
  2011
- **Nanocatalysts in Propulsion: Mechanisms and Optimization** *2010 DDRE MURI Conference, Arlington, VA*
  Wang, H.
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- **Predicting the effects of fuel composition and flame structure on soot generation** *2009 SERDP Symposium, Washington DC*
  Shaddix, C. R., Zhang, J., Schefer, R. W., Pickett, L. M., Kook, S., Doom, J., Oefelein, J. C., Abid, A., Camacho, J., Wang, H.
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- **A kinetic study of the heterogeneous reaction of deliquesced NaCl particles with gaseous HNO3** *AAAR 2007 Annual Conference, Reno, NV*
  Liu, Y., Cain, J., Wang, H., Wang, A.
  2007
- **Reaction kinetics of CO+HO2products: ab initio study and master equation modeling** *Work-in-Progress poster, 31st International Symposium on Combustion, Heidelberg, Germany*
  You, X., Goos, E., Sung, C. J., Wang, H.
  2006
- **Soluble nano catalysts to improve methane combustion** *4th Annual NanoMaterials for Defense Applications Symposium: Accelerating the Transition, Virginia Beach, VA*
  Wickham, D., Cook, R., Engel, J., Nabity, J., Yu, J., Wang, H.
  2006
- **A self-consistent gas-kinetic theory of nanoparticle transport** *AAAR 2005 Annual Conference, Austin, TX*
  Wang, H., Phares, D., Campbell, C. S., Li, Z.
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- **Burning velocity measurements of microgravity spherical sooting premixed flames using rainbow Schlieren deflectometry** *poster at 30th International Symposium on Combustion, Chicago, IL*
  Ibarreta, A. F., Sung, C. J., Hirasawa, T., Wang, H.
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- **Ab Initio potential energy and binary diffusion coefficient of H-Ar** *poster paper presented at 29th International Symposium on Combustion, Sapporo, Japan*
  Middha, P., Wang, H.
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- **A new approach to response surface development for detailed combustion chemistry model development and optimization** *poster paper 29th International Symposium on Combustion, Sapporo, Japan*
  Davis, S. G., Wang, H.
  2002
- **A theoretical study of the reactions on the C2H3O potential energy surfaces: kinetics of C2H2+OH → products and the unimolecular dissociation of the vinoxy radical** *5th International Conference on Chemical Kinetics, Gaithersburg, MD*
  Davis, S. G., Wang, H., Tsang, W.
  2001
- **Numerical simulation of thermo-ionization of soot particles and the effect of thermo-ionization on soot growth in laminar premixed flames** *Work-in-Progress paper, 28th International Symposium on Combustion, Edinburgh, Scotland*
  Balthasar, M., Mauss, F., Wang, H.
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- **An optimized kinetics model for natural gas combustion** *poster paper presented at the 25th Symposium (International) on Combustion, Irvine, CA*
  Frenklach, M., Wang, H., Bowman, C. T., Hanson, R. K., Smith, G. P., Golden, D. M., Gardiner, Jr., W. C., Lissianski, V.
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- **Towards a predictive combustion chemistry model–Uncertainty Propagation and Minimization** *1st High-Pressure Flame Chemistry Workshop*
  Wang, H.
  2012
- **Virtual organization of combustion kineticists** *55th JANNAF Propulsion Meeting*
  Knyazev, V. D., Smith, G. P., Wang, H.
  2008
- **Fundamental kinetics and transport problems in hydrogen oxidation** *NSF Workshop on Research Frontiers for Combustion in the Hydrogen Economy, NSF Headquarters*
  Wang, H.
  2006
- **Process informatics for chemical reaction systems** *232nd ACS National Meeting*
  Frenklach, M., Packard, A., Djurisic, Z. M., Feeley, R., Russi, T., Golden, D. M., Gupta, A., Bowman, C. T., Green, Jr., W. H., McRae, G. J., Smith, G. J., Wang, H., et al
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- **Sodium nitrate particles: physical and chemical properties during hydration and dehydration. Implications for aged sea salt aerosols** *2004 American Geophysical Union Meeting*
  Laskin, A., Hoffman, R. C., Finlayson-Pitts, B. J., Yang, Z., Wang, H.
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- **Thermophoretic force and velocity of nanoparticles in free molecule regime** *2004 Annual AAAR Meeting*
  Li, Z., Wang, H.
  2004
- **Automatic optimization of detailed kinetic mechanism for HCCI-engine simulation** *227th ACS National Meeting*
  Bellanca, R., Mauss, F., Wang, H.
  2004
- **Particle size distribution of soot formed in a laminar premixed ethylene flame** *2002 Annual AAAR Meeting*
  Zhao, B., Yang, Z., Johnston, M. V., Wang, H., Wexler, A., Balthasar, M., Kraft, M.
  2002
- **The effect of gas composition on diamond film growth during chemical vapor deposition** *201st National American Chemical Society Meeting*
  Wu, C. H., Tamor, M. A., Potter, T. J., Frenklach, M., Wang, H.
  1991
- **Detailed mechanism reduction for flame modeling** *1990 Fall Technical Meeting of the Eastern States Section of the Combustion Institute*
  Wang, H., Frenklach, M.

1990

- **Catalytic oxidation of alkanes over palladium oxide** *8th US National Combustion Meeting*
  Xin, Y. X., Wang, H., Law, C. K.
  2013
- **Experimental and modeling study the oxidation of isobutane and isobutene** *7th US National Combustion Meeting, Atlanta, GA*
  Yang, B., Wang, H., Hansen, N., Skeen, S., Cool, A. A.,
  2011
- **Dependence of TiO2 crystal phase on flame synthesis conditions** *7th US National Combustion Meeting, Atlanta, GA*
  Memarzadeh, S., Thompson, C., Wang, H.
  2011
- **Dye sensitized solar cells fabricated by flame stabilized on a rotating surface** *7th US National Combustion Meeting, Atlanta, GA*
  Memarzadeh, S., Phares, D. J., Wang, H.
  2011
- **Combustion kinetic modeling using multispecies time-histories in shock-tube oxidation of n-dodecane** *7th US National Combustion Meeting, Atlanta, GA*
  Tangko, R., Sheen, D. A., Wang, H.
  2011
- **Kinetic modeling of one-ring aromatic compounds** *Spring Technical Meeting of the Western States Sections of the Combustion Institute, University of Colorado*
  Dames, E., Wang, H.
  2010
- **Dye sensitized solar cells fabricated by flame stabilized on a rotating surface** *2009 Fall Western States Section Meeting of the Combustion Institute, Irvine, CA*
  Memarzadeh, S., Phares, D. J., Wang, H.
  2009
- **Ultra sensitive nanoporous TiO2 gas sensing films synthesized in a premixed stagnation flame** *2009 Fall Western States Section Meeting of the Combustion Institute, Irvine, CA*
  Tolmachoff, E. D., Wang, H.
  2009
- **Products of the benzene + O(3p) reaction: Experimental and theoretical study** *6th US National Combustion Meeting, Ann Arbor, MI*
  Taatjes, C. A., Osborn, D. L., Selby, T. M., Meloni, G., Trevitt, A. J., Sirjean, B., Dames, E., Wang, H.
  2009
- **Propagation and extinction of m-xylene/air, and m-xylene/n-dodecane/air flames** *6th US National Combustion Meeting, Ann Arbor, MI*
  Moheet, A., Ji, C., Wang, Y. L., Wang, H., Egolfopoulos, F. N.
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- **Products of the benzene + O(3p) reaction: Experimental and theoretical study** *6th US National Combustion Meeting, Ann Arbor, MI*
  Taatjes, C. A., Osborn, D. L., Selby, T. M., Meloni, G., Trevitt, A. J., Sirjean, B., Dames, E., Wang, H.
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- **Propagation and extinction of m-xylene/air, and m-xylene/n-dodecane/air flames** *6th US National Combustion Meeting, Ann Arbor, MI*
  Moheet, A., Ji, C., Wang, Y. L., Wang, H., Egolfopoulos, F. N.
  2009
- **Experimental and numerical studies on methane ignition catalyzed by in situ generated palladium nanoparticles in a laminar flow reactor** *6th US National Combustion Meeting, Ann Arbor, MI*
  Shimizu, T., Abid, A., Wang, H., Nabity, J., Engel, J., Yu, J., Wickham, D., Devener, B. V., Anderson, S. L.
  2009
- **Relations between particle size distribution function and morphology of soot formed in atmospheric-pressure, premixed ethylene-oxygen-argon flames** *5th Joint States Section of the Combustion Institute Meeting, San Diego, CA*

Abid, A. D., Heinz, N. A., Tolmachoff, E. D., Phares, D. J., Wang, H.
2007

- **Experimental and numerical studies of extinction of premixed lean H2/air flames** *2004 Spring Technical Meeting of the Western States of the Combustion Institute, University of California at Davis, Davis, CA*
  Dong, Y., Holley, A. T., Andac, M. G., Egolfopoulos, F. N., Davis, S. G., Middha, P., Wang, H.
  2004
- **Flame synthesis of titanium oxide nanoparticles** *in Chemical and Physical Pro2003 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Pennsylvania State University, University Park, PA*
  Zhao, B., McCormick, J. R., Bulanin, K., Ni, C., Chen, J., Wang, H.
  2003
- **A comprehensive and optimized kinetic model of H2/CO combustion** *3rd Joint Meeting of the US Sections of the Combustion Institute, Chicago, IL*
  Davis, S. G., Joshi, A., Wang, H., Egolfopoulos, F. N.
  2003
- **Development of Comprehensive Detailed and Reduced Reaction Mechanisms for Combustion Modeling** *40th AIAA Aerospace Sciences Meeting and Exhibit, Reno, NV*
  Law, C. K., Sung, C. J., Wang, H., Lu, T. F.
  2002
- **Molecular dynamics study of radical diffusion coefficients** *1st Joint Meeting of the U.S. Sections of The Combustion Institute, Washington, DC*
  Wang, H.
  1999
- **Numerical simulation on inhibition effectiveness of halocarbons and Inert Gas Mixtures: Effects of Flame Temperature and Water Vapor** *35th Japanese Symposium on Combustion, Tokyo, Japan*
  Saso, Y., Saito, N., Wang, H.
  1997
- **Combustion studies of energetic liquid materials** *Ninth ONR Propulsion Meeting, Alexandria, VA*
  Law, C. K., Sung, C. J., Wang, H., Zhu, D. L.
  edited by Roy, G. D., Kailathnanth, K.
  1996
- **Modeling of NOx formation in natural gas fueled diesel combustion** *3rd International Symposium on COMODIA 94, The Japanese Society of Mechanical Engineers, Yokohama, Japan*
  Yoshihara, Y., Wang, H., Frenklach, M.
  1994
- **On the Troe formula for unimolecular reaction rate coefficient** *1993 Joint Technical Meeting of the Central and Eastern States Sections of the Combustion Institute*
  Wang, H., Frencklach, M.
  1993
- **The oxidation of methane at elevated pressures: experiments and modeling** *1993 Joint Technical Meeting of the Central and Eastern States Sections of the Combustion Institute,*
  Hunter, T. B., Litzinger, T. A., Wang, H., Frenklach, M.
  1993
- **Effect of fuel composition and flame structure on soot generation in turbulent non-premixed flames** *2008 SERDP Symposium, Washington DC*
  Shaddix, C. R., Wang, H., Pickett, M. M., Oefelein, J. C., Zhang, J., Williams, T. C., Schefer, R. W.
  2008
- **Overview of research at the CEFRC on chemical kinetics and reaction mechanisms of foundational fuels** *Multi Agency Coordination Committee for Combustion Research (MACCCR), 4th Annual Fuels Research Review*
  Wang, H.
  2011

- **Mesoporous TiO2 thin films prepared by Flame Stabilized on a Rotating Surface (FSRS) method - Application to dye-sensitized solar cells** *Materials Research Society (MRS) Spring Meeting*
  Memarzadeh, S., Walker, J., Phares, D. J., Wang, H.
  2011
- **Combustion synthesis of ultrafine anatase TiO2 nanoparticles in a premixed stagnation flame** *poster at 27th Annual General Meeting of the International Fine Particle Research Institute (IFPRI)*
  Zhao, B., Uchikawa, K., Wang, H.
  2006
- **Height and phase mode images of soot using AFM** *8th US National Combustion Meeting*
  Lieb, S., Wang, H.
  2013
- **Catalytic methane oxidation over palladium nanoparticles** *7th US National Combustion Meeting, Atlanta, GA*
  Shimizu, T., Wang, H., Perez, J. P., Anderson, S. L.
  2011
- **Formation of soot in laminar premixed n-butanol and isobutanol flames** *7th US National Combustion Meeting, Atlanta, GA*
  Camacho, J., Lieb, S., Wang, H.
  2011
- **Theory and kinetic modeling of initiation reactions for cyclohexane and several of its mono-alkylated derivatives** *7th US National Combustion Meeting, Atlanta GA*
  Dames, E., Krylov, A., Wang, H.
  2011
- **Molecule/particle beams detection by fast superconducting bolometers** *7th US National Combustion Meeting, Atlanta, GA*
  Gao, S., Phares, D. J., Wang, H.
  2011
- **Burner-stabilized stagnation flow flame approach to probe soot size distributions** *6th US National Combustion Meeting, Ann Arbor, MI*
  Abid, A., Camacho, J., Sheen, D. A., Wang, H.,
  2009
- **Simplified chemical kinetic models for high-temperature oxidation of C1 to C12 nalkanes** *6th US National Combustion Meeting, Ann Arbor, MI*
  Sirjean, B., Dames, E., Sheen, D. A., Wang, H.
  2009
- **Transport theory of small spherical particles - how does a molecule become a 'particle'?** *Interdisciplinary Transport Phenomena V: Fluid, Thermal, Biological, Materials and Space Sciences, Bansko, Bulgaria*
  Wang, H.
  2007
- **Reaction kinetics of CO+HO2 → products: ab initio transition state theory study with master equation modeling** *5th Joint States Section of the Combustion Institute Meeting, San Diego, CA*
  You, X., Wang, H., Goos, E., Sung, C. J., Klippenstein, S. J.
  2007
- **Ab-initio study of the C6H6 + O Reaction: Viability of the CO + C5H6 channel** *19th Annual Symposium of the Israeli Section of the Combustion Institute, Jerusalem*
  Joshi, A., Davis, S., Wang, H.
  2003
- **A small-angle neutron scattering study of soot formation in laminar premixed ethylene flames** *2001 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Hilton Head, SC*
  Wyslouzil, B., Streletzky, K., Zhao, B., Wang, H.
  2001
- **Detailed kinetic modeling of benzene and toluene combustion** *1999 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Raleigh, NC*

Wang, H., Djurisic, Z. M.
1999

- **Laminar burning velocities and oxidation kinetics of methane-trifluoromethane-air premixed flames** *34th Japanese Symposium on Combustion, Hiroshima, Japan*
  Saso, Y., Saito, N., Zhu, D. L., Wang, H., Law, C. K.
  1996
- **On the structure of non-sooting counterflow acetylene diffusion flames** *1995 Fall Technical Meeting of the Eastern States Section of the Combustion Institute, Worcester, MA*
  Sun, C. J., Wang, H., Sung, C. J., Law, C. K.
  1995
- **PrIMe: Subgroup operation for collaborative evaluation: Virtual Organization of Combustion Kineticists** *poster at 31st International Symposium on Combustion, Montreal, Canada*
  Smith, G. P., Knyazev, V. D., You, X., Wang, H.,
  2008
- **A kinetic study of the heterogeneous reaction of CaCO3 particles with gaseous HNO3** *AAAR 2007 Annual Conference, Reno, NV*
  Liu, Y., Gibson, E. R., Cain, J. P., Grassian, V. H., Wang, H., Laskin, A.
  2007
- **Evolution of particle size distribution function of nascent soot in premixed ethylene flames** *AAAR 2007 Annual Conference, Reno, NV*
  Abid, A. D., Heinz, N., Tolmachoff, E. D., Phares, D. J., Campbell, C. S., Wang, H.
  2007
- **Probing hygroscopic properties of atmospheric particles using complementary methods of micro FTIR spectroscopy and micro analyses** *AAAR 2007 Annual Conference, Reno, NV*
  Liu, Y., Yang, Z., Desyaterik, Y., Gassman, P. L., Wang, H., Laskin, A.
  2007
- **A kinetic study of the heterogeneous reaction of deliquesced sodium chloride particles with hydroxyl radicals** *2006 International Aerosol Conference, St. Paul, MN*
  Laskin, A., Wang, H., Robertson, W. H., Cowin, J. P., Ezell, M. J., Finlayson-Pitts, B. J.
  2006
- **SMPS analysis and detailed numerical simulation of soot particle size distribution function in a laminar premixed ethylene flame** *poster paper at 29th International Symposium on Combustion, Sapporo, Japan*
  Zhao, B., Yang, Z., Johnston, M. V., Wang, H., Wexler, A. S., Balthasar, M., Kraft, M.
  2002
- **Chemical transformation of CaCO3 particles by heterogeneous reaction with HNO3: Kinetic measurements over a wide range of humidity** *2007 Fall Meeting of the American Geophysical Union*
  Liu, Y., Gibson, E. R., Cain, J. P., Wang, H., Grassian, V. H., Laskin, A.
  2007
- **A kinetic study of the heterogeneous reaction of deliquesced NaCl particles with gaseous HNO3 using novel experimental approach** *Fall 2006 Meeting of the American Geophysical Union (AGU)*
  Liu, Y., Cain, J. P., Wang, H., Laskin, A.
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- **Combustion synthesis of ultrafine anatase TiO2 nanoparticles in a premixed stagnation flame** *2004 Annual AAAR Meeting*
  Zhao, B., Uchikawa, K., McCormick, J. R., Ni, C. Y., Chen, J. G., Wang, H.
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- **Ab initio potential energy and binary diffusion coefficient of H-Ar** *2002 Annual Meeting of American Institute of Chemical Engineers*
  Middha, P., Wang, H.
  2002
- **Reaction mechanisms and H-atom transport issues in modeling lean hydrogen combustion** *2008 SIAM International Conference on Numerical Combustion, Montery, CA*

Wang, H.
2008

- **reporting experimental data for the prime depository: rule-based system with emphasis on uncertainty** *Work-in-Progress poster, 31st International Symposium on Combustion, Heidelberg, Germany*
  Djurisic, Z. M., Frenklach, M., Golden, D. M., Gupta, A., Davidson, D. F., Wang, H.
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- **Bimodal particle size distributions and morphology of soot in a relatively sooty laminar premixed ethylene flame** *AAAR 2005 Annual Conference, Austin, TX*
  Zhao, B., Uchikawa, K., Wang, H., Johnston, M. V.
  2005
- **Development of an integrated workbench for gas-phase thermodynamics, kinetics, and reaction modeling** *Work-in-Progress paper, 28th International Symposium on Combustion, Edinburgh, Scotland*
  McKinnon, J. T., Dean, A. M., Duer, J., Frisch, M., Grenda, J. M., Klipstein, D., Ko, G., Mallard, G., McRae, G. J., Meeks, E., Nimlos, M. N., Petersson, G., Wang, et al
  2000
- **Reduction of detailed chemical models with controlled uncertainty** *2nd International Workshop on Model Reduction in Reacting Flows, Center for Applied Mathematics*
  Sheen, D. A., Løvås, T., Wang, H.
  2009
- **Internal structure, hygroscopic and reactive properties of nacl particles processed with methanesulfonic acid** *AirUCI Annual Workshop*
  Liu, Y., Desyaterik, Y., Minofar, B., Jungwirth, P., Wang, H., Laskin, A.
  2008
- **Virtual organization of combustion kineticists** *poster paper presented at the NSF Workshop on Building Effective Virtual Organizations*
  Wang, H., Smith, G. P., Knyazev, V. D.
  2008
- **Toward a comprehensive understanding of combustion chemistry and detailed reaction modeling of combusting flows** *2002 Annual Meeting of American Institute of Chemical Engineers*
  Wang, H.
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- **Bimodal particle size distributions and morphology of soot in a relatively sooty laminar premixed ethylene flame** *AAAR 2005 Annual Conference, Austin, TX*
  Zhao, B., Uchikawa, K., Wang, H., Johnston, M. V.
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- **Development of an integrated workbench for gas-phase thermodynamics, kinetics, and reaction modeling** *Work-in-Progress paper, 28th International Symposium on Combustion, Edinburgh, Scotland*
  McKinnon, J. T., Dean, A. M., Duer, J., Frisch, M., Grenda, J. M., Klipstein, D., Ko, G., Mallard, G., McRae, G. J., Meeks, E., Nimlos, M. N., Petersson, G., Wang, et al
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  2008

- **Toward a comprehensive understanding of combustion chemistry and detailed reaction modeling of combusting flows** *2002 Annual Meeting of American Institute of Chemical Engineers*
  Wang, H.
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