

Raymond L. Huhnke
Oklahoma State University

(a) Professional Preparation

Purdue University	Agricultural Engineering	B.S., 1973
University of Illinois	Agricultural Engineering	M.S., 1974
Iowa State University	Agricultural Engineering	Ph.D., 1980

(b) Appointments

2008 - Present	Director, Biobased Products and Energy Center, Oklahoma State University, Stillwater
2002 - Present	Associate Director, Sun Grant Initiative – South Central Region, Oklahoma State University, Stillwater
1990 - Present	Professor, Biosystems and Agr. Eng. Dept., Oklahoma State University, Stillwater
1993	Visiting Scientist, U.S. Dairy Forage Research Center and the Agricultural Engineering Department, University of Wisconsin, Madison
1985 - 1990	Associate Professor and Extension Agricultural Engineer, Agricultural Engineering Department, Oklahoma State University, Stillwater
1980 - 1985	Assistant Professor and Extension Agricultural Engineer, Agricultural Engineering Department, Oklahoma State University, Stillwater

(c) Products

(i) Related Products

- Wagle, P., V.G. Kakani and R.L. Huhnke. 2015. Net ecosystem carbon dioxide exchange of dedicated bioenergy feedstocks: switchgrass and high biomass sorghum. *Agricultural and Forest Meteorology* 207:107-116.
- Qian, K., A. Kumar, H. Zhang, D. Bellmer and R. Huhnke. 2015. Recent advances in utilization of biochar. *Renewable & Sustainable Energy Reviews* 42:1055-1064.
- Kumar, A. and R. Huhnke. 2014. Biomass thermochemical conversion technologies for production of fuels, power and chemicals. In: H. Luo, Y. Wu and C. Kole (eds.). *Compendium of Bioenergy Plants – Switchgrass*. CRC Press, Taylor & Francis Group, Boca Raton, FL.
- Ramachandriya, K.D., D.K. Kundiyana, M.R. Wilkins, J.B. Terrill, H.K. Atiyeh, and R.L. Huhnke. 2013. Carbon dioxide conversion to fuels and chemicals using a hybrid green process. *Applied Energy* 112:289-299
- Geza, M., B.J. Barfield, R.L. Huhnke, A. Stoecker, D.E. Storm, and E.W. Stevens. 2009. Comparison of targeted replacement and vegetative filter strips for sediment control and cost effectiveness. *J. Water Resources Planning and Management* 135 (5):406-409.

(ii) Other Significant Products

- Bhoi, P.R., R.L. Huhnke, A. Kumar, K.N. Patil and J.R. Whiteley. 2015. Design and development of a bench scale vegetable oil based wet packed bed scrubbing system for removing producer gas tar compounds. *Fuel Processing Technology* 134:243–250.
- Bhoi, P.R., R.L. Huhnke, A. Kumar, M.E. Payton, K.N. Patil and J.R. Whiteley. 2015. Vegetable oil as a solvent for removing producer gas tar compounds. *Fuel Processing Technology* 133:97–104.
- Sharma, A.M., A. Kumar, S. Madihally, J.R. Whiteley, and R.L. Huhnke. 2014. Prediction of biomass-generated syngas using extents of major reactions in a continuous stirred-tank reactor. *Energy* 72:222-232.
- Phillips, J.R., H.K. Atiyeh and R.L. Huhnke. 2014. Method for design of production medium for fermentation of synthesis gas to ethanol by acetogenic bacteria. *Biological Engineering Transactions* 7(3): 113-128.
- Patil, K.N., R.L. Huhnke, and D.D. Bellmer. 2014. Downdraft Gasifier with Internal Cyclonic Combustion Chamber, U.S. Patent 8,657,892 issued 02/25/2014.

(d) Synergistic Activities

- Served on steering committee for Bioenergy Day held during 2013 International Meeting of ASABE and moderated session “Critical Needs in Biorefining Research and Development”.
- State of Oklahoma Bioenergy Center – Steering Committee, 2007 – 2012.
- Panel Manager for USDA-NIFA Sustainable Bioenergy Development and Production of Regionally Appropriate Biomass Feedstocks, 2012.
- On-site reviewer for USDA Biomass R&D Initiative project entitled “Biomass Gasification: A Comprehensive Demonstration of a Community-Scale Biomass Energy System”, Morris, MN, 2011.
- On-site reviewer for USDA Biomass R&D Initiative project entitled "Integrated Feedstock Supply System for Corn Stover Biomass", Ames, IA, 2006.

(e) Collaborators & Other Affiliations

• Collaborators and Co-Editors

Hasan Atiyeh, Oklahoma State University (OSU); Ibrahim Banat, U. Ulster; Danielle Bellmer, OSU; Pushpak Bhandari, Purdue University; Prakash Bhoi, OSU; Jon Biermacher, Samuel Roberts Noble Foundation (SRNF); John Blanton, Mississippi State University; Michael Buser, OSU; Sergio Capareda, Texas A&M; Mamatha Devarapalli, Dow AgroSciences; Jimmy Faria, OU; Jie Gao, OSU; Solomon Gebreyohannes, OSU; Zhili He, University of Oklahoma (OU); Richard Hess, Idaho National Laboratory (INL); Carol Jones, OSU; Vijaya Kakani, OSU; Kevin Kenney, INL; Amit Khanchi, Iowa State University (ISU); Ajay Kumar, OSU; Dimple Kundiyan, E&J Gallo; Peter Lawson, OU; Randy Lewis, Brigham Young U. (BYU); Kan Liu, OSU; Lance Lobban, OU; Prasanth Maddipati, Dow AgroSciences; Sundar Madihally, OSU; Richard Mallinson, OU; Niels Maness, OSU; Michael McInerney, OU; Jagadeesh Mosali, SRNF; Kiran Mysore, SRNF; Kenneth Nicholas, OU; James Orgill, BYU; Krushan N. Patil, self-employed; Mark Payton, OSU; Randy Phillips, OSU; Kezhen Qian, OSU; Karthikeyan Ramachandriya, Cobalt Technologies; Daniel Resasco, OU; Ali Rownaghi, Missouri S&T; Madhura Sarkar, OSU; Ashokkumar Sharma, ISU; Bhavna Sharma, ISU; Dachuan Shi, OU; Kumar Singarapu, OSU; Robert Smith, INL; Bradley Stevenson, OU; Alberto Striolo, OU; Ralph Tanner, OU; Jenny Terrill, Coskata; Jaya Tumuluru, INL; Pradeep Wagle, OSU; Zhang Wang, SRNF; Paul Weckler, OSU; James Whiteley, OSU; Mark Wilkins, OSU; Zixu Yang, OSU; Hailin Zhang, OSU; Jizhong Zhou, OU.

• Graduate Advisors and Postdoctoral Sponsors

D. Bundy (retired), Iowa State University; J. Curtis (deceased), University of Illinois

• Thesis Advisor and Postgraduate-Scholar Sponsor

Houssam Alost, Therapure Biopharma Inc., Canada; Prashant Bele, Bosch Rexroth; Prakash Bhoi, Oklahoma State University (Advisor and Sponsor); Bruno Cateni, Technip; Clint Cosgrove, unknown; Mengistu Geza, Colorado School of Mines (Advisor and Sponsor); Dimple Kundiyan, E&J Gallo (Advisor and Sponsor); Krushna Patil, self-employed; Ali Rownaghi, Missouri S&T.

Total Graduate Students advised: 7

Total Postdoctoral Scholars Sponsored: 5