

Biographical Sketch

Raymond L. Huhnke

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A. PROFESSIONAL PREPARATION

Purdue University	West Lafayette, IN	Agricultural Engineering	B.S., 1973
University of Illinois	Urbana, IL	Agricultural Engineering	M.S., 1974
Iowa State University	Ames, IA	Agricultural Engineering	Ph.D., 1980

B. APPOINTMENTS

2015 – present Project Director & Principal Investigator, Oklahoma NSF EPSCoR, Oklahoma State University, Stillwater, OK.

2008 - present Director, Biobased Products and Energy Center, Oklahoma State University, Stillwater, OK.

2002 - present Associate Director, Sun Grant Program – South Central Region, Oklahoma State University, Stillwater, OK.

2018 - present Regents Professor, Biosystems and Agr. Eng. Dept., Oklahoma State University, Stillwater, OK.

1990 - 2018 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, WI.

1985 - 1990 Associate Professor and Extension Agricultural Engineer, Agricultural Engineering Department, Oklahoma State University, Stillwater, OK.

1980 - 1985 Assistant Professor and Extension Agricultural Engineer, Agricultural Engineering Department, Oklahoma State University, Stillwater, OK.

C. PRODUCTS

(i) *Most Closely Related to the Proposed Project*

1. Bhoi, P.R., **R.L. Huhnke**, A. Kumar, N. Indrawan and S. Thapa. 2018. Co-gasification of Municipal Solid Waste and Biomass in a Commercial Scale Downdraft Gasifier. *Energy*. 163:513-518. <https://doi.org/10.1016/j.energy.2018.08.151>
2. Bhoi, P.R., **R.L. Huhnke**, A. Kumar, S. Thapa and N. Indrawan. 2018. Scale-up of a Downdraft Gasifier System for Commercial Scale Mobile Power Generation. *Renewable Energy*. 118:25-33. <https://doi.org/10.1016/j.renene.2017.11.002>
3. Indrawan, N., S. Thapa, P.R. Bhoi, **R.L. Huhnke** and A. Kumar. 2018. Electricity Power Generation from Co-gasification of Municipal Solid Wastes and Biomass: Generation and Emission Performance. *Energy*. 162:764-775. <https://doi.org/10.1016/j.energy.2018.07.169>
4. Wagle, P., V.G. Kakani, **R.L. Huhnke**. 2016. Evapotranspiration and Ecosystem Water Use Efficiency of Switchgrass and High Biomass Sorghum. *Agronomy Journal*. 108(3):1-13.
5. 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.

(ii) *Other Significant Products*

1. Atiyeh, H.K., X. Sun, H. Zhang, R.S. Tanner and **R.L. Huhnke**. 2019. Enhanced Ethanol Production from Syngas by *Clostridium ragsdalei* in Continuous Stirred Tank Reactor Using Medium with Poultry Litter Biochar. *Applied Energy*. 236:1269-1279.
<https://doi.org/10.1016/j.apenergy.2018.12.010>
2. Craige, C., R.S. Frazier, M.D. Buser, R.B. Holcomb, S.S. Hizioglu and **R.L. Huhnke**. 2017. Web-based Deployment of Single-factor Biofeedstock Supply Chain Sensitivity Analysis using Monte Carlo Simulation. *Transaction of the ASABE*. 59(6):1555-1561.
3. Craige, C., M.D. Buser, R.S. Frazier, S.S. Hizioglu, R.B. Holcomb and **R.L. Huhnke**. 2016. Conceptual Design of a Biofeedstock Supply Chain Model for Eastern Redcedar. *Computers and Electronics in Agriculture*. 121:12-24.
4. 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.
5. 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

- Serving as member of the U.S. Department of Agriculture (USDA) and the U.S. Department of Energy (DOE) Biomass Research and Development Technical Advisory Committee (2017-present)
- Co-Organizer and Moderator for “Bioenergy Focus Day” panel titled “Addressing the energy-environment nexus and the challenges of scaling up bioenergy technologies,” Annual International Meeting of the American Society of Agricultural and Biological Engineers, New Orleans, LA (2015)
- Member of the Biobased Energy, Fuels, and Products technical committee of the American Society of Agricultural and Biological Engineers (1998-present)
- 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)