Dr. Sridhar Viamajala

(A) PROFESSIONAL PREPARATION

Washington State University	Chemical Engineering	Ph.D., 2003
Indian Institute of Technology, India	Chemical Engineering	B.Tech. (Hons.), 1997

(B) APPOINTMENTS

Aug 2013 – present	Associate Professor, Chemical and Environmental Engineering, The University of Toledo
Aug 2009 – Aug 2013	Assistant Professor, Chemical and Environmental Engineering, The University of Toledo
Jan 2007 – Aug 2009	Assistant Professor, Biological and Irrigation Engineering, Utah State University
Sep 2004 – Jan 2007	Post-Doctoral Research Associate, National Bioenergy Centre, National Renewable Energy Laboratory
Aug 2003 – Sep 2004	Research Assistant Professor, NSF/IGERT Center for Multiphase Environmental Research (CMER), Washington State University
Aug 1997 – Jul 1998	Process Engineer, Reliance Petroleum Limited, India

(C) PUBLICATIONS

1. Shirazi Y, Viamajala S, Varanasi S. 2016. "High-yield production of fuel- and oleochemical-precursors from triglycerides in a novel continuous-flow pyrolysis reactor." ***Applied Energy*** (under review)
2. Wahal S, Viamajala S. 2016. "Uptake of inorganic and organic nutrient species during cultivation of a Chlorella isolate in anaerobically digested dairy waste." ***Biotechnology Progress*** (Accepted for publication)
3. Nelson D, Viamajala S. 2016. "One-pot synthesis and recovery of fatty acid methyl esters (FAME) from microalgae biomass." ***Catalysis Today*** (in press, DOI: 10.1016/j.cattod.2015.11.048)
4. Mudiyanselage AY, Yao H, Viamajala S, Varanasi S, Yamamoto K. 2015. "Efficient production of alkanolamides from microalgae." ***Industrial and Engineering Chemistry Research.*** 54:4060–4065. DOI: 10.1021/ie503980g
5. Abel GA, Nguyen KO, Viamajala S, Varanasi S, Yamamoto K. 2014. "Cross-metathesis approach to produce precursors of nylon 12 and nylon 13 from microalgae." ***RSC Advances.*** 4:55622-55628 DOI: 10.1039/C4RA10980E
6. Mudiyanselage AY, Yao H, Viamajala S, Varanasi S, Yamamoto K. 2014. "Simple ring-closing metathesis approach for synthesis of PA11, 12, and 13 precursors from oleic acid. ***ACS Sustainable Chemistry and Engineering.*** 2:2831–2836. DOI: 10.1021/sc500599u
7. Bollin P, Viamajala S. 2012. "Reactive Extraction of Biomass Triglycerides as Fatty Acid Methyl Esters using Lewis Acidic Chloroaluminate Ionic Liquids." ***Energy & Fuels.*** 26:6411-6418.
8. Chowdhury R, Viamajala S. 2011. "Reduction of environmental and energy footprint of microalgal biodiesel production through material and energy integration." ***Bioresource Technology***. (In press. doi: 10.1016/j.biortech.2011.12.099)
9. Linton E, Rahman A, Viamajala S, Sims RC, Miller CD. 2012. "Polyhydroxyalkanoate quantification in organic wastes and pure cultures using a single-step extraction and (1)H NMR analysis." ***Water Science and Technology***. 66:1000-1006
10. Wahal S, Viamajala S. 2010. "Maximizing algal growth in batch reactors using sequential change in light intensity." ***Applied Biochemistry and Biotechnology.*** 161: 511-522.
11. Donohoe BS, Selig MJ, Viamajala S, Vinzant TB, Adney WS, Himmel ME. 2009. "Detecting cellulase penetration into corn stover cell walls by immuno-electron microscopy." ***Biotechnology and Bioengineering.*** 103:480-489.

12. Viamajala S, Schell DJ, McMillan JD, Elander RT. 2009. "Rheology of dilute acid pretreated biomass slurries: Effect of solids concentration and particle size." ***Bioresource Technology***. 100: 925–934.
13. Selig MJ, Viamajala S, Decker SR, Tucker MP, Himmel ME, Vinzant TB. 2007. "Deposition of Lignin Droplets Produced During Dilute Acid Pretreatment of Maize Stems Retards Enzymatic Hydrolysis of Cellulose." ***Biotechnology Progress***. 23: 1333-1339.

(D) PATENTS

1. Vadlamani A, Zhao X, Viamajala S, Varanasi S. 2015. Microalgae harvesting using stimuli-sensitive hydrogels. (US patent pending) Provisional application filed on September 28, 2015
2. Yamamoto K, Viamajala S, Varanasi S, Mudiyanselage AY. 2014. Methods for production of fatty acid alkanolamides (FAAAs) from microalgae biomass. (US Patent Pending) US/ 14/976,662 filed 12-21-15 and US/62/095,502 filed 12-22-14
3. Alipour S, Li B, Varanasi S, Relue P, and Viamajala S. 2013. New methods for high yield production of furans from biomass sugars at mild operating conditions. US Serial No. 61/898,889 filed November 1, 2013.
4. Shao H, Vadlamani A, Viamajala S, Varanasi S, Relue P. 2013. Enzymatic digestion of microalgal biomass for lipid, sugar and protein recovery. US Serial No.: 61/877,497 filed September 13, 2013
5. Maddi B, Viamajala S, Varanasi S. 2011. Thermal Fractionation of biomass of non-lignocellulosic origin for multiple high-quality biofuels. US Patent 8927240 B1. Awarded January 6, 2015.

(D) SYNERGISTIC ACTIVITIES

Member: American Institute of Chemical Engineers (AIChE); Society of Industrial Microbiology (SIM), Algae Biomass Organization (ABO)

Journal Peer-reviewer:

Applied Biochemistry and Biotechnology; Biodegradation; Bioresource Technology; BMC Microbiology; Chemical Engineering Research and Design; Electronic Journal of Biotechnology; Environmental Toxicology and Chemistry; Journal of Contaminant Hydrology; Journal of Hazardous Materials; Letters in Applied Microbiology; Microbial Ecology; Process Biochemistry

Advisory Board: Member, Microbial Metabolic Systems Distinctive Signature Board, Idaho National Laboratory (2008-2009)

Scientific merit reviewer: USDA SBIR program, USDOE SBIR program, NSF Energy for Sustainability program, CBET division

Conference Chair:

Char of the "Advances in Algal Biorefineries I and II" session at the 2015 Annual AIChE meeting, Salt Lake City, UT, November 8-13, 2015

Co-chair of the "Algae-based Biofuels" session at the 35st Symposium on Biotechnology for Fuels and Chemicals, Portland, OR, April 29 – May 2, 2013

Co-chair of the session "Development & Commercialization of Algal-based Biofuels" at the 31st Symposium on Biotechnology for Fuels and Chemicals, San Francisco, May 3-6, 2009

Invited attendee at national workshops: NSF Workshop on Manufacturing Energy, March 24-25, 2009

(E) COLLABORATORS & OTHER AFFILIATIONS

Major Education and Research Collaborators within last three years

Dr. Brent Peyton, Montana State University; Dr. Matthew Fields, Montana State University; Dr. Robin Gerlach, Montana State University; Dr. Robert Gardner, University of Minnesota; Dr. Gregory Characklis, University of North Carolina at Chapel Hill.

Graduate and Postdoctoral Advisors

Graduate Advisors: Dr. Brent Peyton and Dr. James Petersen, Washington State University

Postdoctoral Advisor: Dr. James McMillan, National Renewable Energy Laboratory.

Thesis Advisor and Postgraduate Scholar Sponsor

Dr. Shantanu Wahal, Dr. Balakrishna Maddi, Dr. Raja Choudhury, Patrick Bollin, Brook Urban, Xiaofei Zhao