

Curriculum Vitae of David Hodge

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Updated: 20 September, 2016

I. Education and Employment

Education

Aug 2005 **Ph.D. in Chemical Engineering**, Colorado State University, Ft. Collins, Colorado.
Dissertation: *Optimization of High Solids Lignocellulosic Biomass Conversion for Ethanol Production*, Advisor: Dr. M. Nazmul Karim

June 2002 **M.S. in Chemical Engineering**, Colorado State University, Ft. Collins, Colorado.
Thesis: *Modeling and Predictive Control of Recombinant *Zymomonas mobilis* Fed-Batch Fermentation*, Advisor: Dr. M. Nazmul Karim

June 1999 **B.S. in Chemical Engineering**, (*cum laude*). Auburn University, Auburn, Alabama.
Specialization in Pulp and Paper Engineering

Employment

July 2015 -present **Associate Professor (with tenure)**, Department of Chemical Engineering and Materials Science, joint appointment with Biosystems and Agricultural Engineering, Michigan State University, East Lansing, Michigan

Jan 2009-June 2015 **Assistant Professor**, Department of Chemical Engineering and Materials Science, joint appointment with Biosystems and Agricultural Engineering, Michigan State University, East Lansing, Michigan

Jan 2012-present **Adjunct Assistant Professor**, Department of Chemical Engineering, Luleå University of Technology, Luleå, Sweden

Feb 2006-Oct 2008 **Research Assistant Professor (*forskarassistent*)**, Department of Chemical Engineering, Luleå University of Technology, Luleå, Sweden

Nov 2003-Feb 2006 **Postdoctoral Scientist, Research Engineer**, National Bioenergy Center, National Renewable Energy Laboratory (NREL), Golden, Colorado

Aug 1999-Nov 2003 **Research/Teaching Assistant**, Department of Chemical Engineering, Colorado State University, Ft. Collins, Colorado

June 1996-Mar 1998 **Control Systems Engineering Cooperative Education Student**, Mead Coated Board (currently Mead-Westvaco), Phenix City, Alabama

Industrial Consulting

- Performed assessment of current commercial activities within technology space for proprietary biomass conversion technology to identify potential for infringement of client's patent portfolio
- Determined conditions required for sterilization of fermentation broths containing recombinant yeast used in the client's pilot biomass hydrolysate fermentation process

II. Teaching

Courses Taught	Students	University	Years
Material and Energy Balances	45-75	MSU	2010, '11, '13, '14, '15, '16
Biomass Conversion Engineering*	20-31	MSU	Annually since 2009 (8x)
Plant Cell Wall Chemistry*	13	MSU	2012
Chemical Engineering Seminar Series	60-90	MSU	2009-present
Study Abroad: Bioenergy Sweden*	7-9	MSU	2010, 2012, 2014, 2016
Sustainable Bioenergy Systems*	5	MSU	2009
Bioprocess Engineering Course and Lab.	15-20	LTU	2006, 2007, 2008
Fermented Beverage Technology Lab.*	10	LTU	2007
Unit Operations Laboratory (as TA)	20	CSU	2003
Process Control Laboratory (as TA)	25	CSU	2000, 2001, 2002, 2003
CHE Design Laboratory (as TA)	30	CSU	1999

* new course developed

Education Workshops and Symposia

- National Effective Teaching Institute, June 23-25, 2011. Vancouver, BC
- MSU Teaching and Learning Symposium, March 26, 2010
- STEM Education Symposium, MSU, October 1, 2009
- NSF Workshop, Enhancement of Chemical Engineering Curricula with Biological Applications in Fluid Transport. August 6-8, 2009, San Jose, CA.

III. Research

Research Funding

2016-2020	Integrated conversion of forest residues into methane and carbonized biobased materials. PI: Stina Jansson. Co-PIs: Jerker Fick; Ulrika Rova; Paul Christakopoulos; <u>David Hodge</u> . Forskningsrådet Formas – SWEDEN
2014-2016	Understanding and Modulation of Interfacial Properties within Plant Cell Wall Pores to Facilitate Enzymatic Deconstruction and Conversion to Biofuels. <u>PI: David Hodge</u> . Co-PI: Ilsoon Lee. NSF CBET Energy for Sustainability, NSF CBET 1336622
2012-2017	Improved Catalyzed Oxidative Pretreatment. Project Lead: Eric Hegg, <u>Project Co-Lead: David Hodge</u> . DOE, Great Lakes Bioenergy Research Center, BER DE-FC02-07ER64494
2014-2015	Combined Catalyst Recovery and Detoxification of Hydrolysates from Cu-Catalyzed AHP Pretreatment of Woody Biomass. <u>PI: David Hodge</u> . Co-PI: Eric Hegg. MSU Michigan Translational Research and Commercialization (MTRAC) Program for the Bio-Economy.
2014-2015	Catalytic Oxidation of Biorefinery- and Forest Products Industry-Derived Lignins for the Production of Functionally Active Aromatic Monomers. <u>PI: David Hodge</u> . Co-PI: Eric Hegg. USDA, Northeast Sun Grant Initiative
2009-2013	Characterization and Scale-up of Alkaline Peroxide Pretreatment. <u>Project Lead: David Hodge</u> . DOE BER, Great Lakes Bioenergy Research Center, BER DE-FC02-07ER64494
2009-2012	Fractionation of Alkaline Pulping Liquors for Fuel and Chemical Production. <u>PI: David Hodge</u> . Northeast Sun Grant Initiative
2007	Production of Succinic Acid using Feedstocks from the Forest. Processum Biorefinery Initiative AB
2007	Kempe Foundation Endowed Fellowship, Sweden

PhD Students Advised

Current Students

Thanaphong Phongpreecha Expected 2018	Chemical Engineering, Michigan State University. Project: <i>Integrated Experimental and Computational Approach to Understanding Catalytic Delignification and Lignin Depolymerization in H-Donating Solvents.</i>
Lisaura Maldonado-Pereira Expected 2018	Chemical Engineering, Michigan State University. Project: <i>Physical Fractionation for Optimal Processing of Bioenergy Grasses.</i>
Jacob Crowe Expected 2017	Chemical Engineering, Michigan State University. Project: <i>Understanding and Modulation of Interfacial Properties within Plant Cell Wall Pores to Facilitate Enzymatic Deconstruction and Conversion to Biofuels.</i>

Graduated Students

Muyang Li Spring 2015	Biosystems & Agricultural Engineering, Michigan State University. Dissertation: <i>Structural Characterization of Alkaline Hydrogen Peroxide (AHP) Pretreated Biomass.</i> Currently: Postdoc with Shi-You Ding, Plant Biology, Michigan State University
Zhenglun Li Spring 2014	Chemical Engineering, Michigan State University. Dissertation: <i>Catalyzed Oxidative Delignification and Pretreatment with Cu-diimines.</i> Currently: Teaching faculty at Oregon State University

Ryan Stoklosa Chemical Engineering, Michigan State University. **Dissertation:** *Fractionation of Alkaline Pretreatment Liquors for Fuel and Chemical Production*. **Currently:** Postdoc in Hodge laboratory
Spring 2014

Daniel Williams Chemical Engineering, Michigan State University. **Dissertation:** *Characterization and Scale-Up of Alkaline Hydrogen Peroxide Pretreatment*. **Currently:** Element Materials Technology, Plymouth, Michigan
Spring 2014

MS Students Advised

Graduated Students

Dhruv Gambhir Chemical Engineering, Michigan State University. **Non-Thesis Project:** *Lignin to Polyols Life Cycle Assessment and Economic Analysis*.
Spring 2016

Elizabeth Hagbjer Chemical Engineering, Luleå University of Technology. **Thesis:** *Characterization of Solubility and Aggregation of Alkaline Extracted Plant Cell Wall Biopolymers*. **Currently:** Preem AB, Lysekil, Sweden
Summer 2012

Muyang Li Chemical Engineering, Michigan State University. **Thesis:** *Structural Characterization of Alkaline Hydrogen Peroxide (AHP) Pretreated Biomass*. **Currently:** Postdoc with Shi-You Ding, Plant Biology, Michigan State University
Spring 2012

Caroline Häggström Chemical Engineering, Luleå University of Technology. **Thesis:** *Media requirements for aerobic cultivation of *Saccharomyces cerevisiae* TMB3400F-30-3 on softwood hydrolysate*. June 2008. **Currently:** Wibax AB, Piteå, Sweden
Spring 2008

Jonas Vinblad von Walter Chemical Engineering, Luleå University of Technology. **Thesis:** *Integration of Alkaline Hemicellulose Extraction into a Kraft Pulp Mill*. **Currently:** SunPine AB, Piteå, Sweden
Summer 2007

Other Researchers Advised

Gilberto Iñiguez-Covarrubias **Visiting Faculty** from Universidad de Guadalajara, Guadalajara, Mexico. Summer 2016.

Pachara Sattayawat **Visiting Scholar** from Chiang Mai University, Chiang Mai, Thailand. Fall 2015.

Guilong Yan **Visiting Scholar** from Huaiyin Normal University, Nanjing, China. February 2015-February 2016

Ryan Stoklosa **Postdoctoral Research Associate**, September 2014-present

Aditya Bhalla **Postdoctoral Research Associate**, (co-advised with Dr. Eric Hegg, MSU Biochemistry) August 2013 -present

Tongjun Liu **Postdoctoral Research Associate**, July 2009-December 2013

Fernando Peregrino Cordoba-Velasquez **Visiting Scholar** from Universidad Nacional de Colombia, Bogotá, Colombia. Summer 2012.

Undergraduate and High School Student Researchers Advised

	Student	Home University	Major	Period
1.	Georginelly Ferreira-Inácio	Universidade do Ceará, Fortaleza, Brazil	Mechanical Engineering	Summer 2016
2.	Ben Gardner	Tuskegee Institute	Chemical Engineering	Summer 2016
3.	Angel Santiago-Colón	University of Puerto Rico, Mayagüez	Chemical Engineering	Summer 2016
4.	Kendall Christy	Michigan State University	Chemical Engineering	Fall 2015-Sp. 2016
5.	Rachael Zarger	Michigan State University	Chemical Engineering	Fall 2015-Sp. 2016
6.	Shahrazad Polk	Texas Southern University	Chemistry	Summer 2015
7.	Pedro Ursulino dos Santos, Jr.	Un. Federal de Sergipe, São Cristóvão, Brazil	Chemical Engineering	Summer 2015
8.	Nicholas Hool	Michigan State University	Chemical Engineering	Summer 2015
9.	Nicholas Feringa	Michigan State University	Chemical Engineering	Fall 2014-present
10.	Alicia Martínez	Un. Politécnica de Madrid	Materials Science	Fall 2014
11.	Mario Gutiérrez	Michigan State University	Chemical Engineering	Summer 2014
12.	Benjamin Seeley	Michigan State University	Chemical Engineering	Summer 2014
13.	Henry Pan	Michigan State University	Chemical Engineering	June 2014-May 2015

14.	Lannie Norris	Michigan State University	Chemical Engineering	Fall 2013
15.	John Groetsch	Michigan State University	Chemical Engineering	Fall 2013-Sp.2014
16.	Avery Banks	University of Michigan	Chemical Engineering	Summer 2013
17.	Tim Magee	Michigan State University	Chemical Engineering	Summer 2013
18.	Andrew Accardo	Michigan State University	Chemical Engineering	Summer 2013
19.	Genevieve Gagnier	Michigan State University	Chemical Engineering	Fall 2012
20.	Phu Ho	High School Student		Summer 2012
21.	Natassa Christides	Michigan State University	Chemical Engineering	Fall 2011-Sp. 2013
22.	Jaowen Zhang	Zhejiang University	Biosys. Engineering	Summer 2011
23.	Serena Brodsky	University of Illinois	Agric. and Biol. Eng.	Summer 2011
24.	John Hill	Michigan State University	Chemical Engineering	Fall 2010
25.	Charles Chen	Michigan State University	Chemical Engineering	Sept 2010-May 2013
26.	Alex Smith	Michigan State University	Chemical Engineering	June 2010-May 2011
27.	Marc Hansen	Michigan State University	Chemical Engineering	Sept 2009-May 2011
28.	Aaron Vigil	Michigan State University	Chemical Engineering	Summer 2010
29.	Beipei Tao	Zhejiang University	Biosys. Engineering	Summer 2010
30.	Phil Lehman	Michigan State University	Chemical Engineering	June 2009-Aug 2009
31.	Ana Vočina	University of Ljubljana	Chemical Engineering	Fall 2006
32.	Michael Ware	Colorado State University	Chemical Engineering	Summer 2003

IV. Service and Outreach

Professional Memberships

- American Institute of Chemical Engineers (AIChE), 2008-present
- American Society of Agricultural and Biological Engineers (ASABE), 2014-present
- Society for Industrial Microbiology (SIM), 2002-present
- American Society for Microbiology (ASM), 2013-present
- American Society for Engineering Education (ASEE), 2009-2011

Ad hoc Reviewer

More than 150 reviews since 2009 for more than 40 journals including:

<i>Applied Biochemistry & Biotechnology</i>	<i>Catalysis Today</i>
<i>Applied Energy</i>	<i>Cellulose</i>
<i>ACS Sustainable Chemistry & Engineering</i>	<i>Chemical Engineering Education</i>
<i>Biochemical Engineering Journal</i>	<i>Energy & Fuels</i>
<i>BioEnergy Research</i>	<i>Enzyme & Microbial Technology</i>
<i>Biofuels Bioproducts & Biorefining</i>	<i>Green Chemistry</i>
<i>Biomacromolecules</i>	<i>Holzforschung</i>
<i>Biomass & Bioenergy</i>	<i>Industrial Biotechnology</i>
<i>Biomass Conversion & Biorefinery</i>	<i>Industrial Crops and Products</i>
<i>Bioprocess & Biosystems Engineering</i>	<i>Industrial & Engineering Chemistry Research</i>
<i>Bioresource Technology</i>	<i>Journal of Applied Polymer Science</i>
<i>BioResources</i>	<i>Journal of Bioremediation & Biodegradation</i>
<i>Biotechnology & Bioengineering</i>	<i>Journal of Bioscience & Bioengineering</i>
<i>Biotechnology for Biofuels</i>	<i>Journal of Environmental Engineering</i>
<i>Biotechnology Progress</i>	<i>Journal of Experimental Botany</i>
<i>Chemical Communications</i>	<i>Journal of Ind. Microbiology & Biotechnology</i>
<i>Chemical Engineering Education</i>	<i>Journal of Wood Chemistry & Technology</i>
<i>Chemical Engineering & Technology</i>	<i>Letters in Applied Microbiology</i>
<i>Carbohydrate Polymers</i>	<i>Process Biochemistry</i>

Proposal Reviewer

U.S. Federal

- NSF EPSCoR RII
- DOE SBIR phase I
- USDA-NIFA Biomass Research and Development Initiative (BRDI)
- NSF CBET: Biotechnology, Biochemical, and Biomass Engineering
- South Central SunGrant Initiative
- Science advisory board member for DOE's Joint Bioenergy Energy Institute's (JBEI) Advanced Biofuels Process Development Unit (ABPDU), Emeryville, CA. 2011-2014

International

- National Science Centre (NCN), Poland

- Canada Foundation for Innovation (CFI), Canada
- National Fund for Scientific & Technological Development (FONDECYT), Chile
- Le Fonds de recherche du Québec – Nature et technologies (FRQNT), Canada

External PhD Examiner

- Department of Geosciences and Natural Resource Management, University of Copenhagen, Denmark. August 2015
- Faculty of Science and Humanities, Anna University-Chennai, India. Sept. 2015

PhD Committee Membership:

<i>Student</i>	<i>Department</i>	<i>Advisor</i>	<i>Completed</i>
Sayli Bote	Chemical Engineering	Ramani Narayan	Current
George Cain	Chemical Engineering	Kris Berglund	Current
Gracie-Lou Klinger	Chemistry	Ned Jackson	Current
Nicole Shriner	Chemical Engineering	Kris Berglund	Current
Imam Nezam	Chemical Engineering	Dennis Miller	Current
Hugh MacDowell	Chemical Engineering	Ramani Narayan	Current
Saisi Xue	Chemical Engineering	Bruce Dale	Current
Zhu Shen	Forestry	Pascal Kamden	Current
Achira Mukhopadhyay	Plant Biology	Jonathan Walton	Current
Mahlet Garede	Biosystems Engineering	Chris Saffron	Current
Caitlyn Kowalsky	Chemical Engineering	Tim Whitehead	Spring 2016
Zhiguo Liu	Biosystems Engineering	Yan Liu	Spring 2016
Tyler Jordison	Chemical Engineering	Dennis Miller	Fall 2015
Aaron Oberg	Chemical Engineering	Dennis Miller	Fall 2015
Arati Santhanakrishnan	Chemical Engineering	Dennis Miller	Spring 2015
Lei Wang	Forestry	Pascal Kamden	Fall 2014
Adam Jaros	Chemical Engineering	Kris Berglund	Fall 2013
Ankush Ghokole	Chemical Engineering	Ilsoon Lee	Fall 2013
Xiaoqing Wang	Biosystems Engineering	Wei Liao	Fall 2012
Wei Wang	Chemical Engineering	Ilsoon Lee	Fall 2012
Shaowen Ji	Chemical Engineering	Ilsoon Lee	Fall 2012
Pragnya Eranki	Chemical Engineering	Bruce Dale	Summer 2012
Rebecca Garlock	Chemical Engineering	Bruce Dale	Summer 2012
Tim Petrik	Chemical Engineering	Kris Berglund	Summer 2011

MS Committee Membership:

<i>Student</i>	<i>Department</i>	<i>Advisor</i>	<i>Completed</i>
Yingkui Zhong	Biosystems Engineering	Yan Liu	Current
Mona Shaaban	Horticulture	Randolph Beaudry	Spring 2016
Kristen Henn	Biosystems Engineering	Chris Saffron	Spring 2015
John Budaj	Biosystems Engineering	Chris Saffron	Fall 2015
Mahlet Garede	Biosystems Engineering	Chris Saffron	Spring 2014
Jason Bouvee	Biosystems Engineering	Chris Saffron	Fall 2013
Michael Zanotti	Biosystems Engineering	Wei Liao	Fall 2013
James MacLelan	Biosystems Engineering	Wei Liao	Summer 2012
Charles Teater	Biosystems Engineering	Wei Liao	Spring 2010
Ying Liu	Biosystems Engineering	Wei Liao	Spring 2010
Xiaorui Niu	Biosystems Engineering	Wei Liao	Spring 2010

Conference Organization

- **Area Programming Chair**, (Area 23b) Sustainable Biorefineries within Sustainable Engineering Forum. AIChE Annual Meeting, 2015, Salt Lake City, UT.
- **Session Chair**, 2 sessions at AIChE Annual Meeting, 2015, Salt Lake City, UT.
- **Area Programming Chair**, (Area 23b) Sustainable Biorefineries within Sustainable Engineering Forum. AIChE Annual Meeting, 2014, Atlanta, GA.
- **Organizing Committee**, DOE GLBRC 2013 Retreat, South Bend, IN.
- **Session Chair**, Alkaline Pretreatments, 35th Symposium on Biotechnology for Fuels and Chemicals, 2013, Portland, OR.

- **Session Moderator**, Pretreatment, DOE GLBRC Biomass Deconstruction Retreat, 9 Jan. 2012, East Lansing, MI.
- **Session Chair**, Biological Conversions and Processes for Renewable Feedstocks, AIChE Annual Meeting, 2011, Minneapolis, MN.
- **Session Chair**, Bioprocessing and Separations Technology, 33rd Symposium on Biotechnology for Fuels and Chemicals, 2011, Seattle, WA.
- **Organizing Committee**, Biomass Waste to Energy Summit, Nov. 9, 2010, East Lansing, MI.
- **Session Co-chair**, Biological Conversions and Processes for Renewable Feedstocks I, AIChE Annual Meeting, 2010, Salt Lake City, UT.
- **Session Chair**, Biological Conversions and Processes for Renewable Feedstocks II, AIChE Annual Meeting, 2010, Salt Lake City, UT.
- **Session Chair**, Pretreatment: What is it? How can it be improved? DOE GLBRC Retreat. May 17-19, 2010, South Bend, IN.
- **Session Co-chair**, Poster Session: Sustainability and Sustainable Biorefineries. AIChE Annual Meeting, 2009, Nashville, TN.

University/Center/Department Service

- Chemical Engineering Graduate Coordinator. Beginning 2017.
- College of Engineering undergraduate awards and financial aid committee, Fall 2016-present
- Chemical Engineering Seminar Series Organizer and Host, Fall 2009-present
- University Committee on Student Affairs, Fall 2009-Spring 2013
- DOE GLBRC Seminar Series Organizing Committee, Spring 2011-December 2013

K-12 Outreach

- High School Engineering Institute (HSEI) Program. Lectures and hands-on laboratory activities for 40-50 high school students. June 2010; June 2013; June 2014; June 2015; June 2015
- Future Scientist Program. Hosted a high school student for 8 weeks in my laboratory in a program sponsored by the MSU Office of the Vice President for Research and Graduate Studies, the MSU Clinical and Translational Sciences Institute, the American Cancer Society, and the Lansing School District. Summer 2012

V. Awards

- MSU Academy of Global Engagement Fellow 2013-2014

VI. Publications and Presentations

Invited Research Presentations

1. **EU COST Action FP 1306 Coordination Meeting**: Valorisation of lignocellulosic biomass side streams for sustainable production of chemicals, materials & fuels using low environmental impact technologies. Invited Speaker. Lisbon, Portugal. October 2016.
2. **Luleå University of Technology**, Department of Chemical Engineering. Department Retreat. August 2016.
3. **Luleå University of Technology**, Department of Chemical Engineering, NMR and Green Chemistry Workshop. October 2015.
4. **University of Copenhagen**, Department of Forestry and Urban Landscape, Copenhagen, Denmark. August 2015. (Host: Claus Felby)
5. **Institute of Chemical Technology**, Department of Chemical Engineering, Mumbai, India. July 2014. (Host: Sunil Bhagwat)
6. **Mid-Michigan AIChE Chapter Monthly Meeting**, Midland, Michigan. Guest Speaker, February 2014. (Host: Maxine Cotrell)
7. **Auburn University**, Department of Biosystems Engineering, November 2013. (Host: Maobing Tu)
8. **Huazhong University of Science and Technology**, Department of Biotechnology, Wuhan, China. October 2012. (Host: Xiaoyu Zhang)
9. **University of Maine**, Department of Chemical Engineering. September 2012. (Host: Peter van Walsum)
10. **Umeå Plant Sciences Centre**, Department of Plant Physiology at Umeå University and the Department of Forest Genetics and Plant Physiology at the Swedish University of Agricultural Sciences (SLU), Umeå. Sweden. May 2012. (Host: Hannele Tuominen)
11. **Clemson University**, Department of Chemical Engineering. April 2012. (Host: Mark Thies)
12. **Cornell University**, Energy Engineering Seminar Series. February 2012. (Host: Jeff Tester)
13. **University of Toledo**, Department of Chemical & Environmental Engineering. February 2010. (Host: Sasidhar Varanasi)

Peer-Reviewed Publications

Total Citations: >1000; h-index: 16; i10-index: 21 (Google Scholar as of Sept.20, 2016)

Graduate student (*), undergraduate (**), or postdoc or visiting scholar (***) supervised by Dr. Hodge

Manuscripts In Review:

1. Orjuela A, da Costa Sousa L, Uppugundla N, **Williams DL***, Dale BE, **Hodge DB**, Balan V (in review). Techno-economic comparison of centralized versus decentralized biorefineries for two alkaline pretreatment processes. *Biores Technol*.
2. Wells T, Khuu LR, Das P, Meng X, **Stoklosa RJ*****, **Bhalla A*****, **Hodge DB**, Yuan JS, Ragauskas AJ (in review). Conversion of corn stover alkaline pretreatment waste streams into biodiesel via *Rhodococci*.

Published:

3. **Li M***, **Williams DL***, Heckwolf M, de Leon N, Kaepler S, Sykes RW, **Hodge DB**. (accepted). Prediction of cell wall properties and response to deconstruction using alkaline pretreatment in diverse maize genotypes using py-MBMS and NIR. *Bioenerg Res*.
4. Nitsos C, **Stoklosa RJ*****, Karnaouri A, Vörös D, Lange H, **Hodge DB**, Crestini C, Rova U, Christakopoulos P (2016). Isolation and characterization of organosolv and alkaline lignins from hardwood and softwood biomass. *ACS Sus Chem Eng*. DOI: 10.1021/acssuschemeng.6b01205.
5. **Bhalla A*****, Bansal N, **Stoklosa R*****, Fountain M, Ralph J, **Hodge DB**, Hegg EL (2016). Effective alkaline metal catalyzed oxidative delignification of hybrid poplar. *Biotechnol Biofuels*. 9, 34.
6. **Bansal N*****, **Bhalla A*****, Pattathil S, Hahn MG, **Hodge DB**, Hegg EL (2016). Cell wall-associated transition metals improve alkaline-oxidative pretreatment in diverse hardwoods. *Green Chem*. 18:1405-1415.
7. **Li Z***, **Bansal N*****, Azarpira A, **Bhalla A*****, **Chen CH****, Ralph J, Hegg EL, **Hodge DB** (2015). Catalyst Co-localization with Altered Cell Wall Morphology associated with catalytic oxidative pretreatment of hybrid poplar. *Biotechnol Biofuels*. 8, 123.
8. Austin S, Kontur WS, Lubrich A, Oshlag JZ, Zhang W, Higbee A, Zhang Y, **Williams DL***, **Hodge DB**, Coon JJ, Donohue TJ, Noguera DR (2015). Detoxification of corn stover hydrolysate and recovery of aromatic chemicals using *Rhodopseudomonas palustris*. *Env Sci Technol*. 49(14):8914-8922.
9. **Li M***, Heckwolf M, **Crowe JD***, **Williams DL***, **Magee TD****, Kaepler SM, de Leon N, **Hodge DB** (2015). Cell wall properties contributing to alkaline pretreatment and deconstruction of diverse maize lines. *J Exp Bot*. 66(14):4305-4315.
10. **Stoklosa RJ*** and **Hodge DB** (2015). Fractionation and improved enzymatic deconstruction of hardwoods with alkaline delignification. *Bioenerg Res*. 8(3):1224-1234.
11. Scott F, **Li M***, **Williams DL***, Conejeros R, **Hodge DB**, Aroca G (2015). A semi-mechanistic model of enzymatic hydrolysis of corn stover with tight confidence interval to support model-based process design and optimization. *Biores Technol*. 177:255-265.
12. Kudahettige-Nilsson RL, Helmerius J, Nilsson R, **Hodge DB**, Rova U (2015). Biobutanol production from Kraft black liquor precipitated xylan by *Clostridium acetobutylicum*. *Biores Technol*. 179:71-79.
13. Tomek KJ, Castillo-Saldarriaga FP, **Cordoba-Velasquez CR*****, **Liu T*****, **Hodge DB**, Whitehead TA (2015). Removal and upgrading of lignocellulosic fermentation inhibitors by *in situ* biocatalysis and liquid-liquid extraction. *Biotechnol Bioeng*. 112(3):627-632.
14. Parreiras LS, Breuer RJ, Narasimhan RA, Higbee AJ, LaReau A, Tremaine A, Qin L, Bice BD, Bonfert BL, Pinhancos RC, Balloon AJ, Uppugundla N, **Liu T*****, Li C, Tanjore D, Ong IM, Li H, Pohlmann E, Withers ST, Simmons BA, **Hodge DB**, Westphall MS, Coon JJ, Dale BE, Balan V, Keating DH, Zhang Y, Landick R, Gasch AP, Sato TK (2014). Engineering and two-stage evolution of a hydrolysate-tolerant *Saccharomyces cerevisiae* strain for anaerobic fermentation of xylose from AFEX™ pretreated corn stover. *PLoS One*. 9(9):e107499.
15. **Williams DL*** and **Hodge DB**. (2014). Impacts of delignification and hot water pretreatment on the water induced cell wall swelling behavior of grasses and its relation to cellulolytic enzyme hydrolysis and binding. *Cellulose*. 21(1):221-235. **Liu T*****, **Williams DL***, Pattathil S, **Li M***, Hahn MG, **Hodge DB** (2014). Coupling alkaline pre-extraction with oxidative post-treatment of corn stover to enhance enzymatic hydrolysis and fermentability. *Biotechnol Biofuels*. 7, 48.
16. **Li M***, Pattathil S, Hahn MG, **Hodge DB** (2014). Identification of features associated with plant cell wall recalcitrance to pretreatment by alkaline hydrogen peroxide in diverse bioenergy feedstocks using glycome profiling. *RSC Adv*. 4:17282-17292.
17. Gowtham YG, Miller KP, **Hodge DB**, Henson JH, Harcum SW (2014). A novel two-stage fermentation process for bioethanol production using *Saccharomyces pastorianus*. *Biotechnol Prog*. 30(3):300-310.

18. Sato TK, Liu T^{***}, Parreiras LS, Williams DL*, Wohlbach DJ, Bice BD, Breuer RJ, Ong IS, Qin L, Bulsalacchi D, Deshpande S, Daum C, Gasch AP, **Hodge DB** (2014). Harnessing Genetic Diversity in *Saccharomyces cerevisiae* for Improved Fermentation of Xylose in Hydrolysates of Alkaline Hydrogen Peroxide Pretreated Biomass. *Appl Env Microbiol.* 80(2):540-554.
19. Li Z*, Chen CH*, Li Z*, Hegg E, **Hodge DB**. (2013). Rapid and Effective Oxidative Pretreatment of Woody Biomass at Mild Reaction Conditions and Low Oxidant Loadings. *Biotechnol Biofuels.* 6(1), 119.
20. Li Z*, Chen CH*, Liu T^{***}, Mathrubootham V, Hegg EL, **Hodge DB**. (2013). Catalysis with Cu^{II}(bpy) Improves Alkaline Hydrogen Peroxide Pretreatment. *Biotechnol Bioeng.* 110(4):1078-1086.
21. Stoklosa RJ*, Velez J, Kelkar S, Saffron CM, Thies MC, **Hodge DB** (2013). Correlating Lignin Structural Features to Phase Partitioning Behavior in a Novel Aqueous Fractionation of Softwood Kraft Black Liquor. *Green Chem.* 15(10):2904-2912.
22. Stoklosa RJ*, **Hodge DB** (2012). Extraction, Recovery, and Characterization of Hardwood and Grass Hemicelluloses for Integration into Biorefining Processes. *Ind Eng Chem Res.* 51:11045-11053.
23. Li M*, Foster C, Pu Y, Holmes D, Saffron C, Ragauskas A, **Hodge DB** (2012). Structural Characterization of Alkaline Hydrogen Peroxide Pretreated Grasses Exhibiting Diverse Lignin Phenotypes. *Biotechnol Biofuels.* 5(1)38.
24. Banerjee G, Car S, Williams DL*, López-Meza S, Walton JD, **Hodge DB** (2012). Scale-up and Integration of Alkaline Hydrogen Peroxide Pretreatment, Enzymatic Hydrolysis, and Ethanol Fermentation. *Biotechnol Bioeng.* 109(4):922-931.
25. Enman J, **Hodge DB**, Berglund KA, Rova U (2012). Growth promotive conditions for enhanced eritadenine production during submerged cultivation of *Lentinus edodes*. *J Chem Technol Biotechnol.* 87(7):903-907.
26. Banerjee G, Car S, Scott-Craig J, **Hodge DB**, Walton JD (2011). Alkaline peroxide pretreatment of corn stover: effects of biomass loading, peroxide concentration, and enzyme concentration and composition on yields of glucose and xylose. *Biotechnol Biofuels.* 4:16.
27. Helmerius J, Vinblad von Walter J*, Rova U, Berglund KA, **Hodge DB** (2010). Impact of Hemicellulose Pre-extraction on the Properties of Birch Kraft Fibers. *Biores Technol.* 101(15):5996-6005
28. **Hodge DB**, Andersson CA, Berglund KA, Rova U (2009). Detoxification Requirements for Bioconversion of Softwood Dilute Acid Hydrolyzates to Succinic Acid. *Enz Microb Technol.* 44:309-316.
29. Andersson CA, Helmerius J, **Hodge DB**, Berglund K, Rova U (2009). Inhibition of Succinic Acid Production in Metabolically Engineered *Escherichia coli* by Neutralizing Agent, Organic Acids, and Osmolarity. *Biotech Prog.* 25(1):116-123.
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