YUN JI
Associate Professor, Department of Chemical Engineering, University of North Dakota (UND)

EDUCATION AND TRAINING:

2007 Ph.D., University Maine, Chemical Engineering
2002 M.S., Asian Institute of Technology, Process Technology/Pulp and Paper Technology
1999 B.Eng, Northwest University of Light Industry, Light Industry Technology

RESEARCH AND PROFESSIONAL EXPERIENCE:

2015 – Present	Associate Professor, University of North Dakota
2018	Visiting Professor, VTT Technical Research Center, Finland
2009 – 2015	Assistant Professor, University of North Dakota
2007 – 2009	Postdoc Researcher, National Renewable Energy Laboratory
2002 – 2007	Research Assistant, University of Maine
2005	Project Engineer, International Paper
2002	Research Engineer, Kymi Paper Oy, UPM-Kymmene, Finland

AREAS OF EXPERTISE: Biomass pretreatment, enzymatic hydrolysis, forestry bio-refinery and renewable chemicals and fuels, green composites and materials. Other areas include: oil and gas pipeline detection modeling, metal-ion co-catalysts to improve biomass pretreatment yields, pulp and paper technology, paper recycling, and process/environmental engineering applications.

ACCOMPLISHMENTS AND SYNERGISTIC ACTIVITIES:

Fulbright-VTT Grant in Science, Technology and Innovation, Finland, 2017-2018
North Dakota Spirit Faculty Achievement Award (in recognition of significant contribution in teaching, research and service), May 2014

Best Visual Presentation award in the Biomass Feedstock, Residues and By-products poster session of the 21st European Biomass Conference and Exhibition in Copenhagen, Denmark, June 2013
TAPPI Journal Best Research Paper Award, 2012
Howard Rapson Memorial Award of International Pulp Bleaching Conference, Québec City, Canada, 2008
Journal Reviewer for Journal of the American Chemistry Society, Journal of Energy and Fuels Journal of Bio-resource Technology, International Journal of Biological Sciences, Journal of Industrial Crops and Products, Journal of Biomass and Bioenergy, Journal of Industrial Crops and Products

GRANTS RECEIVED:

1. "The Production of 1,4-Pentadiol from Corn Stover-Derived Levulinic Acid", North Dakota Council, 7/1/2020-6/30/2021, $75,000, Co-PI
2. "Chemicals from Corn Stover to Increase Corn Producer Revenue", ND Corn Council, 7/1/2019-6/30/2020, $75,000, Co-PI
3. "Valorization of Corn as a Feedstock for Designing of High Value Functional Materials", ND Corn Council, 7/1/2019-6/30/2021, $90,600, Co-PI
4. "Collaborative Sustainable Materials Research Program in the University of North Dakota", NSF EPSCoR Seed Grant, 5/1/2017-7/15/2018, $45,000, Co-PI

5. "Improving Cold Tolerance in Sorghum: A Promising Feedstock for Biofuels and Biobased Products in Northern Great Plains", USDA 2016 Sungrant North Central Region, $150,000, 4/1/2017-3/31/2019, Co-PI
6. "Detection of Blockage in Petroleum Pipeline", ND Venture, $99,932, 9/1/2017-8/31/2018, Role, Co-PI
7. "Novel Lignin Based Biopolymers and Composites", ND Venture, $98,800, 6/1/2016-5/30/2018, Role, Co-PI
8. "Dakota BioCon", NSF EPSCoR, $6,000,000, 8/1/2014-7/31/2016, Role: Major Participant
9. "Investigate Lewis Acid Co-Catalyst for Enhancing Dilute-Acid Pretreatment and Saccharification Yields of Biomass Substrates", $236,067, 07/10 – 12/14, Role: Single PI
10. "Continuous Hasterlloy C276 Reactor System for Biocatalysis Research", ND EPSCoR Equipment, $38,210, 02/10-08/10, Role: Single PI
11. "Evaluation of Kenaf as a Renewable Source for "Green" Chemicals and Fuels", DOE ND EPSCoR, $31,000, 07/10-12/11, Role: PI
12. "Renewable Fuels and Chemicals from Sugar Beet Pulp", UND Faculty Seed, $19,000, 5/1/2011-7/31/2012, Role: PI
13. "UND New Faculty Startup", UND and SUNRISE, $150,000, 06/09 – 08/12, Role: PI
14. "Soft Molasses Fermentation Research", MinnDak Yeast Company, $13,245, 5/16/2011-8/15/2011
15. "Double- and relay- cropping systems for oil and biomass feedstocks production in North Central region", North Central Sungrant, $95,642, 4/1/2011-3/31/2013, Role: Co-PI
16. "Biomass pretreatment for Menon & Associates, Menon & Associates, $78,000, Role: Co-PI

Students Advised:

Undergraduates: 85 Undergraduate students
M.S. Thesis Advisees: John Degenstein, Ebenezer Donkoh, Hardy Delong, Tony Snyder, Asina Fnu, Katie Hall
PhD Dissertation Advisees: Srinivas Reddy Kamireddy, Ivana Brzonova, Jian Kang
Visiting Scholars: Jinbao Li, Hai Wang

PEER REVIEWED PUBLICATIONS (Student authors underlined)

1. J. Li, Z. Wang, H. Xiu, X. Zhao, F. Ma, L. Liu, C. Yi, M. Zhang, E. Kozliak, **Y. Ji***, (2022) "Correlation between the powder characteristics and particle morphology of microcrystalline cellulose (MCC) and its tablet application performance", Powder Technology, 117194
2. J. Li, Y. Cui, H. Xiu, W. Wang, M. Du, X. Yang, Q. Xu, E. Kozliak, **Y. Ji***, (2022) "An integrative cellulose-based composite material with controllable structure and properties for solar-driven water evaporation", Cellulose, 1:1-17.
3. S. Gupta, S. Javaid, M. Dey, C. Matzke, E. Eades, Y. Ji, (2022). Exploration of solvent casting for designing engineered microstructures for biomedical and functional applications. Journal of American Ceramic Society; 105(3), 1864-1881 https://doi.org/10.1111/jace.18104
4. Aldam, S. A., Dey, M., Javaid, S., Ji, Y., & Gupta, S. (2020). On the Synthesis and Characterization of Polylactic Acid, Polyhydroxyalkanoate, Cellulose Acetate, and Their Engineered Blends by Solvent Casting. Journal of Materials Engineering and Performance, 1-15. https://doi.org/10.1007/s11665-020-04594-3

5. J. Li, P. Feng, H. Xiu, M. Zhang, J. Li, M. Du, X. Zhang, E. Kozliak, **Y. Ji***, (2020) "Wheat straw components fractionation, with efficient delignification, by hydrothermal treatment followed by facilitated ethanol extraction", Bioresource Technology, 316, 123882 https://doi.org/10.1016/j.biortech.2020.123882
6. S. Gupta, M. Dey, S. Javaid, **Y. Ji**, S. Payne, (2020), " On the design if novel biofoams using lignin, wheat straw and sugar beet pulp as precursor material", ACS Omega, 5, 28, 17078-17089, https://doi.org/10.1021/acsomega.0c00721
7. H. Xiu, F. Ma, J. Li, X. Zhao, L. Liu, P. Feng, X. Yang, X. Zhang, E. Kozliak, **Y. Ji***, (2020) "Using fractal dimension and shape factors to characterize the microcrystalline cellulose (MCC) particle morphology and powder flowability", Powder Technology, 364, 241-250 https://doi.org/10.1016/j.powtec.2020.01.045
8. J. Li*, P. Feng, H. Xiu, J. Li, F. Ma, X. Li, X. Zhang, E. Kozliak, **Y. Ji***, (2019), *"Morphological changes of lignin during separation of wheat straw components by the hydrothermal-ethanol method"*, Bioresource Technology, 294, 122157 https://doi.org/10.1016/j.biortech.2019.122157
9. S. Gupta, M. Dey, C. Matzke, G. Ellis, S. Javaid, K. Hall, Y. Ji, and S. Payne, (2019) *"Synthesis and Characterization of Novel Foams by Pyrolysis of Lignin"*, Tappi, 18(01):45-56
10. J. Li*, H. Dong, H. Xiu, T. Song, X. Yang, F. Ma, P. Feng, X. Zhang, E. Kozliak, **Y. Ji***, (2019) *"Structure and Performance Control of Plant Fiber Based Foam Material by Fibrillation via Refining Treatment"*, Industrial Crops and Products, 128, 186-193
11. J. Li, T. Song, H. Xiu, Rui Cheng, X. Yang, Q. Liu, X. Zhang, E. Kozliak, **Y. Ji***, (2019) *"Control of Structure and Properties of Nano-fibrillated Cellulose (NFC) Based Foam Materials by using Ethanol Additives prior to Freeze Drying"*, Wood Science & Technology, 4: 837-854, doi: 10.1007/s00226-019-01097-w
12. J. Pere, E. Pääkkönen, **Y. Ji**, E. Retulainen* (2019), *"Influence of Hemicellulose Content on Fiber Properties, Strength and Formability of Handsheets"*, BioResources, 14(1), 251-263
13. J. Li*, R. Cheng, H. Xiu, M. Zhang, Q. Liu, T. Song, H. Dong, B. Yao, X. Zhang, E.
14. H. Xiu, R. Cheng, J. Li, F. Ma, T. Song, X. Yang, P. Feng, X. Zhang, E. Kozliak, **Y. Ji***, (2019) *"Effects of Acid Hydrolysis Waste Liquid Recycle on Preparation of Microcrystalline Cellulose"*, Green Processing and Synthesis, 8: 348–354, doi: https://doi.org/10.1515/gps-2019-0002
15. Kozliak, **Y. Ji***, (2018)*"Pore Structure and Pertinent Physical Properties of Nanofibrillated Cellulose (NFC)-based Foam Materials"*, Carbohydrate Polymers, 201, 141-150
16. **Y. Ji**, Y. Peng, A. Strand, S. Fu, A. Sundberg, E. Retulainen*, (2018)*"Fiber Evolution during Alkaline Treatment and Its Impact on Handsheet Properties"*, BioResources, 13(4), 7310-7324
17. J. Li, R. Cheng, H. Xiu, T. Song, M. Zhang, Q. Liu, X. Zhang, E. Kozliak, **Y. Ji ***, (2018) *"Foam Materials with Controllable Pore Structure Prepared from Nanofibrillated Cellulose with Addition of Alcohols"*, Industrial Crops and Products, 125, 314-322
18. H. Wei*, X. Chen, J. Shekiro, E. Kuhn, W. Wang, **Y. Ji**, E. Kozliak, M. Himmel and M. Tucker, (2018) "*Kinetic Modelling and Experimental Studies for the Effects of Fe2+ Ions on Xylan Hydrolysis with Dilute-Acid Pretreatment and Subsequent Enzymatic Hydrolysis*", Catalysts, 8(1), 39 doi:10.3390/catal8010039

19. I. Brzonova, E.I. Kozliak, A.A. Andrianova, A. LaVallie, A. Kubátová, **Y. Ji***, (2017) *"Production of Lignin Based Insoluble Polymers (anionic hydrogels) by C. versicolor*", Scientific reports. 7 doi:10.1038/s41598-017-17696-1.
20. I. Brzonova, F. Asina, A. Andrianova, I. Smoliakova, A. Kubátová, E. Kozliak, and **Y. Ji***, (2017), *"Fungal Biotransformation of Insoluble Kraft Lignin into Water Soluble Polymers"*, Industrial & Engineering Chemistry Research, 56(21) 6103-6113, DOI: 10.1021/acs.iecr.6b04822
21. F. Asina, I. Brzonova, E. Kozliak, A. Kubátová and **Y. Ji***, (2017), *"Microbial Treatment of Industrial Lignin: Successes, Problems and Challenges"*, Renewable and Sustainable Energy Reviews, 77, 1179-1205, http://doi.org/10.1016/j.rser.2017.03.098
22. S. Gupta, M.F. Riyad and **Y. Ji**, (2016), *"Synthesis and Tribological Behavior of Ultra High Molecular Weight Polyethylene (UHMWPE)-Lignin Composites"*, Lubricants, 4(3), 31, doi:10.3390/lubricants4030031
23. F. Asina, I. Brzonova, K. Voeller, E. Kozliak, A. Kubátová, B. Yao, **Y. Ji***, (2016), *"Biodegradation of Lignin by Fungi, Bacteria and Laccases"*, 220, 414-424, Bioresource Technology, doi: 10.1016/j.biortech.2016.08.016
24. J. Li, H. Xiu, M. Zhang, S. Kamireddy, X. Zhang and **Y. Ji***, (2016) "*Extraction, separation and refining of microcrystalline cellulose from wheat straw using various pretreatment processes*", International Journal of Agricultural and Biological Engineering, 9(2), 137-145
25. M. Berti, R. Gesch, B. Johnson, **Y. Ji,** W. Seames and A. Aponte, (2015) "*Double- and Relay-Cropping of Energy Crops in the Northern Great Plains, USA*", Industrial Crops and Products, (75) 26–34, doi:10.1016/j.indcrop.2015.05.012.
26. H. Xiu, J. Li, H. Wang and **Y. Ji**, (2014) "*Application of PEI and PAC as Anionic Trash Catcher to Improve the Paper Properties of Aspen APMP Containing Furnish-A Case Study*", Ippta, Volume 26, No. 4, 52-57
27. Brzonova, E. Kozliak, A. Kubátová, M. Chebeir, W. Qin, L. Christopher and **Y. Ji*** (2014), "*Kenaf Biomass Biodecomposition by Basidiomycetes and Actinobacteria in Submerged Fermentation for Production of Carbohydrates and Phenolic Compounds*", Bioresource Technology, DOI: 10.1016/j.biortech.2014.09.057
28. S. Reddy Kamireddy, E. Kozliak, M. Tucker and **Y. Ji*** (2014), *"Kinetic Features of Xylan de-polymerization in Production of Xylose Monomer and Furfural during Acid Pretreatment for Kenaf, Forage sorghums and Sunn hemp Feedstocks"*, International Journal of Agricultural and Biological Engineering, Vol. 7 No. 4, 86-98
29. L. Christopher*, B. Yao and **Y. Ji** (2014) *"Lignin Biodegradation with Laccase-mediator Systems"*, Frontiers in Energy Research. 2:12. doi: 10.3389/fenrg.2014.00012
30. S. Reddy Kamireddy, E. Kozliak, M. Tucker and **Y. Ji*** (2014) "*Determining the Kinetics of Sunflower Hulls using Dilute Acid Pretreatment in the Production of Xylose and Furfural*", Green Processing and Synthesis, Vol. 3, 1, 69-75
31. R. Anfinrud, L. Cihacek, B. Johnson, **Y. Ji** and M. Berti* (2013) *"Sorghum and Kenaf Biomass Yield and Quality Response to Nitrogen Fertilization in the Northern Great Plains of the USA"*, Industrial Crops and Products, 50, 159-165
32. H. Wang, M. Tucker and **Y. Ji***, (2013) *"Recent Development in Chemical Depolymerization of lignin-A Review"*, Journal of Applied Chemistry, Vol. 2013, Article ID 838635, 1-9
33. S. Reddy Kamireddy, J. Li, S. Abbina, M. Tucker, M. Berti and **Y. Ji***, (2013) *"Converting Forage Sorghum and Sunn Hemp into Biofuels through Dilute Acid Pretreatment"*, Industrial

Crops and Products, 49, 598-609

34. J. Degenstein, S. Kamireddy, M. Tucker, and **Y. Ji***, (2013) "*Oligomer Saccharide Reduction during Dilute Acid Pretreatment Co-catalyzed with Lewis Acids on Corn Stover Biomass"*, International Journal of Agricultural and Biological Engineering, Vol. 6 No. 2, 54-62
35. J. Li, H. Xiu, M. Zhang, H. Wang, Y. Ren, **Y. Ji***, (2013) *"Enhancement of Cellulose Acid Hydrolysis Selectivity Using Metal Ion Catalysts"*, Current Organic Chemistry, 17, 1617-1623
36. M. Berti*, S. Kamireddy, **Y. Ji**, (2013) *"Row Spacing Affects Biomass Yield and Composition of Kenaf (Hibiscus cannabinus L.) as a Lignocellulosic Feedstock for Bioenergy",* Journal of Sustainable Bioenergy Systems, 3, 68-73
37. S. Kamireddy, J. Degenstein M. Berti and **Y. Ji***, (2013) "*Pretreatment and Enzymatic Hydrolysis of Kenaf as a Potential Source for Lignocellulosic Biofuel and Green Chemicals"*, Current Organic Chemistry, 17, 1624-1632
38. S. Kamireddy, J. Li, J. Degenstein, M. Tucker, and **Y. Ji***, (2013) "*Effects and Mechanism of Metal Chlorides Catalysts on Pretreatment and Enzymatic Digestibility of Corn Stover"*, Industrial & Engineering Chemistry Research, 52(5), 1775-1782
39. E. Donkoh, J. Degenstein, and **Y. Ji***, (2012) "*Feasibility of Integrating Ethanol Plant into Existing Sugar Processing Plant using Sugar Beet Pulp"*, International Journal of Agricultural and Biological Engineering, Vol. 5 No. 1, 52-61
40. S. Reddy Kamireddy, C. Schaefer, M. Defrese, and **Y. Ji***, (2012) "*Pretreatment and Enzymatic Hydrolysis of Sunflower Hulls for Fermentable Sugar Production*", International Journal of Agricultural and Biological Engineering, Vol. 5 No. 1, 62-70
41. VanHeiningen* and **Y. Ji**, (2012), *"Southern Pine Oxygen Delignified Pulps Produced in a Berty Throughflow Reactor: How to Obtain the Highest Degree of Delignification while Maintaining Pulp Yield and Quality"*, Tappi Journal, Vol. 11 No. 3, 9-18
42. E. Donkoh and **Y. Ji***, (2012), *"Optimization of Enzymatic Hydrolysis of Dilute Acid Pretreated Sugar Beet Pulp Using Response Surface Design"*, Journal of Sugar Beet Research, Vol. 49 Nos. 1&2, 26-37
43. J. Degenstein, S. Kamireddy, M. Tucker and **Y. Ji***, (2011) "*Novel Batch Reactor for the Dilute Acid Pretreatment of Lignocellulosic Feedstocks with Improved Heating and Cooling Kinetics"*, International Journal of Chemical Reactor Engineering, Vol. 9: A95
44. **Y. Ji**, E. Vanska and A. VanHeiningen*, (2009) *"Rate Determining Step and Kinetics of Oxygen Delignification"*, Pulp and Paper Canada, 110(3), 29-35
45. **Y. Ji**, E. Vanska and A. VanHeiningen*, (2009*) "New kinetics and mechanisms of oxygen delignification observed in a continuous stirred tank reactor (CSTR)"*, Holzforschung, Vol 63, (3), 272-277
46. **Y. Ji**, M. Wheeler and A. VanHeiningen*, (2007) *"Oxygen Delignification Kinetics: CSTR and Batch Reactor Comparison"*, AIChE Journal, Vol. 53, No. 10, 2681-2687
47. **Y. Ji** and A. VanHeiningen*, (2007) "*A New CSTR for Oxygen Delignification Mechanism and Kinetics Study"*, Journal of Pulp and Paper Canada, 108:5, 38-42

BOOK CHAPTER:

1. van Heiningen, Adriaan RP, Yun Ji, and Vahid Jafari. "Recent progress on oxygen delignification of softwood Kraft pulp." *Cellulose Science and Technology: Chemistry, Analysis, and Applications* (2018): 67-97.

COURSES TAUGHT

Undergraduate Level

ChE 206 Unit Operations in Chemical Engineering
ChE 301 Introduction to Transport Phenomena
ChE 303 Chemical Engineering Thermodynamics
ChE 332 Chemical Engineering Lab III
ChE 335 Chemical Engineering Summer Lab II/III
ChE 408 Process Dynamics and Control

Graduate Level

ChE 505 BioChemical Engineering
ChE 515 Design of Engineering Experiments
CHE 562 Seminar in Chemical Engineering
ENGR 562 Seminar in Engineering
ENVE 562 Seminar in Environment Engineering

CONFERENCE PROCEEDINGS/PRESENTATIONS (Student authors underlined)

1. I. Brzonova, F. Asina, A. Artemyeva, I. Smoliakova, A. Kubátová, E. Kozliak, **Y. Ji**, *"Lignin for Biomedical Application: Potential and Challenges",* First International Symposium on Materials from Renewables (ISMR), Fargo, ND, July 19-20, 2016
2. I. Brzonova, F. Asina, A. Artemyeva, I. Smoliakova, A. Kubátová, E. Kozliak, **Y. Ji**,. "*Changes in Chemistry of Fugally Biotreated Lignin".* ND EPSCoR/IDeA State Conference, Grand Forks, ND, April 19, 2016
3. I. Brzonova, F. Asina, A. Artemyeva, I. Smoliakova, A. Kubátová, E. Kozliak, **Y. Ji**., *"Biopolymers and Chemicals from Kraft Lignin"*, 10th World Biomaterials Congress, Montreal, Canada, May 17-22, 2016
4. I. Brzonova, F. Asina, A. Artemyeva, I. Smoliakova, A. Kubátová, E. Kozliak, **Y. Ji**., *"Renewable Biopolymers and Chemicals from Kraft Lignin using Fungal Treatment"* 38th Symposium on Biotechnology for Fuels and Chemicals, Baltimore, April 25-28, 2016
5. F. Asina, I. Brzonova, K. Voeller, E. Kozliak, A. Kubátová and Y. Ji., *"A Comparative Study on Microbial and Enzymatic Degradation of Lignin"*, 38th Symposium on Biotechnology for Fuels and Chemicals, Baltimore, April 25-28, 2016
6. A. Fnu, I. Brzonova, K. Voeller, **Y. Ji***, A. Kubatova and E. (2015), *"Microbial Degradation of Lignin for Production of Valuable Chemicals"*, 17th International Conference on Geography and Geosciences, Oct. 8-9, Osaka, Japan
7. I. Brzonova, A. Fnu, A. Kubatova, E. Kozliak, and **Y. Ji***, (2015), *"Enhancement of Lignin Bio-Degradation through Homogenization with Dimethyl Sulfoxide"*, 17th International Conference on Geography and Geosciences, Oct. 8-9, Osaka, Japan
8. L. Christopher, I. Brzonova, M. Chebeir, A. Kubatova, E. Kozliak and **Y. Ji***, (2014**) "***Microbial production of low molecular weight phenolics and aromatics"*. 36th Symposium on Biotechnology for Fuels and Chemicals, April 28-May 1, 2014, Clearwater Beach, FL.
9. I. Brzonova, M. Chebeir, A. Kubatova, E. Kozliak, L. Christopher, and **Y. Ji***, (2013) *"Biodegradation of kenaf for production of low molecular weight phenolics"*. Bio Pacific

Rim Summit on Industrial Biotechnology and Bioenergy, December 8-11, 2013, San Diego, CA.

10. I. Brzonova, M. Chebeir, A. Kubatova, E. Kozliak, L. Christopher, and **Y. Ji***, (2013) *"Biodegradation of kenaf biomass by Basidiomycetes and Actinobacteria for production of valuable low molecular weight carbohydrates and phenolics"*. 15th Annual NIH SBIR/STTR Conference, October 28-30, 2013, Sioux Falls, SD.
11. S. Kamireddy, S. Abbina, **Y. Ji***, J. Li, M. Berti and M. Tucker, 63rd Canadian Chemical Engineering Conference, *"The Effect of Dilute Acid Pretreatment on Forage Sorghum and Sunn Hemp Biomasses in the Production of Bio-Fuels and Value Added Chemicals through Bio-Chemical Conversion Process"***,** Fredericton, New Brunswick, Canada, 10/20/2013-10/23/2013
12. I. Brzonova, E. Kozliak, A. Kubatova, W. Seames and **Y. Ji***, 63rd Canadian Chemical Engineering Conference, *"Kenaf Simultaneous Biodegradation by Basidiomycetes and Actinobacteri",* Fredericton, New Brunswick, Canada, 10/20/2013-10/23/2013
13. Russ Gesch*, Marisol Berti, Burton Johnson, Alfredo Aponte, **Yun Ji**, Wayne Seames, and David Archer, "*Double- and relay-cropping oilseed and biomass crops for sustainable energy production*", European Biomass Conference, Denmark, 6/02/2013-6/06/2013
14. Marisol Berti*, Burton Johnson, Russ Gesch, Alfredo Aponte, Dulan Samarappuli, **Yun Ji**, Wayne Seames, and Srinivas Reddy Kamireddy, "*Forage sorghum: an excellent feedstock for second generation (2G) biofuels in the North Central Region of the USA*", European Biomass Conference, Denmark, 6/02/2013-6/06/2013
15. S. Kamireddy, **Y. Ji*,** J. Degenstein and M. Tucker**,** "*Effect and Mechanism of Metal Salt Catalysts in Biomass Pretreatment and Enzymatic Hydrolysis"*, 34th Symposium on Biotechnology for Fuels and Chemicals, New Orleans, LA, 4/30/2012-5/3/2012
16. S. Kamireddy, C. Schaefer, M. Defrese and **Y. Ji***, *"Study of Sunflower Hulls as a Potential Feedstock for Biofuel and Chemical Production"*, National Sunflower Association Research Forum, Fargo, ND, 1/11/2012-1/12/2012
17. A. VanHeiningen and **Y. Ji***, "*Southern Pine Oxygen Delignified Pulps Produced in a Berty Throughflow Reactor： How to Obtain the Highest Degree of Delignification while Maintaining Pulp Yield and Quality*", International Pulp Bleaching Conference, Portland, OR, 10/5/2011-10/7/2011
18. M. Berti, R. Anfinrud, R. Nudell, and **Y. Ji**, "*Kenaf: A Renewable Source for "Green" Chemicals and Fuels in North Dakota".,* 2011AAIC 23rd Annual Meeting Challenges and Opportunities for Industrial Crops, Fargo, ND, 9/11/2011-9/14/2011
19. S. Reddy Kamireddy, **Y. Ji***, and M. Berti, "*Pretreatment and Enzymatic Hydrolysis of Kenaf Biomass as a Renewable Source for Biofuels and Green Chemicals",* 2011AAIC 23rd Annual Meeting: Challenges and Opportunities for Industrial Crops, *Fargo*, ND, 9/11/2011-9/14/2011
20. S. Reddy Kamireddy, C. Schaefer, M. Defrese, and **Y. Ji***, "*Evaluation and Optimization of Biofuel Production from Sunflower Hulls*", 2011AAIC 23rd Annual Meeting: Challenges and Opportunities for Industrial Crops, Fargo, ND, 9/11/2011-9/14/2011
21. J. Degentein and **Y. Ji***, *"Lewis Acid Co-Catalyzed Dilute Sulfuric Acid Pretretreatment of Lignocellulosic Biomass"*, Cleantech 2011 Workshop & Action Summit, Grand Forks, ND, 6/19/2011-6/21/2011
22. S. Reddy Kamireddy and **Y. Ji***, *"Kenaf as a Potential Biomass for Future Fuel"*, Cleantech 2011 Workshop & Action Summit, Grand Forks, ND, 6/19/2011-6/21/2011

23. J. Degenstein, M. Tucker and **Y. Ji***, *"Lewis Acid Co-catalyzed Dilute Acid Pretreatment of LignocellulosicBbiomass",* 33rd Symposium on Biotechnology for Fuels and Chemicals, Seattle, WA, 5/3/2011-5/6/2011
24. J. Degenstein, M. Tucker and **Y. Ji***, *"Lewis Acid Pretreatment and Enzymatic Hydrolysis of Corn Stover"*,32nd Symposium on Biotechnology for Fuels and Chemicals, Clearwater Beach, FL, 4/19/2010-4/22/2010
25. **Y. Ji***, S. Viamajala, M. Selig, T. Vinzant and M. Tucker, *"Comparison of Kinetics of Xylose and Lignin Removal during Hot Water and Dilute-Acid Pretreatment of Corn Stover Using a Continuous Flow-Through Reactor"*, 31st Symposium on Biotechnology for Fuels and Chemicals, San Francisco, CA, 5/4/2009-5/7/2009
26. **Y. Ji***, T. Vinzant, M. Tucker, N. Nagle, R. Katahira, L. Lykins and R. Elander, "*Better Understanding of Lignin Mobility in Biomass Pretreatment*", Annual Meeting of American Institute of Chemical Engineers (AIChE), 2008
27. A. Van Heiningen*, **Y.Ji**, and E. Vänskä, *"New Kinetics and Mechanism of Oxygen Delignification"*, International Pulp Bleaching Conference, 91-98, 2008
28. **Y. Ji***, D. Blake, N. Weiss and N. Nagle, "*Microwave Reactor vs. Multiclave Reactor for Biomass Pretreatment*", Colorado Center for Biorefining and Biofules (C2B2) semi-Annual Meeting, 2008
29. **Y. Ji** and A.Van Heiningen*, *"Mechanism and Kinetics of Delignification During Alkali Treatment in a CSTR"*, 92nd PAPTAC Annual Meeting, B213-B222, 2006
30. **Y. Ji** and M. Nazhad*, *"Quality of Some Local Asian Old Newspapers (LONP) as a Raw Material for Newsprint"*, 5th International Non-Wood Fiber Pulping & Papermaking Conference (5th INWFPPC) incorporating with 3rd International Symposium on Merging Technologies of Pulping and Papermaking (3rd ISETPP), China, 2006
31. M, Lawoko, **Y. Ji** and A. Van Heiningen*, *"On the Importance of Lignin-Cabohydrate Bonds in Oxygen Delignification"*, Ninth European Workshop on Lignocellulosics and Pulp, 76-79, 2006
32. **Y. Ji** and A. Van Heiningen*, *"Kinetics of Oxygen Delignification from CSTR and Batch Reactor Data"*, AIChE Annual Meeting, 2006

RELEVANT NON-REFEREED TECHNICAL PUBLICATIONS:

1. L. Selig, N. Weiss, and **Y. Ji**, (2008), *"Enzymatic Saccharification of Lignocellulosic Biomass",* Laboratory Analytical Procedure (LAP), NREL Report No. TP-510-42629
2. **Y. Ji**, M. Tucker, R. Katahira, N. Nagle, D. Johnson, W. Michener, T. Vinzant, (2008). *"Understanding Lignin Fractions of Biomass during Dilute Acid Pretreatment Using a Flow through Reactor"*, NREL Report No. AB-510-43400
3. **Y. Ji**.; S. Viamajala, M. Selig T. Vinzant, M. Tucker, *(2009). "Comparison of Kinetics of Xylose and Lignin Removal During Hot Water and Dilute-Acid Pretreatment of Corn Stover using a Continuous Flow-Through Reactor"* , NREL Report No. PO-510-45789

SERVICE:

- UND-STEAM project engineering participate (2016-present)
- UND V-Stem project engineering representative (2015 present)
- UND Chemical Engineering and Chemistry REU program coordinator (2010-present)

- NSF SBIR and CBET Review Panelist: 2011, 2013, 2017
- Session chair of two technical sessions for Cleantech 2011 Workshop & Action Summit, Grand Forks, ND, 6/19/2011-6/21/2011
- External Reviewer of four master theses, North-West University, Potchefstroom Campus, South Africa.
- U.S. Department of Energy Advanced Research Project Agency-Energy (ARPA-E) funding proposal reviewer, 2009
- Served as a judge for "Best Student Poster Competition" in 32nd Symposium on Biotechnology for Fuels and Chemicals, May 3-6, 2009, San Francisco, CA
- Reviewed papers for Journal of Industrial Crops and Products, Journal of Chemistry & Engineering Research, Journal of Biomass & Bioenergy…
- Advisor of 85 distance students
- Gave seminar at the Chemistry Department (2009), Physics Department (2011), chemistry department (2014)
- UND V-stem group member, gave two presentations to the 6th and 7th grade teachers (2014)
- Supported 2 AURA student,5 REU students and 4 native students
- UND faculty seed proposal review committee