***Curriculum Vitae***

**Hongbo Du**

NSF Crest Center for Energy & Environmental Sustainability (CEES)

Prairie View A&M University

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**EDUCATION**

Ph.D. Mechanical Engineering--- 2011 Colorado State University, Fort Collins, USA

Master in Mechanical Engineering --- 2002 Beijing Forestry University, Beijing, China

Bachelor in Mechanical Engineering ---1999 Beijing Forestry University, Beijing, China

**WORKING EXPERIENCE**

**February, 2015-present Post-doctoral Researcher Prairie View A& M University**

♦ Studying oil and shale gas produced water treatment via various membrane technologies

♦ Working on digestion of organic matter in produced water with advanced photocatalyst

♦ Working on applications of polyethyleneimine impregnated on titanate nanotubes in post combustion CO2 capture

♦ Working on energy sustainability of biofuels including bioethanol and biodiesel, electrical vehicles and renewable energies

♦ Expertise in material characterization with SEM, TEM, AFM, TGA-DSC, and surface area and porosity analysis, and chemical detection with IC, HPLC and GC-MS.

♦ Mentored more than 20 graduate and undergraduate student researchers at CEES. Under my mentoring, 1 one graduate student won the first place of oral research presentation and one undergraduate student won the second place in the land-grant research symposium at PVAMU (2018); one graduate student won the third place in the 13th annual research symposium at PVAMU (2018); one undergraduate student won the second place at the Texas A&M University System’s 13th Annual Pathways Student Research Symposium (2016); and one graduate student won the first place in an American national conference (2016).

**2012-January, 2015 Post-doctoral Researcher University of Arkansas, USA**

**Catalytic conversion of biomass to biofuels**

♦ Worked on catalyst optimization of solid styrene sulfonic acids and poly ionic liquids grafted from the filtration membrane for biofuel derivation

♦ Studied free energies involved in a folding-unfolding process of a thermo-responsive polymer, Poly (N-isopropylacrylamide) (PNIPAM) in water and NaCl solution at the lower critical solution temperatures

♦ Studied the salt effects on the free energy landscape of unfolding protein in salt solution through with metadynamics

♦ Studied glucose and sucrose separation through pH-responsive membrane

♦ Studied the binding between protein and bisphosphonate copolymer through molecular dynamics simulations

♦ Investigated interactions between poly-arginine and poly-bisphosphonate

♦ Studied structures and properties of α/β -glucose in DMSO/water mixtures through ab initio calculations

**2007-2011 Graduate Research Assistant Colorado State University, USA**

**Biofuel derivation from cellulose**

♦ Worked on biofuel derivation from cellulose in ionic liquids at mild high temperature

♦ Worked on the conversion of cellulose into reduced sugar and then into 5-hydroxymethylfurfural in ionic liquids using density functional theory

♦ Investigated phase transitions of PNIPAM and its copolymer PNIPAM-co-poly (ethylene glycol) (PEGMA) in different salt solutions

♦ Conducted pKa calculations for methacrylic acid oligomers and sulfonic acid through thermodynamic cycle with ab initio calculations

♦ Worked as a teaching assistant for the courses thermodynamics and mechatronics

**2002-2006 Patent Examiner Patent Office of the State Intellectual Property Office**

**Patent Examination**

♦ Examined patent applications in the fields of thermal science, heat exchanger, heat engine, mechatronics, optical/magnetic materials

**1999-2002 Graduate Research Assistant Beijing Forestry University, China**

**Detection of veneer moisture content**

♦ Conducted the research of wireless control of the correlation tracker to balance heat transfer of the space solar telescope in the National Astronomical Observatories, Chinese Academy of Sciences in China

♦ Participated in designing of wireless remote control automatic pruning machine, detection of veneer moisture content by surface-circle-shaped resistance, circular saw detection system and student record database management system of the Graduate School at Beijing Forestry University in China

**PROFESSIONAL AFFILIATIONS**

North American Membrane Society

The American Institute of Chemical Engineers

Air & Waste Management Association

Lead guest editor of Journal of Chemistry for a specific issue of the applications of theoretical chemistry on green chemistry

Reviewer of the journals: Progress in Additive Manufacturing, Energy Technology, Surface and Coatings Technology, Journal of Nanomaterials, Separation Science and Technology, Journal of Renewable and Sustainable Energy, Metallurgical and Materials Transactions E: Materials for Energy Systems, Journal of Chemistry, Tribology in Industry, Journal of Materials Engineering and Performance, Journal of Molecular Liquids, Asia-Pacific Journal of Chemical Engineering, Journal of Molecular Modeling, International Journal of Photoenergy, Advances in Materials Science and Engineering, Journal of Material Sciences and Engineering, International Journal of Computational Materials Science and Engineering, Materials Sciences and Applications, Journal of Powder Metallurgy & Mining.

**AWARD**

Merit award at Prairie View A&M University in 2017

Mentor recognition of student employment “Earn and Learn” Program at Prairie View A&M University in 2017.

**PROPOSAL GRANTS**

1. Served as Co-PI in a mini-grant at Prairie View A&M University $20,000. Summer 2017
2. Served as Co-PI in USDA-CBG funded program $300,000 Feb. 2018-Jan. 2021
3. Served as senior personnel in a collaborated NSF proposal of INFEW with Texas A&M Univesity, Kingsville. $2,500,000. Submitted by Texas A&M Univesity.
4. Serving as Co-PI in BOR proposal preparation $150,000 (preparing) Jul. 2019-Jun. 2022

**PUBLICATIONS** (Total citation 590 based on the Google scholar citation report on Dec. 31th, 2018)

1. Peer-reviewed book
2. Osmotically Driven Membrane Process: Approach, Development and Current Status. Editors: **Hongbo Du**, Audie Thompson, and Xinying Wang. 2018. ISBN: 978-953-51-5688-8. Publisher: Intechopen, Inc.
3. Peer-reviewed journal articles
4. Raghava R. Kommalapati, **Hongbo Du**, Sai Pradeep Potluri, and Venkata Sai Vamsi Botlaguduru. “Treatment of Shale Oil Produced Water with Zwitterion-Modified Forward Osmosis Membrane” Submitted to Water and Environment Journal (under review)
5. Raghava R. Kommalapati, **Hongbo Du**, Melisa L. Stewart, Xinhua Shen, Ziaul Huque and. “The Effects of Synthesis Conditions on the Carbon Capture Capacity of Polyethylenimine Impregnated Protonated Titanate Nanotubes.” Submitted to Energy Technology (under review).
6. Ananda S. Amarasekara, Loc H. Nguyen, **Hongbo Du**, Raghava R. Kinetics and mechanism of the solid-acid catalyzed one-pot conversion of D-fructose to 5, 5'-[oxybis(methylene)]bis[2-furaldehyde] in dimethyl sulfoxide. Submitted to Industrial & Engineering Chemistry Research (under review).
7. Iqbal Hossan, Venkata S.V. Botlaguduru, **Hongbo Du**, Raghava R. Kommalapati, Ziaul Huque. “Air Quality Impact of Biomass Co-firing with Coal at a Power Plant in the Greater Houston Area.” Open Journal of Air Pollution 2018, 7, 263-285.
8. Raghava R. Kommalapati, Iqbal Hossan, Venkata S.V. Botlaguduru, **Hongbo Du**, Ziaul Huque. “Life Cycle Environmental Impact of Biomass Co-firing with Coal at a Power Plant in the Greater Houston Area.” Sustainability 2018, 10(7), 2193; https://doi.org/10.3390/su10072193.
9. Jesuina Chipindula, Venkata S.V. Botlaguduru, **Hongbo Du** and Raghava R. Kommalapati. Life Cycle Environmental Impact of Onshore & Offshore Wind Farms in Texas. Sustainability 2018, 10, Article ID: 2022. doi:10.3390/su10062022.
10. **Hongbo Du**, Ziaul Huque and Raghava R. Kommalapati. “Impacts of Biodiesel Applied to the Transportation Fleets in the Greater Houston Area”. Journal of Renewable Energy Vol.2018, (2018), Article ID 7350715. https://doi.org/10.1155/2018/7350715.
11. Xinhua Shen, **Hongbo Du**, Riley H. Mullins, and Raghava R. Kommalapati. "Polyethylenimine Applications in CO2 Capture and Separation: from Theoretical Study to Experimental work." Energy Technology 5, no. 6 (2017), 822-833.
12. **Hongbo Du**, Zizhao Liu, Renee Jennings, and Xianghong Qian. "The effects of salt ions on the dynamics and thermodynamics of lysozyme unfolding." Separation Science and Technology 52, no. 2 (2017): 320-331.
13. **Hongbo Du**, Raghava R. Kommalapati and Ziaul Huque, “Assessment of Bioethanol Applications on Transportation Vehicles in Houston”. *Journal of Fundamentals of Renewable Energy and Applications*. 6, no. 3, (2016): Article No. 1000207.
14. Raghava R. Kommalapati, Shahzeb Sheikh, **Hongbo Du**, and Ziaul Huque. "Life-Cycle Analysis of Bio-Ethanol Fuel Emissions of Transportation Vehicles in Greater Houston Area." Journal of Environmental Protection 7, no. 06 (2016): 793-804.
15. **Hongbo Du**, and Xianghong Qian. "The hydration properties of carboxybetaine zwitterion brushes." Journal of computational chemistry 37, no. 10 (2016): 877-885.
16. Zizhao Liu, **Hongbo Du**, S. Ranil Wickramasinghe, and Xianghong Qian. "Membrane surface engineering for protein separations: experiments and simulations." Langmuir 30, no. 35 (2014): 10651-10660.
17. Heath H. Himstedt, **Hongbo Du**, Kathryn M. Marshall, S. Ranil Wickramasinghe, and Xianghong Qian. "pH responsive nanofiltration membranes for sugar separations." Industrial & Engineering Chemistry Research 52, no. 26 (2013): 9259-9269.
18. **Hongbo Du**, Sumith Ranil Wickramasinghe, and Xianghong Qian. "Specificity in cationic interaction with poly (N-isopropylacrylamide)." The Journal of Physical Chemistry B 117, no. 17 (2013): 5090-5101.
19. **Hongbo Du**, and Xianghong Qian. "The effects of acetate anion on cellulose dissolution and reaction in imidazolium ionic liquids." *Carbohydrate research* 346, no. 13 (2011): 1985-1990.
20. **Hongbo Du**, and Xianghong Qian. "Molecular dynamics simulations of PNIPAM-co-PEGMA copolymer hydrophilic to hydrophobic transition in NaCl solution." *Journal of Polymer Science Part B: Polymer Physics* 49, no. 15 (2011): 1112-1122.
21. **Hongbo Du**, Ranil Wickramasinghe, and Xianghong Qian. "Effects of salt on the lower critical solution temperature of poly (N-isopropylacrylamide)." *The Journal of Physical Chemistry B* 114, no. 49 (2010): 16594-16604.
22. Yuetao Zhang, **Hongbo Du**, Xianghong Qian, and Eugene Y-X. Chen. "Ionic liquid− water mixtures: enhanced Kw for efficient cellulosic biomass conversion." *Energy & Fuels* 24, no. 4 (2010): 2410-2417.
23. Haitao Dong, **Hongbo Du**, Sumith Ranil Wickramasinghe, and Xianghong Qian. "The Effects of Chemical Substitution and Polymerization on the pKa Values of Sulfonic Acids." *The Journal of Physical Chemistry B* 113, no. 43 (2009): 14094-14101.
24. Haitao Dong, **Hongbo Du**, and Xianghong Qian. "Prediction of pKa Values for Oligo-methacrylic Acids Using Combined Classical and Quantum Approaches." *The Journal of Physical Chemistry B* 113, no. 39 (2009): 12857-12859.
25. Haitao Dong, **Hongbo Du**, and Xianghong Qian. "Theoretical Prediction of pKa Values for Methacrylic Acid Oligomers Using Combined Quantum Mechanical and Continuum Solvation Methods." *The Journal of Physical Chemistry A* 112, no. 49 (2008): 12687-12694.
26. Chao Sa, **Hongbo Du**, Biguang Zhang, and Guozhu Wang. "Detection of Veneer Moisture Content by Surface-circle-shaped Resistance." *Forestry Studies in China***,** 5, no. 4 (2003): 41-44.
27. Peer-reviewed book chapters
28. **Du, Hongbo**, and Xianghong Qian. "The Interactions between Salt Ions and Thermo‐Responsive Poly (N‐Isopropylacrylamide) from Molecular Dynamics Simulations." Chapter 10 in the book “Responsive Membranes and Materials”, 2013, Page: 229-242. Editor(s): D. Bhattacharyya, Thomas Schäfer, S. R. Wickramasinghe, and Sylvia Daunert Publisher: Willey, ISBN: 978-0-470-97430-8.
29. Raghava R.Kommalapati, Fiifi Asah-Opoku, **Hongbo Du**, and Ziaul Huque. Monte Carlo Simulations of Nuclear Fuel Burnup. Nuclear Material Performance, Chapter 3, Editor(s): Rehab O. Abdel Rahman, Hosam El-Din Mostafa Saleh. 2016, Page: 37-55. Publisher: Intech, Print ISBN 978-953-51-2447-4.
30. Peer-reviewed conference proceedings
31. **Hongbo Du,** Arndreya Howard, Raghava Kommalapati. Emission Analysis of Diesels Derived from Biomass used for Hybrid Transportation Fleet. Transportation Consortium of South Central States (Tran-SET) Conference. New Orleans, LA. April 3-4, 2018.
32. **Hongbo Du**, Raghava R. Kommalapati, and Ziaul Huque. Life Cycle Assessment of Bioethanol used in Passenger Cars in Houston. The 4th International Conference on Chemical, Ecology and Environmental Sciences (ICEES'2015) Dec. 15-16, 2015 Pattaya (Thailand). Page: 44-49.
33. **Hongbo Du**, S. Ranil Wickramasinghe, and Xianghong Qian. Molecular Dynamics Simulations of Thermoresponsive Poly(N-isopropylacrylamide) and Its Copolymer. Euromembrane Conference [OC52] Procedia Engineering 44 ( 2012 ) 485 – 488.
34. Conference presentations
35. Esther Armah, **Hongbo Du**, Raghava Kommalapati. “Life Cycle Emissions Analysis of Diesels Derived from Biomass used for Hybrid Heavy Duty Trucks”. Presented at the 15th Annual Texas A&M University System (TAMUS) Pathways Student Research Symposium. Canyon, Texas. November 1-2, 2018.
36. Brittani Turner, Venkata Botlaguduru, **Hongbo Du**, Raghava Kommalapati. “Pretreatment of Shale oil Produced Water with Softening, Coagulation and Flocculation”. Presented at the 15th Annual Texas A&M University System (TAMUS) Pathways Student Research Symposium. Canyon, Texas. November 1-2, 2018.
37. De Jaune’ Bickham, Venkata Botlaguduru, **Hongbo Du**, Raghava Kommalapati. “Investigating the Anaerobic Co-Digestion of Food Waste at the Prairie View A & M University Campus Dining Facility”. Presented at the 15th Annual Texas A&M University System (TAMUS) Pathways Student Research Symposium. Canyon, Texas. November 1-2, 2018.
38. Raghava Kommalapati, Arndreya Howard, **Hongbo Du**, and Venkata Botlaguduru. “Analysis and Development of Emission Factors for Goat Farm Operations”. A&WMA’s 111th Annual Conference & Exhibition. Hartford, CT. June 25-28, 2018.
39. Raghava Kommalapati, Iqbal Hossan, **Hongbo Du** and Venkata Botlaguduru. “Air Quality Effects of Biomass Co-firing with Coal at a Houston Area Power Plant”. A&WMA’s 111th Annual Conference & Exhibition. Hartford, CT. June 25-28, 2018.
40. Raghava Kommalapati,Jesuina Chipindula, Venkata Botlaguduru, and **Hongbo Du**. “Life Cycle Environmental Impact of Onshore and Offshore Wind Farms in Texas: Sensitivity Analysis for Material and Manufacturing Stages”. A&WMA’s 111th Annual Conference & Exhibition. Hartford, CT. June 25-28, 2018.
41. Esther Armah, **Hongbo Du**, and Raghava Kommalapati. Emissions Analysis of diesels Derived from Biomass used for Heavy Duty Trucks. The 2018 Land Grant Research Symposium at Prairie View A&M University. April 18, 2018.
42. Osayuki Iyawe, **Hongbo Du**, and Raghava Kommalapati. Environmental Impact of Monocrystalline PV System in Texas. The 2018 Land Grant Research Symposium at Prairie View A&M University. April 18, 2018.
43. Mirjalal Babayev, **Hongbo Du**, Venkata S.V. Botlaguduru, and Raghava Kommalapati. The Effect of Pretreatment with L-DOPA Modified Ultrafiltration on the Forward Osmosis for Produced Water Treatment. The 2018 Land Grant Research Symposium at Prairie View A&M University. April 18, 2018.
44. Arndreya Howard, Venkata S.V. Botlaguduru, **Hongbo Du** and Raghava Kommalapati. Analysis of Air Pollutant Emissions from a Goat Farm Operation. The 2018 Land Grant Research Symposium at Prairie View A&M University. April 18, 2018.
45. Cythia Lewis, Melisa Stewart, **Hongbo Du**, Raghava R. Kommalapati, Ziaul Huque, and Shrabanti Roy. “Post Combustion Carbon Capture Using Polyethylenimine (PEI) Functionalized Titanate Nanotubes”. 2018 National Energy Technology Laboratory Project Review Meeting for Crosscutting Research Portfolios, Pittsburgh, PA. April 10-12, 2018.
46. Cynthia Lewis, **Hongbo Du**, and Raghava Kommalapati. Graphene Grafted Titania/Titanate Nanosheets for Photocatalytic Degradation of Organic Compounds in Produced Water. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
47. Esther Armah, **Hongbo Du**, and Raghava Kommalapati. Emissions Analysis of diesels Derived from Biomass used for Heavy Duty Trucks. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
48. Osayuki Iyawe, **Hongbo Du**, and Raghava Kommalapati. Environmental Impact of Monocrystalline PV System in Texas. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
49. Mirjalal Babayev, **Hongbo Du**, Venkata S.V. Botlaguduru, and Raghava Kommalapati. The Effect of Pretreatment with L-DOPA Modified Ultrafiltration on the Forward Osmosis for Produced Water Treatment. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
50. Arndreya Howard, Venkata S.V. Botlaguduru, **Hongbo Du** and Raghava Kommalapati. Analysis of Air Pollutant Emissions from a Goat Farm Operation. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
51. Brittani Turner, Mirjalal Babayev, **Hongbo Du**, Venkata S.V. Botlaguduru, and Raghava Kommalapati. Evaluation of Coagulation and Flocculation as Pretreatment of Produced Water for COD and Turbidity Reduction. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
52. Ansaarullah R. Diop, Arndreya Howard, **Hongbo Du**, Venkata S.V. Botlaguduru, and Raghava Kommalapati. Analysis of Air Emissions at a Goat Farm Operation. The 13th Annual Research Symposium at Prairie View A&M University. April 5, 2018.
53. Arndreya Howard, **Hongbo Du**, Raghava Kommalapati. Life Cycle Emission Analysis of Renewable Diesel and Ethanol-Diesel for Freight Trucks. Trasportation Research Board 97th Annual Meeting. Washington D.C. January 7-11, 2018.
54. Raghava R. Kommalapati, Jesuina Chipindula, **Hongbo Du**, Venkata Botlaguduru. Evaluation of the Life-Cycle Environmental Impact of Onshore & Offshore Wind Farms in Texas. International Conference on Environmental Systems Research 2017. Singapore, December 14-16, 2017.
55. Iqbal Hossan, **Hongbo Du**, Venkata Botlaguduru, Raghava R. Kommalapati. Impact Of Biomass Cofiring with Coal on the Air Quality Of the Greater Houston Area. The ASAR-International Conference on Renewable Energy, Green technology & Environmental Science (ICREGTES). Bhubaneswar, India. December 17th, 2017.
56. Cynthia Lewis, **Hongbo Du**, Raghava Kommalapati. Carbon Capture Directly from Air: Literature Review and Preliminary Work of the Capture with Polyethylenimine-Impregnated Titanate Nanotubes. The Texas A&M University System 14th Annual Pathways Student Research Symposium. November 2-3, 2017.
57. Esther Armah, **Hongbo Du**, Raghava Kommalapati. Life Cycle Emissions of Passenger Vehicles Powered by Different Technologies.The Texas A&M University System 14th Annual Pathways Student Research Symposium. November 2-3, 2017.
58. Sai Pradeep Potluri,Mirjalal Babayev, **Hongbo Du**, Venkata Botlaguduru, Raghava Kommalapati. Shale Oil Produced Water Treatment Using Zwitterion Amino Acid L-DOPA Modified Forward Osmosis Membranes.The Texas A&M University System 14th Annual Pathways Student Research Symposium. November 2-3, 2017.
59. Arndreya Howard, **Hongbo Du**, Raghava Kommalapati. Monitoring Air Pollutant Emissions from Goat Farm Operations.The Texas A&M University System 14th Annual Pathways Student Research Symposium. November 2-3, 2017.
60. Raghava Kommalapati, **Hongbo Du**, Esther Armah. Life Cycle Greenhouse Gases and Pollutants Emissions of Electric Vehicles in the US. A&WMA's 110th Annual Conference & Exhibition, Pittsburgh, PA. June 5-8, 2017.
61. Xinhua Shen, Hawra Algazwi, Riley Mullins, Tyler Schley, Huanxin Zhang, **Hongbo Du**, Raghava Kommalapati. Estimating Surface PM2.5 Using Satellite AOD Observations and the NASA MERRA2 Model Simulations. A&WMA's 110th Annual Conference & Exhibition, Pittsburgh, PA. June 5-8, 2017.
62. Xinhua Shen, Natalie Gallegos, Riley Mullins, Molly Standard, **Hongbo Du**, Raghava Kommalapati. Characterizations of air quality weekend effect in Houston, Texas. A&WMA's 110th Annual Conference & Exhibition, Pittsburgh, PA. June 5-8, 2017.
63. Iqbal Hossan, **Hongbo Du**, Raghava Kommalapati. Effects of Biomass Cofiring with Coal on Air Quality in the Greater Houston Area. A&WMA's 110th Annual Conference & Exhibition, Pittsburgh, PA. June 5-8, 2017.
64. **Hongbo Du**, Xinhua Shen, Esther Armah, Raghava R. Kommalapati. Life Cycle Analysis of Pollutant and Greenhouse Gas Emissions for Electric Vehicles in the World. The Iowa Academy of Science Annual Meeting in 2017. Cedar Falls, IA. April 21-22, 2017.
65. Melisa Stewart, **Hongbo Du**, Raghava R. Kommalapati, Ziaul Huque, Shrabanti Roy. Post Combustion Carbon Capture Using Polyethylenimine Functionalized Titanate Nanotubes. 2017 DoE Project Review Meeting For Crosscutting Research, Gasification Systems, and Rare Earth Elements Research Portfolios. Pittsburgh, PA. March 20-23, 2017.
66. Melisa Stewart, **Hongbo Du**, Raghava R. Kommalapati. Post Combustion Carbon Capture Using Polyethylenimine (PEI) Functionalized Titanate Nanotubes. The 2017 Emerging Researchers National (ERN) Conference in STEM. Washington DC. March 2-4, 2017.
67. Arndreya Howard, **Hongbo Du**, Raghava Kommalapati. Air quality measurement of poultry farms. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016.
68. Cynthia Lewis, **Hongbo Du**, Raghava Kommalapati. Titanium nanomaterials synthesized via hydrothermal treatment. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016.
69. Esther Armah, **Hongbo Du**, Raghava Kommalapati. Life cycle analysis of pollutant and greenhouse gas emissions for electric vehicles. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016. (Award: the second place)
70. Iqbal Hossan, **Hongbo Du**, Raghava Kommalapati. Evaluation of emissions from electricity generation for biomass cofiring with coal. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016.
71. Jesuina Chipindula, **Hongbo Du**, Raghava Kommalapati. Evaluating the impact of a wind farm In Texas. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016.
72. Melisa Stewart, **Hongbo Du**, Raghava Kommalapati. Carbon capture with polyethylenimine functionalized titanate nanotubes. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016.
73. Sai Pradeep Potluri, **Hongbo Du**, Raghava Kommalapati. Produced water treatment using a forward osmosis and reverse osmosis hybrid system. The Texas A&M University System 13th Annual Pathways Student Research Symposium. November 3-4, 2016.
74. Raghava Rao Kommalapati, **Hongbo Du**, Sumal Shah, Ziaul Huque. Effects of biodiesel applications on the transportation fleet in Houston. 109th A&WMA Annual Conference & Exhibition, New Orleans, LA. June 20-23, 2016.
75. Raghava Rao Kommalapati, Tarkik Shahriar, Akhil Kadiyala, **Hongbo Du** and Ziaul Huque. (2016). Analyzing weekday and weekend ozone concentrations in the Houston-Galveston-Brazoria Area during 2012 summer episode using CAMx. 109th A&WMA Annual Conference & Exhibition, New Orleans, LA. June 20-23, 2016.
76. Xinhua Shen, **Hongbo Du**, Ziaul Huque, and Raghava Kommalapati. Polyethylenimine applications in post combustion carbon capture from theoretical study to experimental work, Air and Waste Management Association (AWMA) 109th Annual Conference & Exhibition, New Orleans, LA, June 20-23, 2016.
77. **Hongbo Du**, Melisa Stewart, Raghava R. Kommalapati and Xinhua Shen, Carbon dioxide capture using polyethylenimine impregnated titanate nanotubes, the 251st ACS National Meeting & Exposition, San Diego, CA. March 13-17, 2016.
78. Md. Tarkik Shahriar, Raghava Kommalapati, Ziaul Huque, **Hongbo Du**. (2016). Analysis of pollutant emissions from elevated point sources in the 8-counties of the Houston-Galveston-Brazoria area during 2012 summer episode. The 251st American Chemical Society National Meeting. San Diego, CA. March 13-17, 2016.
79. Melisa Stewart, **Hongbo Du**, and Raghava R. Kommalapati, 2016, Carbon (CO2) capture with a novel solid absorbent of polyethyleneimine (PEI) impregnated titanate nanotubes (TNTs), Presented at the 2016 Emerging Researchers National (ERN) Conference in STEM, Washington, DC, February 25-27, 2016. (Award: the first place).
80. Xinhua Shen, Samarita Sarker, Huanxin Zhang, **Hongbo Du**, Ziaul Huque, and Raghava R. Kommalapati, Assessment of 2012 on-road mobile source episode specific emissions on air quality in Houston, American Geophysical Union (AGU) Fall Meeting, San Francisco, CA. December 14-18, 2015.
81. **Hongbo Du**, Raghava R. Kommalapati, Ziaul Huque. (2015) Life Cycle Assessment of bioethanol used in passenger cars in Houston. The 4th International Conference on Chemical, Ecology and Environmental Sciences. Pattaya, Thailand December 15-16, 2015.
82. Riley Mullins, Xinhua Shen, **Hongbo Du**, Ziaul Huque, and Raghava R. Kommalapati. Reducing greenhouse gas emissions with advanced nano-engineered materials. Seventh Annual American Chemical Society Undergraduate Research Conference, American Chemical Society Illinois-Iowa Section, St. Ambrose University, Davenport, IA, November 14, 2015.
83. Travis Burrell, **Hongbo Du**, Ziaul Huque, Raghava Kommalapati, Biodiesel effects On vehicle emissions in houston studied from life cycle assessment. Texas A&M University System 12th Annual Pathways Student Research Symposium, Corpus Christi, Texas, October 22-23, 2015.
84. Sumal Shah, **Hongbo Du**, Ziaul Huque, Raghava Kommalapati. Life cycle assessment of bio-diesel Fuel Emissions. Texas A&M University System 12th Annual Pathways Student Research Symposium, Corpus Christi, Texas, October 22-23, 2015.
85. Melisa Stewart, **Hongbo Du**, Raghava Kommalapati. Carbon capture with a novel solid bbsorbent of polyethylenimine impregnated titanate nanotubes. Texas A&M University System 12th Annual Pathways Student Research Symposium, Corpus Christi, Texas, October 22-23, 2015.
86. Xianghong Qian and **Hongbo Du**. The effects of salt on the free energy of thermo-responsive PNIPAM transition” 2015 Annual Meeting of the American Institute of Chemical Engineers, Salt Lake City, UT. November 8-13, 2015.
87. Jasmine Kaur, John Chau, **Hongbo Du**, Xianghong Qian and Kamalesh K. Sirkar. Organic solvent nanofiltration with novel polymeric membranes. 2015 Annual Meeting of the American Institute of Chemical Engineers, Salt Lake City, UT. November 8-13, 2015.
88. Zizhao Liu, **Hongbo Du**, S. Ranil Wickramasinghe and Xianghong Qian. Polymeric ligand Affinity Membranes for Protein Separations: Experiments and Simulations. 2014 Annual Meeting of the American Institute of Chemical Engineers, Atlanta, GA. November 16-21, 2014.
89. Xianghong Qian and **Hongbo Du**. The Effects of salt on the thermodynamics of protein folding. 2014 Annual Meeting of the American Institute of Chemical Engineers, Atlanta, GA. November 16-21, 2014.
90. Xianghong Qian, Guanghui Song, **Hongbo Du** and S. Ranil Wickramasinghe. Developing advanced antifouling membranes using complementary experimental and theoretical Methods. 2014 Annual Meeting of the American Institute of Chemical Engineers, Atlanta, GA. November 16-21, 2014.
91. **Hongbo Du** and Xianghong Qian. Investigating antifouling properties of zwitterionic carboxybetaines from molecular dynamics simulations. 2014 Annual Meeting of the American Institute of Chemical Engineers, Atlanta, GA. November 16-21, 2014.
92. Xiaoquan Sun, **Hongbo Du**, S. Ranil Wickramasinghe and Xianghong Qian. Molecular dynamics Simulations of cellulose interaction with polymeric solid acid. 2013 Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA. November 3-8, 2013.
93. **Hongbo Du** and Xianghong Qian. The effects of salt on the free energy surface for protein folding. 2013 Annual Meeting of the American Institute of Chemical Engineers, San Francisco, CA. November 3-8, 2013.
94. Xianghong Qian and **Hongbo Du**. The effects of solvent on glucose conversion to 5-Hydroxymethylfurfural. 2012 Annual Meeting of the American Institute of Chemical Engineers, Pittsburgh, PA. October 28 - November 2, 2012.
95. **Hongbo Du** and Xianghong Qian. Structure and property of glucose in DMSO/water mixtures from ab initio molecular dynamics simulations. 2012 Annual Meeting of the American Institute of Chemical Engineers, Pittsburgh, PA. October 28 -November 2, 2012.
96. **Hongbo Du**, S. Ranil Wickramasinghe and Xianghong Qian. Molecular dynamics simulations of thermoresponsive poly (N-isopropylacrylamide) and its copolymer. 2012 Annual Meeting of the American Institute of Chemical Engineers, Pittsburgh, PA. October 28 - November 2, 2012.
97. **Hongbo Du**, S. Ranil Wickramasinghe, Mathias Ulbricht and Xianghong Qian. The effects of salt on lower critical solution temperature transition of thermo-responsive Pnipam-Co-PEGMA copolymer. 2011 Annual Meeting of the American Institute of Chemical Engineers. Minneapolis, MN. October 16 - 21, 2011.
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