Curriculum Vitae

Faculty Name:	**Bernard Wiredu, PhD**	**Work Address:**	P.O. Box 519 MS 2215 Prairie View, TX 77446
Position Title:	Assistant Professor (Department of Chemistry, Biochemistry & Physics)		
Office Location:	100 L.W. Minor Street E.E. O'Banion Science Building, Room 223		
Office Phone:	979-335-5937 / 936-261-3101		
Email Address:	Bernard.wiredu10@gmail.com / bewiredu@pvamu.edu		

Education:

Degree and Area of Study	Institution Name	Degree Date
PhD. Chemistry	Kansas State University, Manhattan, KS	December 2008
MPhil (1)	University of Ghana, Legon	May 2002
B.S. Chemistry	University of Ghana, Legon	May, 2000

Teaching/ Professional Experience

Position Title	Institution Name	Position Dates (Beginning and End)
Assistant Professor, Chemistry	Prairie View A&M University	September 2018 - present
Adjunct Assistant Professor, Chemistry	Prairie View A&M University, Prairie View, Texas	August 2016 – August 2018
Postdoctoral Teaching/Research Fellow	Center for Energy & Environmental Sustainability (CEES), Prairie View A&M University, Prairie View, Texas	January 2013 to August 2016
Postdoctoral Research Associate	Prairie View A&M University, Department of Chemistry & Physics, Prairie View, Texas	February 2011 to May 2013
Postdoctoral Researcher	Specialized Chemistry Center (SCC) of the Higuchi Biosciences Center (HBC), The University of Kansas, Lawrence	March 2009 to December 2010
Graduate Teaching Assistant	Kansas State University, Manhattan, KS	August 2002 to December 2008
Graduate Teaching Assistant	University of Ghana	August 2001 to May 2002

Selected Publications:

Ananda S. Amarasekara[a]*, Bernard Wiredu[a], Rocio Garcia Obergon[a], Davor Margetić[b] Solid acid catalysed aldol dimerization of levulinic acid for the preparation of C10 renewable fuel and chemical feedstocks. *Manuscript Accepted*, **2018** Catalysis.

Ananda S. Amarasekara*, **Bernard Wiredu**, Yen Maroney Lawrence, Anthony D. Fernandez, Tony Grady. Conversion of levulinic acid and cellulose to γ-valerolactone over Raney-Ni catalyst

using formic acid as a hydrogen donor. *Biofuel*, May 10, **2018**, Manuscript Accepted for Publication.

Ananda S Amarasekara, **Bernard Wiredu.** The effect of manganese (II) chloride as a co-catalyst on cellobiose hydrolysis in dilute aqueous sulfuric acid and acidic ionic liquid mediums. *Catalysis Communications*, **2016**, 81, 41-44.

Ananda S. Amarasekara**, Bernard Wiredu.** Interactions of d-cellobiose with selected chloride salts: A ^{13}C NMR and FT-IR study. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* **2016,** 159, 113-116

Bernard Wiredu, Ananda S. Amarasekara**.** Chemo-catalytic hydrolysis of cellulose at 37° C, 1 atm. *Catalysis Science & Technology*, **2016**, 6 (2), 426-429

Ananda S. Amarasekara**, Bernard Wiredu**, Dre'Langala N. Edwards.**γ-**Valerolactone *from pyrolysis of calcium salts of levulinic-formic acid mixtures derived from cellulose*, Biomass and Bioenergy**, 2015**, 72, 39 - 44

Bernard Wiredu, Ananda S. Amarasekara. 1-(1-Propylsulfonic)-3-methylimidazolium chloride acidic ionic liquid catalyzed hydrolysis of cellulose in water: Effect of metal ion co-catalysts. *Catalysis Communications* (**2015**), 70, 82-85.

Ananda S. Amarasekara*.* **Bernard Wiredu.** Acidic ionic liquid catalyzed liquefaction of cellulose in ethylene glycol; identification of a new cellulose derived Cyclopentenone derivative. *Industrial & Engineering Chemistry Research,* **2015***,* 54(3), 824 - 831

Bernard Wiredu, *Julie N. Dominguez,* Ananda S. Amarasekara*.* The Co-Catalyst Effect of Zeolites on Acidic Ionic Liquid Catalyzed One-Pot Conversion of Cellulose to Ethyl Levulinate and Levulinic Acid in Aqueous Ethanol. *Current Catalysis* (**2015**), 4(2), 143-151

Bernard Wiredu*, Ananda S. Amarasekara*. The effect of metal ions as co-catalysts on acidic ionic liquid catalyzed single-step saccharification of corn stover in water. *Bioresource Technology* (**2015**), 189, 405-408

Bernard Wiredu, Ananda S. Amarasekara. Acidic ionic liquid catalyzed one-pot conversion of cellulose to ethyllevulinate and levulinic acid in ethanol-water solvent system. *BioEnergy Research,* **2014**, *7(4),* 1237-1243

Ananda Sarath Amarasekara, **Bernard Wiredu.** *Single reactor conversion of corn stover biomass to C5–C20 furanic biocrude oil using sulfonic acid functionalized Brönsted acidic ionic liquid catalysts.* Biomass Conversion and Biorefinery, **2014**, *4:149 – 155.*

Bernard Wiredu, Ananda S. Amarasekara. Synthesis of a silica immobilized Brönsted acidic ionic liquid catalyst and hydrolysis of cellulose in water under mild conditions. *Catalysis Communications* **(2014)**, 48, 41-44*.*

Ananda S. Amarasekara, Ashfaqur Razzaq, Robert Caballero, **Bernard Wiredu**. Sol-gel synthesis, characterization and water vapor adsorption properties of 1, 1'-(1, 6-hexanediyl)-*bis* (imidazolium) dichloride-silica hybrid material. *Journal of Sol-Gel Science and Technology* **(2014),** 69(2), 345-350.

Ananda Sarath Amarasekara, **Bernard Wiredu.** Sulfonic acid group functionalized ionic liquid catalyzed hydrolysis of cellulose in water: structure activity relationships. *Sustainable energy,* **2014**, 2 (3), 102-107

Bernard Wiredu, Ananda S. Amarasekara. Synthesis of an immobilized Brönsted acidic ionic liquid catalyst and hydrolysis of cellulose in water under mild conditions. *Current Catalysis,* **2013**, *2(3),* 219-224.

Ananda Sarath Amarasekara, **Bernard Wiredu.** A comparison of the use of dilute aqueous p-toluenesulfonic acid and sulfuric acid in single step pretreatment - saccharification of corn stover at moderate temperatures and pressures. *Bioresource Technology* (2012), 125, 114-118.

Amarasekara, Ananda S.; **Wiredu, Bernard**. Aryl sulfonic acid catalyzed hydrolysis of cellulose in water. *Applied Catalysis, A: General* (**2012**), 417-418, 259-262.

Ananda Sarath Amarasekara, **Bernard Wiredu**. Bronsted acidic liquid 1-(1-propylsulfonic)-3-methylimidazolium chloride catalyzed hydrolysis of D-cellobiose in aqueous medium. *International Journal of carbohydrate chemistry* (**2012**), 948652, 6 pp

Amarasekara, Ananda; Callis, Brandon; **Wiredu, Bernard.** Synthesis and characterization of branched polymeric ionic liquids with imidazolium chloride segments. *Polymer Bulletin* **2012**, 68(4), 901-908

Ananda Sarath Amarasekara, **Bernard Wiredu**, and Ashfaqur Razzaq. Vanillin based polymers: I. An electrochemical route to polyvanillin. *Green Chemistry* (2012), 14, (9), 2395-2397.

Ananda S. Amarasekara, **Bernard Wiredu**. Degradation of cellulose in dilute aqueous solutions of acidic ionic liquid 1-(1-propylsulfonic)-3-methylimidazolium chloride, and *p*-toluenesulfonic acid at moderate temperatures and pressures. *Industrial & Engineering Chemistry Research,* **2011,** 50(21), 12276-12280.

Kaiyan Lou, Allan M. Prior, **Bernard Wiredu**, John Desper, and Duy H. Hua. Synthesis of Cyclododeciptycene Quinones. *J. Am. Chem. Soc*. **2010**, 132(49), 17635-17641.

Wang, Y.; Perchellet, E. M.; Ward, M. M.; Lou, K.; Zhao, H.; Battina, S. K.; **Wiredu, B.**; Hua, D. H.; and Perchellet, J.-P. H. Antitumor triptycene analogs induce a rapid collapse of mitochondrial transmembrane potential in HL-60 cells and isolated mitochondria. *International Journal of Oncology*, **2006**, 28(1), 161-172

Additional Trainings/Skills:

Ability to operate and troubleshoot sophisticated modern analytical instruments critical for the study of chemistry and to support research operations in a modern chemistry lab

Post-Doctoral Training at major research and teaching institutions including Prairie View A&M University.

Attended numerous NSF and NIH sponsored Grant writing workshops under the auspices of major research institutions including Prairie View A&M University

Working Knowledge of Online based-curriculum instruction using programs such as D2L, SmartWorks, and WebEx.

Experience in Molecular modeling using Gaussian-based software

Strong communication skills

Experienced in presenting /communicating difficult and abstract concepts in chemistry to diverse

student population both orally and mechanistically.

Honors/Awards:	2017- 2017	Merit Award for Teaching Excellence	Prairie View A&M University
	2016 - 2017	SREP/REU Mentor Award	Prairie View A&M University
	2002 - 2003	Kansas State University	ISEP Scholarship
	1999 - 2000	University of Ghana	Otumfour Scholarship
Leadership Activities:	2001 – 2002	Secretary, Students Chemical Society	Univ. of Ghana, Legon
	2005 – 2007	President, African Students Union	Kansas State Univ. Manhattan

Professional Affiliations

American Chemical Society, USA
Royal Chemical Society, UK
Sigma Xi, USA