Biographical Sketch for Dr. Benjamin E. Dawson-Andoh (PI)

Professional Preparation

Institution	Major/Area	Degree	Year
University of Cape Coast, Ghana	Chemistry	B.S.	1972
Kwame Nkrumah University of Science & Technology	Wood Science & Technology	MS.	1976
University of British Columbia Canada	Analytical Instrumentation	Ph.D..	1989
Oregon State University	Wood Biodeterioration	Postdoc	2000

a. Appointments

Professor, Division Forestry & Natural Resources, West Virginia University, Aug. 2014 - Present
Associate Professor, Division Forestry & Natural Resources, West Virginia University, Aug. 2008 – July 2014
Assistant Professor, Division Forestry & Natural Resources, West Virginia University, Jan. 2008 – Aug. 2008
Research Associate, Michigan State University, Dept. of Forestry
Research Scientist, Forintek, Canada, Department of Bioinnovation

b. Selected Publications

1. Atta-Obeng E., Venky S. Pingali and B. Dawson-Andoh. 2018. Effect of ball-milling on biomass cell wall structure using small angle neutron scattering. Carbohydrate Polymers. *In preparation*.
2. Dawson-Andoh B., G. Lawar-Yolar and E. Atta-Obeng. 2018. Phase change materials for thermal storage: evaluation of tropical tree fruit oils. Bioresource Technology. *In preparation.*
3. Dawson-Ando B., G. Lawar-Yolar and E. Atta-Obeng. 2018. Biodiesel from Tall Oil Fatty acids via homogeneous and heterogeneous catalysis. Bioresource Technology. *In preparation*
4. Dawson-Andoh B., C. Norman, E. Atta-Obeng, J. Slahor and D. DeVallance. 2018. Bio-durability of biochar-plastic composites. Polymer degradation and stability. *In preparation*.
5. Nkansah Kofi, Benjamin Dawson-Andoh, Oluwatosin Adedipe, Emmanuel Atta-Obeng, and Lawrence Osborn. 2017. Rapid characterization of northern red oak *(Quercus rubra)* using near-infrared spectroscopy. Journal of Forestry Research. Accepted. May 7 2018.
6. Emmanuel Atta-Obeng, Benjamin Dawson-Andoh, Gene Felton and Greg Dahle. 2017.Carbon dioxide capture using amine functionalized hydrothermal carbons from technical lignin. Waste and biomass valorization. https://doi.org/10.1007/s12649-018-0281-2
7. Atta-Obeng E., B. Dawson-Andoh, M. Seehra, U. Geddam, J. Poston and J. Leisen. 2017. Physico-chemical characterization of carbons produced from technical lignin by sub-critical hydrothermal carbonization. Biomass and Bioenergy. 107 172-181.
8. Cheng X., L. Matuana and B. Dawson-Andoh. 2017. Effect of Processing Parameters on the Quality of Red Oak Flakes. International Wood Products Journal. 8 (3): 139-143.

9. Nkansah K., O. Adedipe, B. Dawson-Andoh, E. Atta-Obeng, J. Slahor and L. Osborn. 2015. Determination of concentration of ACQ wood preservatives components by UV-Visible spectroscopy coupled with multivariate data analysis. Chemometrics and Intelligent Laboratory Systems. 147: 157-166.
10. Tidwell, J. E., B. Dawson-Andoh, E. O. Adedipe, K. Nkansah and M. J. Dietz. Can Near-Infrared spectroscopy detect and differentiate implant-associated biofilms? 2015. Clinical Orthopaedics and Related Research. DOI.1007/s11999-015-44971-1
11. Seehra M., S. K. Pyapalli, J. Poston, E. Atta-Obeng and B. Dawson-Andoh. 2015. Hydrothermal conversion of commercial lignin to carbonaceous materials. J. Indian Acad. Wood Sci. 12 (1): 29-36
12. Adedipe O. E and B. Dawson-Andoh. 2012. Rapid separation of three Canadian Softwoods with spectroscopy. Journal of Wood Science and Technology Journal. 46:1193-1202
13. Cody, R.B., A.J. Dane, B. Dawson-Andoh, E.O. Adedipe, and K. Nkansah. 2012. Rapid classification of White Oak and Northern Red Oak by using Pyrolysis Direct Analysis in Real Time (DART™) and Time-of-Flight Mass Spectrometry. J. Analytical and Applied Pyrolysis 95: 134-137.
14. Adedipe O. E and B. Dawson-Andoh. 2012. Rapid separation of three Canadian Softwoods with spectroscopy. Journal of Wood Science and Technology Journal. 46:1193-1202
15. Nkansah, K., B. Dawson-Andoh and J. Slahor. 2010. Rapid characterization of biomass using near infrared spectroscopy coupled with multivariate data analysis: Part 1. Yellow-Poplar (*Liriodendron tulipifera* L.). Bioresource Technology. 101: 4570-4570.
16. Nkansah, K.and B. Dawson-Andoh. 2010. Rapid characterization of biomass using near fluorescence spectroscopy coupled with multivariate data analysis: Part 1. Yellow-Poplar (*Liriodendron tulipifera* L.). Journal of Renewable and Sustainable Energy. DOI: 1063/1.329-749
17. Nkansah, K.and B. Dawson-Andoh. 2010. Rapid characterization of biomass using near fluorescence spectroscopy coupled with multivariate data analysis: Part 2. Northern Red Oak (*Quercus rubra*). Journal of Renewable and Sustainable Energy. 2, 043101. 10p
18. Filson, B. and B. Dawson-Andoh. 2009. Characterization of sugars from enzyme-mediated pulp hydrolyzates using high-performance liquid chromatography coupled to light scattering. Bioresource Technology. 100 (24): 6661-6664.

c. Research Focus

- Valorization of waste streams.
- Development of bio-pigments/colorants and other novel technologies for wood and other materials.
- Application of Process Analytical Technology – chemometric-based modeling of physical and chemical properties of wood, other materials and processes.
- Material characterization by small angle scattering methods and novel spectroscopic techniques including X-ray and neutron tomography
- Carbon fibers from lignin by electrospinning and solution-blowing,
- Bio-inspired materials and application of nanotechnology to lignocellulosic biomass,
- Carbonaceous materials from lignocellulosic biomass by hydrothermal and other carbonization processes

- Performance advantaged bio-products from lignocellulosic biomass and other bio-materials