Gloria S. Oporto-Velasquez, Ph.D.
Associate Professor Wood Science & Technology, Forestry and Natural Resources West Virginia University, Morgantown, WV
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Education and Training

University of Concepción, Chile	Chemical Engineering	B.S., 1994
University of Maine, Orono, ME	Forest Resources	Ph.D., 2009
University of Maine, Orono, ME	Adv. Engineered Wood Composites	Certificate, 2009

Research and Professional Experience

2016–Present	Associate Professor of Wood Science and Technology, School of Natural Resources, West Virginia University
2010–2016	Assistant Professor of Wood Science and Technology, School of Natural Resources, West Virginia University
2005–2009	Graduate Research Assistant, Advanced Structures and Composites Center, University of Maine, Orono, ME
2002–2005	Head of the Advanced Material Area, Unidad de Desarrollo Tecnológico, University of Concepción, Chile
1994–2001	Project Engineer, Unidad de Desarrollo Tecnológico, University of Concepción, Chile

Current Teaching Responsibilities

Wood Anatomy and Structure (*FNRS 223, 3cr*); Anatomy of North American Wood (*FNRS 623, 3cr*); Wood Mechanics (*FNRS 341, 3cr*); Wood-Based Composite Materials (*FNRS 465, 3cr*); Advanced Wood Mechanics (*FNRS 693C, 3cr*); Advanced Wood Composites (*FNRS 693D, 3cr*); Wood Chemistry (*FNRS 413);* Forest Resources in U.S. History (*FNRS 100, 3cr*); Wood Protection (*FNRS 351, 3cr*). Other classes taught: Sustainable Construction (*FNRS 320, 3cr*); Career in Natural Resources (*FNRS 203, 1cr*);

Other Responsibilities

Preparation of the Wood Science and Technology (WST) Assessment Plan for:

a) WST ten-year Accreditation - Society of Wood Science and Technology (SWST)
b) WST Five-year review for the West Virginia University Board of Governors (BOG) reports.

Synergistic Activities

- Ad hoc reviewer for the USDA Agriculture and Food Research Initiative (AFRI) Exploratory Research program.
- Panel member for the USDA-SBIR Phase I. Forestry and Related Resources.
- Panel member for the USDA AFRI Sustainable Agricultural Systems competitive grants.
- Past Chair of the Society of Wood Science and Technology (SWST) Education and accreditation Committee.

Products (selected)

1. Sivaneri K., **Oporto, G.**, Barre, M., Terada M., Boyd J., Goldsmith W., Nurkiewicz T., Gupta R. and E. Sabolsky. **2023**. Eco-Friendly Hierarchical Nanoporous Microfiber Respirator Filters Fabricated Using Rotary Jet Spinning Technology (RJS). *ACS Applied Polymer Materials*. 5(3) 1657–1669. https://doi.org/10.1021/acsapm.2c01387

2. Ponce G., Rodriguez S, Castano P., **Oporto G.**, Sabando C. and G. Cabrera. 2022. Biocomoposites of polylactic acid/ poly(butylene adipate-co-terephthalate) blends loaded with quinoa husk agro-waste: thermal and mechanical properties. *Journal of Polymer Research.* 29: 356. https://doi.org/10.1007/s10965-022-03196-y
3. O'Donnell K.L., **Oporto G.S.** and Comolli N.2020. Evaluation of Acetaminophen Release from Biodegradable Poly (Vinyl Alcohol) (PVA) and Nanocellulose Films Using a Multiphase Release Mechanism. *Nanomaterials* 2020, 10, 301; doi:10.3390/nano10020301.
4. Rigg-Aguilar P., Moya R., **Oporto G.S.**, Vega-Baudrit J., Starbird R., Puente-Urbina A., Méndez D., Potosme L.D. and Esquivel M. 2020. Micro- and Nanofibrillated Cellulose (MNFC) from Pineapple (*Ananas comosus*) Stems and Their Application on Polyvinyl Acetate (PVAc) and Urea-Formaldehyde (UF) Wood Adhesives. *Journal of Nanomaterials*, Volume 2020, Article ID 1393160, 12 pages. http://doi.org/10.1155/2020/1393160
5. Hao J., Wu X., **Oporto G.S**., Liu W. and Wang J. 2020. Structural analysis and strength-to-weight optimization of wood-based sandwich composite with honeycomb core under three-point flexural test. European Journal of Wood and Wood Products. https://doi.org/10.1007/s00107-020-01574-1
6. Hao J., Wu X., **Oporto G.S**., Wang J., and Dahle G. 2020. Compression Properties and Its Prediction of Wood-Based Sandwich Panels with a Novel Taiji Honeycomb Core. *Forests*. 11, 886; doi:10.3390/f11080886.
7. Winans M., Gallagher J.E.G.; Jaczynski J and **G.S Oporto**. 2019. Pick Your Poison: Benzalkonium Chloride and Copper Enable Nanocellulose Derivatives to Form Antimicrobial Properties Against a Spectrum of Microorganisms. https://www.biorxiv.org/content/10.1101/783076v1
8. Tosin O., Singh K. **Oporto G.S.,** Dawson-Andoh B. McDonald L. and Sabolsky E. 2019. Effect of one-step and two-step H3PO4 activation on activated carbon characteristics, *Bioresource Technology Reports*, https://doi.org/10.1016/j.biteb.2019.100307
9. Tosin O., Singh K. **Oporto G**., Dawson-Andoh B. McDonald L. and Sabolsky E. 2019. Influence of one-step and two-step KOH activation on activated carbon characteristics, *Bioresource Technology Reports*, 7(2019)100266. https://doi.org/10.1016/j.biteb.2019.100266
10. Moya R., Tenorio C., **Oporto G**. 2019. Short Rotation Wood Crops in Latin American: A Review on Status and Potential Uses as Biofuel. *Energies* 12, 705.
11. O'Donnell K.L., **Oporto G.S.** and N. Comolli. 2018. Nanocellulose in combination with inorganic/organic materials for food packaging applications – Safety issues review in "Composite materials for food packaging." Scrivener Publishing LLC and John Willey and Sons Ltd. DOI: 10.1002/9781119160243.ch11
12. Rong-Mullins, X. Winans M., Lee J.B., Lonergan Z.R., Pilolli V.A., Weatherly L.M., Carmenzind T.W., Jiang L., Cumming J.R., **Oporto G.S.** and J.E.G. Gallagher. 2017. Proteomic and genetic analysis of *S. cerevisiae* response to soluble copper leads to improvement of antimicrobial function of cellulosic copper nanoparticles. *Metallomics*, 9:1304. DOI: 10.1039/C7MT00147A
13. Owen, C.W., **Oporto G.S.**, Söderberg B.C. and K. E. Lambson. 2017. Lignocellulosic micro- and nanomaterials as Copper Frames for the Evaluation of the Copper (I) Catalyzed Azide-Alkyne Cycloaddition (CuAAC). *Journal of Nanomaterials*, Volume 2017, Article ID 9461615. DOI: 10.1155/2017/9461615
14. Hassanzadeh M., Sabo R., Rudie A., Reiner R., Gleisner R. and **G.S. Oporto**. 2017. Nanofibrillated Cellulose from Appalachian Hardwoods Logging Residues as Template for Antimicrobial Copper. *Journal of nanomaterials*, Volume 2017, Article ID 2102987. DOI: 10.1155/2017/2102987
15. Zhong, T., **Oporto, G.S.** and J. Jazynski. 2017. Antimicrobial food packaging with cellulose-copper nanoparticles embedded in thermoplastic resins. In: *Volume 6. Food Preservation, Series: Nanotechnology in the Agri-Food industry (Volumes 1-10)*, edited by Alexandru Mihai Grumezescu, Ed. Elsevier Inc, London, United Kingdom, pp.671-699. DOI: 10.1016/B978-0-12-804303-5.00019-5
16. Jiang C., **Oporto G.S.**, Zhong T. and J. Jaczynski. 2016. TEMPO nanofibrillated cellulose as template for controlled release of antimicrobial copper from PVA films. *Cellulose*, 23(1): 713-722. DOI: 10.1007/s10570-015-0834-5