

Diego Gomez-Maldonado

Assistant Professor of Biopolymers for Biomedical Applications ♦ Bio Nano Advanced Health Materials Lab
Fiber and Biopolymer Research Institute ♦ Department of Plant and Soil Sciences
1001 E Texas 289 Loop Frontage, Office 105A, Texas Tech University, Lubbock, TX 79403
(334)-400-0890 ♦ dgomezma@ttu.edu ♦ gmz_diego@yahoo.com

EDUCATION

- *PhD in Forestry* (August 2017 – April 2021)

Concentration area: *Forest Biomaterials*

School of Forestry and Wildlife Science, Auburn University, Auburn, AL, USA

- *Master in Natural Science and Engineering* (August 2015 – July 2017)

Concentration area: *Engineering and Design of Materials and Molecules*

Division of Natural Science and Engineering, Universidad Autonoma Metropolitana (UAM), Cuajimalpa, Mexico City, Mx

- *B.S. Biological Engineering* (August 2011 – July 2015)

Concentration area: *Biomedical and Biomaterials*

Department of Process and Technology, Division of Natural Science and Engineering, Universidad Autonoma Metropolitana (UAM), Cuajimalpa, Mexico City, Mx

POSTDOCTORAL WORK

- *Postdoctoral Research Associate - Chemical Engineering*, Northeastern University, Boston (November 2022 – December 2024)

My work here focusses on the optimization of a microgel system for the understanding of mechanotransductive and chemo-responsive environment cues in neural cell line response. Likewise, I perform *in vivo*, and *in vitro* research related to the use of electrical based therapies aiming for optical nerve protection and regeneration in glaucoma. I am also responsible for the training and supervision of graduate and undergraduate students active in the [*Materials for Tissue Engineering Lab*](#).

Supervisor: [Dr. Rebecca K. Willits](#)

- *Postdoctoral Research Fellow – Forest Biomaterials*, at the College of Forestry, Wildlife and Environment, Auburn University, Alabama (May 21 – October 22)

I oversaw and directed projects related to the development of bio-based enhanced efficiency fertilizers, bio-based metallic nanocomposites for water remediation, immunoassays for malaria detection, and the development of bio-based bed nets for malaria control. Likewise, I was responsible for mentoring and supervising undergraduate, graduate, and visiting scholars. In the same venue, I helped with the training of students and visitors in the techniques available in the [*Sustainable Bio-Based Materials Lab*](#), as well as teaching responsibilities for undergraduate courses.

Supervisor: [Dr. Maria Soledad Peresin](#)

PROFESSIONAL APPOINTMENTS

Current Appointments (n = 3)

Texas Tech University, Lubbock, TX. (January 2025 – present)

- *Assistant Professor of Biopolymers for Biomedical Applications*

My research program focuses on the study and use of sustainable biopolymers and nanotechnology for the discovery and development of bioproducts. These bioproducts will be developed through green chemistry and emerging sustainable technologies like additive manufacturing and self-assembly. The aim is to tackle the Sustainable Development Goals and other One Health needs through the revalorization of biomass and its different fractions. Likewise, I work in the development of inclusion and belonging of all students in STEM through professional development programs for graduate, undergraduate, and high school students.

Technical Association of Pulp and Paper Industries, Atlanta, GA. (October 2024 – present)

- *Editorial board member* – TAPPI Journal

As an editorial board member for the TAPPI Journal, I contribute to the peer review and editorial process, ensuring the publication of high-quality research in the fields of biopolymers, biomaterials, and fiber science. My role involves evaluating manuscript submissions, guiding the review process, and supporting the journal's mission to advance knowledge in the paper, pulp, packaging, and associated industries.

Universidad Autónoma Metropolitana, Cuajimalpa, Mx (March 2024 – present)

- *Adjunct Professor* – Posgrado de Ciencias Naturales e Ingeniería

I mentor graduate students and collaborate on interdisciplinary research initiatives. My role involves delivering specialized lectures, guiding research projects in biomaterials and nanotechnology, and supporting the program's goals of advancing

scientific and engineering knowledge to address pressing societal challenges.

Past Appointments (n = 11)

Northeastern University, Boston (November 2022 – December 2024)

- *Scientific Advisor* – Department of Chemical Engineering (**Jan 24 – May 24**)
 - Advisor for Senior Capstone Project with 1 group of 4 students (CHME 4703 – Spring 24)

Auburn University, Alabama (August 2017 – October 2022)

- *Instructor* – School of Forestry and Wildlife Science (**Aug 21 – Oct 22**)
 - Co-instructor for Capstone Project I with 7 students (BIOP 4400 –Fall 22)
 - Co-instructor for Frontiers on Sustainable Materials with 20 students (BIOP 2120 –Fall 21, Spring 22)
- *Graduate Teaching Assistant* – Department of Biological Science (**Jan-May 20**)
 - Lead TA at one section with 42 students and assist in two more sections for General Microbiology Laboratory (BIOL 3210 – Spring 20)
- *Graduate Teaching Assistant* – School of Forestry and Wildlife Sciences (**Aug 19 – Apr 21**)
 - Co-instructor in Biopolymers for Sustainable Packaging with 9 students (BIOP 4800 – Spring 21)
 - Assistant TA in Introduction to Natural Resources with 94 students (FOWS 1010 – Fall 19)
 - Assistant TA in Frontiers on Sustainable Materials with 30 students (BIOP 2120 – Spring 19)
- *Graduate Research Assistant* – Forest Products Development Center (**Aug 17 – Apr 21**)

Worked in and developed multiple projects where some of the focus areas of the multidisciplinary projects were the development of water remediation systems with bio-based nano- and micro structured materials; slow release of active components such as vitamins, fertilizers, and pesticides; and for the surveillance and detection of diseases, allergens, and pollutants.

Supervisor: Dr. Maria Soledad Peresin

Aalto University, Espoo, Finland (May – June 2017)

- *Visiting Scholar* – Department of Bioproducts and Biosystems, School of Chemical Engineering
“Study on SPR of the Interactions between Polymer Hydrogels and Nanoparticles”.

Supervisor: Dr. Orlando Rojas

Universidad de Guadalajara, Guadalajara, Mx (November 2016)

- *Visiting Scholar* – Laboratory of Immunology, University Center of Health Science
“Study of the Effects of Theragnostic Nanoplatfroms Biofunctionalization with Humanized Monoclonal Antibodies on the Diagnostic and Selective Treatment of Epithelial Ovary Cancer”

Supervisor: Dr. Antonio Topete

Universidad Autónoma Metropolitana, Cuajimalpa, Mx (August 2011 – September 2017)

- *Lead instructor* – PAEA (**Fall 16, Winter & Spring 17**)
 - Remedial Courses Program of Academic Literacy with over 45 students
- *Research Assistant* – Laboratory of Surfaces and Interphases, (**Jan 15 – Jul 17**)
 - “Study of Biopolymeric Hydrogel Interactions with Photodynamic Systems” *master’s thesis topic*

Supervisor: Dr. Jose Campos Terán

- “Development of Biocompatible Hydrogels for Cardiac Cell Growth”

Supervisors: Drs. Jose Campos Terán & Nohra Beltran

- “Study on the Interactions of Lignin Honeycomb Structured Porous Membranes.”

Supervisor: Dr. Maribel Hernández-Guerrero

- “Study of Nanoparticle-Protein Conjugates and their Interaction with Algal Cellulose Surfaces” *senior capstone project*

Supervisor: Dr. Jose Campos Terán

- *Peer-Tutor* - Department of Process and Technology
 - Teaching tutor in Chemistry (**Winter 15**)
 - Teaching tutor in Material Balance (**Fall 13**)

AWARDS AND RECOGNITIONS

Awards (n = 11)

- Young Professionals Award. Technical Association of the Pulp and Paper Industries - Nanotechnology Division. **2024**
- Postdoctoral Fellow in Chemical Engineering Award. American Institute of Chemists **2024**

Diego Gomez-Maldonado, PhD

- CAS Future Leaders 2023. American Chemical Society. **2023** ([website](#))
- Student Leader Award. Pride on the Plain. Auburn, AL **2021**
- International Student Recognition. International Student Organization, Auburn University. AL **2021**
- Outstanding Doctoral Student. Graduate School, Auburn University. AL **2020-2021**
- Auburn University's Student Research Spotlight. Auburn University. AL **2020**
- International Student Recognition. International Student Organization, Auburn University. AL **2020**
- Badge to the Academic Merit (Master level). Universidad Autonoma Metropolitana. Mexico, **2017**
- Badge to the Academic Merit (Undergraduate level). Universidad Autonoma Metropolitana. Mexico, **2015**
- State's First Place in "Children's Knowledge Olympiads". Federal Government of President Vicente Fox Quesada. Chiapas, Mexico, **2005**

Presentation Awards (n = 3)

- Research Showcase Poster Presentation Competition – 1st Prize Postdoctoral Level, Department of Chemical Engineering, Northeastern University. Boston, Massachusetts. September 19, **2023**
- 1st Place on the Southeastern Society of American Foresters (SESAP) poster competition, Mobile, AL, **2019**
- Auburn University Student Research Symposium, Poster Presentations, School Awards, School of Forestry and Wildlife Sciences, Graduate Student Winner, **2018**

Fellowships (n = 7)

- Travel Award for AIMBE Public Policy Institute for Rising Leaders. American Institute for Medical and Biological Engineering Washington DC, **October 21-22, 2024**. (\$ 800 USD)
- Drummond Company Endowed Fellowship in The School of Forestry and Wildlife Sciences PhD, Auburn University, AL **2021** (\$ 1000 USD)
- Harry Murphy Dean's Enhancement Award for Excellence in The School of Forestry and Wildlife Sciences, Auburn University, AL, **2020** (\$ 1000 USD)
- Merriwether Fellowship Award, Graduate School, Auburn University, AL **2019-2020** (\$ 1000 USD)
- Incentive Program for the Universal Baccalaureate, Prepa Sí. Universidad Nacional Autónoma de México and Government of Mexico City, **2009-2011**. \$22,500 MXN (\$1,125 USD)
- Fellowship "Encouragement to State's Best Students", Chiapas, Mexico, **2006**
- BBVA Scholarship for the Youth, Mexico City, **2005-2007** \$36,000 MXN (\$3600 USD)

Scholarships (n = 6)

- Scholarship for the 2024 ACS LEADS Conference: Lasting Encounters between Aspiring and Distinguished Scientists. Washington DC, November 6-9, **2024**
- Scholarship for the Career Development and Inclusive Leadership Workshop, University of Washington Institute of Stem Cell, and Regenerative Medicine. Seattle, Washington. April 24-25, **2023**
- Scholarship for Research Stay from National Council of Science and Technology (CONACyT), Mexico City, **2017**
- Scholarship for Master Study from National Council of Science and Technology (CONACyT) Number 717646/592247, Mexico City, **September 2015 – August 2017**
- Scholarship "A Summer in Canada" from King's University College, Western University and Universidad Autonoma Metropolitana, **2015**
- Scholarship for Cultural Exchange, Universidad Autonoma Metropolitana, **2014**

Research Funding (n = 4)

- PI – ACS Bridge Grant. Project "Advancing Sustainable Drug Delivery by Integrating Nanocellulose and Protein Nanoparticles" USD \$ 125,000. **Submitted September 2024**.
- Key Personnel –NSF CAREER Award. Project "Unlocking the potential of natural polymers for efficient removal of emerging contaminants from drinking water" USD \$619,691. **2021-2026**
- Key Personnel – USDA AFRI-NIFA. Project "Cellulose Nanocrystals: A Versatile Platform for the Detection of Allergens and Emerging Contaminants" USD \$477,650. **2020-2023**
- Key Personnel – Aptar CSP Technologies. Project "Chlorine detection method validation for reusable masks" USD \$6,615. **2020**

SCIENTIFIC PRODUCTION

Peer-Reviewed Manuscripts in Archival Literature (n = 26)

- **Gomez-Maldonado, D.**, Dickson, B.R., Au, G., Bortner, M.; Li, M.; Espinosa Victor, E., Rodriguez, A., Higgins, B., Peresin, M.S.* (2025). Exploring the Effects of Cellulose Source on Silver Reduction and the Bacterial Removal of Nanocellulose-Based Hydrogel Beads. *Carbohydrate Polymers* 347, 122771. <https://doi.org/10.1016/j.carbpol.2024.122771>
- Contreras, R.; Chumpitaz, D.; Zavaleta, D.; Guterra, A.; Cárdenas, A.; Gonzáles, H.; Quino, J.; **Gomez-Maldonado, D.**; Peresin, M.S.; Ponce, S.* From Bolaina. (2024). Wood Fibers to Antimicrobial Films: Characterization and Application in the Food Industry Using Copper Nanoparticles. *Journal of Natural Fibers* 21(1), 2431314. <https://doi.org/10.1080/15440478.2024.2431314>.
- Nan, Y.; **Gomez-Maldonado, D.**; Zhang, K.; Du, H.; Whitehead, D.; Li, M.; Zhang, X.; Peresin, M.S.* (2024). Polyethyleneimine functionalized graphene oxide and cellulose nanofibril composite hydrogels: synthesis, characterization and water pollutants adsorption. *Carbohydrate Polymer Technologies and Applications* 8, 100585. <https://doi.org/10.1016/j.carpta.2024.100585>
- Hernández Guerrero, M.; **Gomez-Maldonado, D.**; Gutiérrez-Castañeda, J.; Revah, S.; Campos-Terán, J.; Viguera Ramírez, G.* (2024). Assessment of Culture Systems to Produce Bacterial Cellulose with a Kombucha Consortium. *Applied Biochemistry and Biotechnology*. <https://doi.org/10.1007/s12010-024-04929-z>
- Amit, S.K.; **Gomez-Maldonado, D.**; Bish, T.; Peresin, M.S.; Davis, V.A.* (2024). Properties of APTES Modified CNC Films. *ACS Omega* 9(14), 16572-16580. <https://doi.org/10.1021/acsomega.4c00439>
- **Gomez-Maldonado, D.**; Phillips, S.; Vaidya, S.; Bartley III, P.C.; White, J.C.; Fairbrother, D.H.; Peresin, M.S.* (2024). Modifying Soluble NPK Release with Hydrophobized Nanocellulose-Based Hydrogels for Sustainable Enhanced Efficiency Fertilizers. *RSC Environmental Science: Nano*. 11(2), 529-545. <https://doi.org/10.1039/d3en00306j>
- **Gomez-Maldonado, D.***; Au, G.; Davis, V.A.; Zohdy, S.; Peresin, M.S.* (2024). Rapid Production of *Plasmodium* Sporozoite Detection Paper Dipstick Assays using Cellulose Nanocrystals: Proof-of-Concept for Bio-Based, Locally Developed, Point-of-Care Devices. *Nano Select*. 5(1), 2300093. <https://doi.org/10.1002/nano.202300093>
- Zhao, X.*; Bhagia, S.; **Gomez-Maldonado, D.**; Tang, X.; Wasti, S.; Lu, S.; Zhang, S.; Parit, M.; Rencheck, M.; Korey, M.; Jiang, H.; Zhu, J.; Meng, X.; Lamm, M.E.; Copenhaver, K.; Peresin, M.S.; Wang, L.; Tekinalp, H.; Yang, G.; Kumar, V.; Chen, G.; Nawaz, K.; Chen, X.; Vaidya, U.; Ragauskas, A.J.; Webb, E.; Garden, D.J.; He, P.; Li, K.; Ozcan, S.* (2023). Bioinspired Design toward Nanocellulose-based Materials. *Materials Today*. 66, 409-430. <https://doi.org/10.1016/j.mattod.2023.04.010>
- **Gomez-Maldonado, D.**; López-Simeon, R.; Topete, A.; Rojas, O.J.; Beltrán-Vargas, N.E.; Campos-Terán, J.* (2023). Surface Interaction of Polysaccharide Thin Model Films and Citrate or Protein Capped Gold Nanoparticles. *Applied Nanoscience*, 13(8), 5807-5819. <https://doi.org/10.1007/s13204-023-02833-2>
- **Gomez-Maldonado, D.**; Stephens, H.; Sutcliffe, A.C.; Camarano Eula, M.A.; Vega Erramuspe, I.B.; Dotson, E.M.; Peresin, M. S.; & Zohdy, S.* (2023). Assessment of Bio-Based Materials as a Sustainable and Scalable Alternative for Detection of *Plasmodium* spp. (Haemospororida: Plasmodiidae) Sporozoites in Field Deployable Testing. *Journal of Medical Entomology*, 60(3), 535-545. <https://doi.org/10.1093/jme/tjad008>
- Nan, Y.; **Gomez-Maldonado, D.***; Iglesias, M.C.; Whitehead, D.; Peresin, M.S.* (2023). Revalorization of Soybean Hulls as TEMPO Oxidized Cellulose Nanofibril and Polyethylenimine Composite Hydrogels. *Cellulose*. 30(6), 3639–3651. <https://doi.org/10.1007/s10570-023-05086-y>
- Nori, U. M.; **Gomez-Maldonado, D.**; Saha, P.; Ashurst, W.R., Peresin, M.S., Davis, V.A.* (2023). Antibody Immobilization on Sulfated Cellulose Nanocrystals. *ACS Biomacromolecules*, 24(3), 1103-1110. <https://doi.org/10.1021/acs.biomac.2c00877>
- Nan, Y.; **Gomez-Maldonado, D.**; Whitehead, D.; Peresin, M.S.* (2023). Comparison between Nanocellulose-Polyethyleneimine Composite Synthesis Methods towards Multiple Water Pollutants Removal: A Review *Journal of Biological Macromolecules*, 232(3). 123342. <https://doi.org/10.1016/j.jbiomac.2023.123342>
- Iglesias, M.C.; **Gomez-Maldonado, D.**; Davis, V.A.; & Peresin, M.S.* (2023). A Review on Lignocellulose Chemistry, Nanostructure, and their Impact on Interfacial Interactions for Sustainable Products Development. *Journal of Material Science*, 58, 685-706. <https://doi.org/10.1007/s10853-022-07992-1>
- Brake, S.; **Gomez-Maldonado, D.**; Hummel, M.; Zohdy, S.; & Peresin, M.S.* (2022). Understanding the Current State-of-the-Art of Long-Lasting Insecticide Nets and Potential for Sustainable Alternatives. *Current Research in Parasitology & Vector-Borne Diseases*, 100101. <https://doi.org/10.1016/j.crpvbd.2022.100101>
- **Gomez-Maldonado, D.**; Ponce, S.; Peresin, M.S.* (2022). The Applicability of Cellulose-Tara Gum Composite Hydrogels as Dye Capture Adsorbents. *Water, Air, Soil Pollution* 233:340. <https://doi.org/10.1007/s11270-022-05818-z>
- **Gomez-Maldonado, D.**; Reynolds, A. M.; Babu, R. J.; Waters; M. N.; & Peresin, M. S.* (2022). Delignified Wood Aerogel as Scaffolds Coated with an Oriented Chitosan-Cyclodextrin Co-Polymer for Removal of Microcystin-LR. *RSC advances* 12(31) 20330-20339 <https://doi.org/10.1039/D2RA03556A>
- **Gomez-Maldonado, D.**; Filpponen, I.; Vega Erramuspe, I. B.; Johansson, L.-S.; Mori, M.F.; Babu, J.R.; Waters, M.N.; &

Peresin, M. S.* (2022). Development of a β -cyclodextrin-Chitosan Polymer as Active Coating for Cellulosic Surfaces and Capturing of Microcystin-LR. *Surfaces and Interfaces* 33 102192. <https://doi.org/10.1016/j.surfin.2022.102192>

- **Gomez-Maldonado, D.**; Reynolds, A. M.; Johansson, L.-S.; Burnett, D.; Babu, R. J.; Waters, M. N.; Vega Erramuspe, I. B.; Peresin, M. S.* (2021). Fabrication of Aerogels from Cellulose Nanofibril Grafted with β -cyclodextrin for Capture of Pollutants for Water Remediation. *Journal of Porous Materials* 28(6) 1725-1736 <https://doi.org/10.1007/s10934-021-01109-w>
- **Gomez-Maldonado, D.**; Filpponen, I.; Hernandez Diaz, J.A.; Waters, M.N.; Auad, M.L.; Johansson, L.-S.; Vega Erramuspe, I. B.*; Peresin, M. S.* (2021). Simple Functionalization of Cellulose Beads with Pre-Propargylated Chitosan for Clickable Scaffold Substrates. *Cellulose* 28 (10), 6073-6087. <https://doi.org/10.1007/s10570-021-03905-8>
- **Gomez-Maldonado, D.**; Filpponen, I.; Johansson, L.-S.; Waters, M.N.; Vega Erramuspe, I. B.; Peresin, M. S.* (2021). Environmentally Dependent Adsorption of 2,4-Dichlorophenol on Cellulose-Chitosan Self-Assembled Composites. *Biopolymers* 112(8) 1-9 e23434. <https://doi.org/10.1002/bip.23434>
- **Gomez-Maldonado, D.**; Peresin, M. S.; Verdi, C.; Velarde, G.; Saloni, D.* (2020). Thermal, Structural, and Mechanical Effects of Nanofibrillated Cellulose in Polylactic Acid Filaments for Additive Manufacturing. *BioResources* 15 (4), 7954–7964. <https://doi.org/10.15376/biores.15.4.7954-7964>
- Sánchez-Osorno, D. M.; **Gomez-Maldonado, D.**; Castro, C.; Peresin, M. S.* (2020). Surface Interactions between Bacterial Nanocellulose and B-Complex Vitamins. *Molecules* 25 (18), 4041. <https://doi.org/10.3390/molecules25184041>
- Iglesias, M. C., **Gomez-Maldonado, D.**, Via, B. K., Jiang, Z., & Peresin, M. S.* (2020). Comparison of kraft and sulfite pulping processes and Their Effects on Cellulose Fibers and Nanofibrillated Cellulose Properties: A Review. *For. Prod. J.* 2020, 70 (1), 10–21. <https://doi.org/10.13073/FPJ-D-19-00038>
- **Gomez-Maldonado, D.**, Vega Erramuspe, I. B., Filpponen, I., Johansson, L. S., Lombardo, S., Zhu, J., Thielemans, W., & Peresin, M. S.* (2019). Cellulose-Cyclodextrin Co-Polymer for the Removal of Cyanotoxins on Water Sources. *Polymers*, 11(12), 2075. <https://doi.org/10.3390/polym11122075>
- **Gomez-Maldonado, D.**, Erramuspe, I. B. V., & Peresin, M. S.* (2019). Natural Polymers as Alternative Adsorbents and Treatment Agents for Water Remediation. *BioResources*, 14(4), 10093-10160. <https://doi.org/10.15376/biores.14.4.Gomez-Maldonado>

Peer-Reviewed Articles under Review (n = 2)

- Martínez Bello, L.I.; Vázquez Cuevas, V.Y.; González-Contreras, M.; **Gomez-Maldonado, D.***; Hernández Guerrero M.* Bio-Polyethylene Furanoate Production in Latin America as a Response to the Current Needs for Sustainable Food Packaging. (In Review, *Journal of Polymers and the Environment* 04/Jan/2024)
- **Gomez-Maldonado, D.**; Shovmer, R.; Inman, D.*; Willits, R. K.* Brain Activity Based on Single Application of Transcorneal Electrical Stimulation within Glaucoma Model. (Under Revisions in *Experimental Eye Research* 17/Jan/2024)

Peer-Reviewed Articles in Preparation (n = 9)

- Puerta, M.; **Gomez-Maldonado, D.**; Restrepo-Osorio, A. Peresin, M.S. Green Composite Cryogels from Silk Fibroin and Cellulose by Self-Assembly.
- Nan, Y.; **Gomez-Maldonado, D.**; Bello, F.; Zhu, J.Y.; Peresin, M.S. Effect of nanocellulose particle size on adsorption behavior of 3-D hydrogels for toxic dyes.
- **Gomez-Maldonado, D.**; Zea, F.; Plaza, N.Z., Houtman, C, Peresin, M.S.; Restrepo-Osorio, A. Spin-Coating Fabrication of Self-Standing Silk Fibroin Films from Fibrous Waste.
- Nan, Y.; **Gomez-Maldonado, D.**; Iglesias, M.; Whitehead, D.; Yang, M.; Peresin, M.S. Investigating Interaction Mechanisms Between Cellulose-Polyethylenimine Hydrogels and Methyl Blue Dyes.
- Barba Godinez, J.M.; Tinajero Diaz, E.; Alarcon, E.I.; **Gomez-Maldonado, D.**; Peresin, M.S.; Garcia Carvajal, Z.Y. A New Perspective in Nanocellulose-Based Materials for Biomineralization and Bone Repair.
- Plaza, N.Z.; Restrepo-Osorio, A.; **Gomez-Maldonado, D.**; Peresin, M.S.; Hunt, C. β -Sheet Content Calculations in Soy Flour for Sustainable Adhesives.
- Amit, S.K.; **Gomez-Maldonado, D.***; Peresin, M.S.; Davis, V.A. APTES-Molecularly Imprinted Polymers Modified Cellulose Nanocrystals for Carbofuran Detection
- Lopez-Simeon, R.; **Gomez-Maldonado, D.**; Campos-Teran, J.; Hernández-Guerrero, M.; Algae-Based Cellulose-Polystyrene Composites for Honeycomb Structured Films.
- Puerta, M.; **Gomez-Maldonado, D.**; Peresin, M.S.; Restrepo-Osorio, A. Comparing the Effects of Methanol Post-Treated on Silk Fibroin Films from Cocoons and Waste.

Theses (n = 3)

- **Gomez-Maldonado, D.** Development of Bio-Based Systems as Pollutants Removal for Water Remediation. (2021). *PhD Dissertation*, Forestry and Wildlife Science, Auburn University.
- **Gomez-Maldonado, D.** Study of Biopolymeric Hydrogel Interactions with Photodynamic Systems. (2017). *Master Thesis*, Graduate Studies in Natural Science and Engineering, Universidad Autonoma Metropolitana.
- **Gomez-Maldonado, D.** Study of Conjugates of Nanoparticle-Protein, and their Interactions with Surfaces. (2015). *Senior Capstone Project*, Undergraduate in Biological Engineering. Universidad Autonoma Metropolitana.

Theses Directed (n = 1)

- Martínez Bello, L.I. & Vazquez Cuevas, V.Y. (2023). Análisis de Necesidades de la Industria Alimentaria en Términos de Empaques y Posibilidades de Uso de Bioplásticos en Latinoamérica. *Senior Capstone Project*, Undergraduate in Biological Engineering. Universidad Autonoma Metropolitana. Co-directed with Maribel Guerrero Hernández.

Book Chapters (n = 2)

- **Gomez-Maldonado, D.**; Ponce Álvarez, S.; Peresin, M.S. (2024). Aplicación de los Hidrogeles del Compósito Celulosa – Goma de Tara com Adsorbentes para la Captura de Colorantes. In Evangelina Vallejos, M.; Sulbarán Rangel, B.; Avea, M.C. (Eds.), *Nanocelia: Producción de Celulosa Nanofibrilada y Microfibrilada en Iberoamerica*. (pp. 213–237). Astra Editorial. ISBN: 978-84-10215-61-0. DOI: 10.61728/AE20246099.
- **Gomez-Maldonado, D.**, Hernández-Guerrero, M., Lopez-Simeon, R., Arroyo-Maya, I. J., Campos-Terán, J. (2020). Lignocellulosic Derived Nanostructures from Latin-American Natural Resources: Extraction, Preparation, and Applications. In Filpponen, I., Peresin, M.S., Nypelö, T. (Eds.), *Lignocellulosics: Renewable Feedstock for (Tailored) Functional Materials and Nanotechnology*. (pp. 91-116). Elsevier. ISBN: 9780128040775. 10.1016/B978-0-12-804077-5.00004-X

Conference Proceedings (n = 4)

- Pearson, E.; Nan, Y.; **Gomez-Maldonado, D.**; Peresin, M.S. (2023). Functionalized Nanocellulose Aerogels for Oil Spill Absorption. *Auburn University Journal of Undergraduate Scholarship*. Volume 12
- Adams, F.; Brake, S.; **Gomez-Maldonado, D.**; Peresin, M.S. (2023). A Fundamental Study on the Influence of Biomass Source and Operation Conditions on the Self-Assembly of Cellulose-Based Hydrogel Beads. *Auburn University Journal of Undergraduate Scholarship*. Volume 12
- Cruz Barrera, G.J.; **Gomez-Maldonado, D.**; Viguera Ramírez, G.; Hernández Guerrero, M. (2023). Obtención de membranas de celulosa bacteriana con medios de cultivo estandarizados, no estandarizados y enriquecidos: análisis de rendimiento y características físicas. *Proceeding of XIV Congreso Internacional de Docencia e investigación en Química*. (https://revistatediq.azc.uam.mx/Docs/Revista_TeDIQ_2023.pdf)
- Dickson, B.R., Au, G., **Gomez-Maldonado, D.**, Higgins, B., Peresin, M.S. (2022). Nanocellulose-based Antimicrobial Systems for Mitigating *E. coli* outbreaks in water bodies. *Auburn University Journal of Undergraduate Scholarship*. Volume 11

Non-Peer-Reviewed/ Dissemination (n = 3)

- **Gomez-Maldonado, D.** & Iglesias M.C. (2022). Can we achieve the United Nations Sustainable Development Goals by 2030? *TAPPI Nano Student Committee NANO 360°*, Volume No. 4, 5
- **Gomez-Maldonado, D.** & Iglesias M.C. (2020). Building new bodies from paper? *TAPPI Nano Student Committee NANO 360°*, Volume No. 3, 5-6
- **Gomez-Maldonado, D.** & Iglesias M.C. (2019). How can nanocellulose materials help with the global warming crisis? *TAPPI Nano Student Committee NANO 360°*, Volume No. 2, 4-5

Patents and Invention Disclosures (n = 3)

- Davis, V.A., Peresin, M.S., **Gomez-Maldonado, D.**; Amit, Sadat K.; Ashurst, W. Cellulose Nanocrystal Modification for Adsorbents and Sensors. US Patent Application 18/634,149 filed April 12, 2024. (non-provisional)
- Peresin, M.S.; Zohdy, S.M., **Gomez-Maldonado, D.** Cellulose-Based Insecticidal Fiber Yarn for Malaria Control. No.: 63/248,060 AU IP Disclosure No. 2021-069-01
- Peresin, M.S., **Gomez-Maldonado, D.**, Bartley, P. Biobased Carriers. AU IP Disclosure No. 2021-013

Journal Refereed (n = 46, not counting revisions)

International Journal of Biological Macromolecules from Elsevier (10); *Cellulose* from Springer (7); *Journal of Material Science* from Springer (5); *ACS Omega* (5); *TAPPI Journal* (1); *Forest Product Journal* from Allen Press (2); *Scientific Reports* from Springer Nature (2);
Diego Gomez-Maldonado, PhD

Water, Air, & Soil Pollution from Springer **(1)**; *Journal of Polymers and the Environment* from Springer **(1)**; *Nano-Micro Letters* from Springer **(1)**; *Journal of Sol-Gel Science and Technology* from Springer **(1)**; *Material Advances* from Royal Society of Chemistry **(1)**; *SN Applied Science* from Springer **(1)**; *Food and Bioprocess Technology* from Springer **(1)**; *Journal of Biomedical Materials Research: Part A* from Wiley **(1)**; *Analyst* from Royal Society of Chemistry **(1)**; *RSC Advances* from Royal Society of Chemistry **(3)**; *Advances in Materials & Processing Technology* from SCI **(1)**; *Revista Mexicana de Ingeniería Química* from CONACyT **(1)**; *Journal of Composite Materials* from Sage **(1)**.

RESEARCH ORGANIZATION AND GROUPS

- American Chemical Society. Membership No. 31000915. **(January 2017 - present)**
- Technical Association of the Pulp and Paper Industry, TAPPI. Membership No. 1324053. **(March 2018 - present)**
- American Institute of Chemical Engineers. Member ID: 009905844480 **(April 2023 – present)**
- American Institute of Chemists. **(May 2024 – December 2025)**
- MANRRS: Minorities in Agriculture, Natural Resources and Related Sciences **(August 2020-November 2022)**
- SFWS Grad Student Association, Auburn University **(January 2020 – May 2021)**
- Sustainable Biomaterials and Packaging Society, Auburn University. **(August 2019 – October 2022)**

PROFESSIONAL LEADERSHIP

Scientific Committees (n = 6)

- Strategic Planning Committee Member for the ACS CELL Division **(August 15-16, 2024)**
- Chair of the Subcommittee “CNC, Lignin and Renewable Nanomaterials” from the Research Committee at TAPPI Nano division **(September 2022 – present)**
- Chair of the Research Subcommittee “Functional Materials and Soft Matter” at TAPPI Nano division **(July 2021 – September 2022)**
- Emeritus Chair TAPPI Nano Student Committee **(July 2021- October 2022)**
- Co-vice chair TAPPI Nano Student Committee **(December 2018 – July 2021)**
- Co-founder of the ACS CELL Division Student Committee. **(2020)**

Diversity and Inclusion (n = 3)

- Member of the TAPPI DEIA committee **(November 2024 – present)**
- DEIR Champion of the CELL Division with the ACS Office of DEIR **(December 2023 – present)**
 - Roundtable Participation
- Committee member of the CELL Division DEIRB (Diversity, Equity, Inclusion, Respect & Belonging) Committee of the ACS **(November 2022 – present)**

Institution Service (n = 3)

- Presenter for the Materials for Tissue Engineering Lab at the 2023 Showcase of Opportunities for Undergraduate Research and Creative Endeavor (SOURCE) **(5 October 2023)**
- Member-at-large of the Action Committee to foster LGBTQ+ inclusion in the Academic Life, Retention and Recruitment Committee **(October 2020 –May 2021)**
- Senator for the School of Forestry and Wildlife Sciences at the Graduate School Council **(Fall 2020 – Summer 2021)**
 - Member of the Event Committee

OUTREACH AND COMMUNITY SERVICE

- Community Service Chair at the Auburn Chapter of MANRRS **(October 2020-October 2022)**
 - Hispanic and Latinx Heritage Month Celebration **(03 October 2022)**
 - Volunteering at The Curtis House Halloween’s event **(23 October 2021)**
 - Guiding through “Halloween Enchanted Forest” at The Kreher Preserve & Nature Center **(22 October 2021)**
 - Decoration of Our House with MANRRS **(23 November 2020)**
- Young Professionals in Training - Lee County, AL **(August 2021- October 2022)**
 - Committee member for Program development (Academic year 2022-2023)
 - Sustainability mentor for the program (August 2021- July 2022)
- Co-organizer of “*Rallying for Sustainable Communities*” with the Sustainable Bio-Based Materials Lab, MANRRS, The Curtis House, Our House – Auburn, & The Sustainability Office from Auburn University **(April 23, 2022)**
- Member-at-large of Pride on The Plains **(September 2020 – May 2021)**
 - Co-organizer of Halloween Giveaway 2020 (October 2020)

- Public Relationship Auxiliary Chair at Pride on The Plains **(January – December 2019)**
 - Float parade preparation for PRIDE 2019 (June 2019)
 - Co-organizer of the 2019 Believe Ball (March 2019)
- Volunteer at the “*Unity Wellness Center World AIDS Day 8K & 1 Mile Run/Walk*” from Unity Wellness Center **(November 9, 2019)**

SUPERVISORY AND EVALUATION DUTIES

Current:

Undergraduate Students (n = 0)

Graduate Students (n = 3)

Beatriz Herrera – Master student **(Spring 2025 – present, TTU)**; Ketzalzin Vazquez Hernandez – Master student **(Spring 2025 – present, TTU)**; Guadalupe Jasmin Cruz Barrera – Master student **(Spring 2023 – present, UAMC)**

Completed:

Undergraduate Students Supervised (n = 28)

Marisa Parker **(Summer & Fall 2023, Fall 2024, NEU)**; Joylynn Awurama Biney **(Spring 2024, NEU – UPLIFT program)**; Zoe Yu **(Spring 2024, NEU – UPLIFT program)**; Phebe Jiang **(Spring 2024, NEU – work-study)**; Molly Pombo **(Fall 2023 – Spring 2024, NEU)**; Maggie Nelson **(Spring 2021 – Spring 2024, AU)**; Aleka Gutierrez Saez **(Fall 2023, NEU)**; Kamal Kamal **(Spring 2023- Fall 2023, NEU – work-study)**; Lory Ileri Martínez Bello **(Fall 2022 – Fall 2023, UAMC)**; Vimanelly Yaneth Vazquez Cuevas **(Fall 2022 – Fall 2023, UAMC)**; Alan Zhang **(Spring 2023 – Summer 2023, NEU – REU)**; Benjamin Bradley **(Spring 2022 – Fall 2022, AU)**; Holden Lee **(Fall 2021 – Fall 2022, AU)**; Emmie Mayson **(Fall 2021 – Fall 2022, AU)**; Florence Adams **(Fall 2021 – Fall 2022, AU)**; Evelyn Pearson **(Spring 2021 – Fall 2022, AU)**; Beatriz Herrera **(Summer 2022, AU – REU)**; Laura Marhefka **(Summer 2022, AU – REU)**; Mary Keenan Nicholas **(Fall 2021 – Spring 2022, AU)**; Amanda Murph **(Fall 2021, AU)**; Samir Freij **(Summer 2021, AU)**; Gabriel Au **(Summer 2021, AU)**; Brienne Dickson **(Fall 2020 – Spring 2022, AU)**; Sydney Brake **(Fall 2020, AU)**; Cassidy Stephenson **(Fall 2019, AU)**; Autumn Marie Reynolds **(Summer & Fall 2019, Fall 2020, Spring & Summer 2021, AU)**; Jacob Bolin **(Spring 2019, AU)**

Graduate Students Supervised (n = 3)

Rachel H. Shovmer – PhD student **(Spring 2023 – Winter 2024, NEU)**; Yufei Nan - PhD **(Spring 2020 – Fall 2023, AU)**; Sydney Brake - Master **(Spring 2021 – Fall 2022, AU)**

Visiting Scholars Supervised (n = 3)

Jonathan Michel Barba Godinez **(Fall 2022, AU)**; Federico Zea Gutierrez **(Spring and Summer 2022, AU)**; Melissa Puerta **(Fall 2021, AU)**

External Theses Reader (n = 5)

Duber Esmely Garcés Martínez, **2022** (BS, Universidad Pontificia Bolivariana, Colombia); Isabel Bascon Villegas, **2022** (PhD, Universidad de Cordoba, Spain); Nicolas Lopez Marulanda, **2022** (BS, Universidad Pontificia Bolivariana, Colombia); Nataly Adriana Pulido Velandia, **2022** (BS, Universidad Pontificia Bolivariana, Colombia); Maria Jose Vallejo Martinez, **2021** (BS, Universidad Pontificia Bolivariana, Colombia).

Honors and Awards of Undergraduate and Graduate Students under my Supervision (n = 8)

- **Sydney Brake, 2022.** Auburn University Student Research Symposium, Oral Presentations, School Awards, College of Forestry and Wildlife Sciences, Graduate Student Winner
- **Brienne Dickson, 2022.** Auburn University Student Research Symposium, Oral Presentations, School Awards, College of Forestry and Wildlife Sciences, Undergraduate Student Winner.
- **Florence Adams, 2021.** SFWS Fall Dean’s List.
- **Evelyn Pearson, 2021.** SFWS Fall Dean’s List.
- **Holden Lee, 2021.** SFWS Fall Dean’s List.
- **Brienne Dickson, 2021.** Auburn Undergraduate Research Fellowship Program (Fall 2021-Spring 2022).
- **Yufei Nan, 2021.** Auburn University Student Research Symposium, Poster Presentations, School Awards, SFWS, Graduate Student Winner.
- **Autumn Marie Reynolds, 2021.** Auburn University Student Research Symposium, Oral Presentations, School Awards, SFWS, Sustainable Biomaterials & Packaging, Undergraduate Student Winner.

CONFERENCE PARTICIPATION

Symposiums Organized and Chaired (n = 15)

- Co-organizer of the technical program for the International Conference of Nanotechnology for Renewable Materials (Nano Conference 2024) in Atlanta, GA (**June 10-14, 2024**)
- Session presider for “Advances in Renewable Materials” in ACS Fall 2023 Harnessing the power of data. San Francisco, CA (**August 16, 2023**)
- Co-organizer of the technical program for the International Conference of Nanotechnology for Renewable Materials (Nano Conference 2023) in Vancouver, Canada (**June 12-16, 2023**)
- Co-organizer of the Student activities and Student panel at the International Conference of Nanotechnology for Renewable Materials in Helsinki, Finland (**June 13-17, 2022**)
- Co-organizer and chair of the Coffee Break series of TAPPI Nano Student Committee (**April 27, 2022**)
- Co-organizer committee member and presider of the Symposium “Pitch in Renewable Materials for Early Career Scientists”, ACS Spring meeting, Bonding Through Chemistry in San Diego, CA (**March 22, 2022**)
- Presider of the symposium “Converting Process Wastes to Value-Added Renewable Materials and Multiphase Systems” at ACS Spring meeting, Bonding Through Chemistry in Sand Diego, CA (**March 20, 2022**)
- Co-organizer of the Networking/Happy Hour at TAPPI Nano 2021 Virtual Conference (**June 15, 2021**)
- Presider of the session “Sustainable Packing and Antimicrobial Personal Protective Equipment” and the “Students Poster Presentation and Competition” at TAPPI Nano 2021 Virtual Conference (**June 15-16, 2021**)
- Co-organizer committee member and presider of the Symposium “Pitch in Renewable Materials for Early Career Scientists”, ACS Spring meeting, Macromolecular Chemistry: The Second Century (**April 8, 2021**)
- Presider on oral presentations at 2021 AU Student Research Symposium (**April 7, 2021**)
- Co-organizer and chair of the Coffee Break series of TAPPI Nano Student Committee (**August 26, 2020**)
- Co-organizer of the poster competition at the TAPPI Nano 2020 Virtual Conference (**July 21-23, 2020**)
- Co-organizer of the Coffee Break series of the TAPPI Nano Student Committee (**May 28, 2020**)
- Organizer committee member of the Symposium “Pitch in Renewable Materials for Early Career Scientists”, 257th American Chemical Society (ACS), National Meeting and Exposition, Philadelphia, PA. (**March 25, 2020**)

Poster Presentations Judged (n = 5)

- Judge at the Bioengineering (Division 15) Poster Session at AIChE, Orlando, FL (**November 6, 2023**)
- Judge at the poster’s session of the Student Research Seminar, Auburn University, Auburn, AL (**March 28, 2022**)
- Judge at the poster’s session of the Council of Engineering Graduate Students, Auburn University, Auburn, AL (**October 28, 2021**)
- Judge at the poster’s session of the Student Research Seminar, Auburn University, Auburn, AL (**April 9, 2019**)
- Judge at the poster’s session, 256th American Chemical Society (ACS), National Meeting and Exposition, Orlando, FL. (**March 31 – April 4, 2019**)

Invited Presentations and Keynote Lectures (n = 6)

- Coffee Break from the TAPPI Nano Division Student Committee. **21 March 2024**. Online talk ([Event link](#)).
- “Polysaccharide Assemblies for Environmental Remediation” Charla magistral 6 in Congreso de Investigación en Materiales y Aplicaciones. **18 November 2022**. Universidad de San Francisco, Quito, Ecuador
- “Nanocellulose: Characteristics and Applications”. **07 Apr 2022**. Physics and Chemistry of Polymers Class. Universidad Autonoma Metropolitana, Mex.
- “How Diversity and Inclusion Can Help Move Sustainability and STEM Forward”. EDII Workshop. **14 February 2022**. BioProducts Institute, University of British Columbia. Recording available at <https://events.ubc.ca/event/how-diversity-and-inclusion-can-help-move-sustainability-and-stem-forward>.
- “Development of Bio-based Systems”. **04 May 2021**. Physics and Chemistry of Polymers Class. Universidad Autonoma Metropolitana, Mex.
- “Professionals Roundtable”, Semana de Ingenieria Biológica. **2018**. Universidad Autonoma Metropolitana, Mex.

Oral Presentations (n = 55)

- Nelson, M.; **Gomez-Maldonado, D.**; Peresin, M.S.; Mailen, R.W. **2024**. Multifunctional Coating Development for Oxygen Generation in Built Space Environments. At Track 3: Materials in ASME's 2nd Annual Aerospace Structures, Structural Dynamics, and Materials Conference (SSDM). April 29 – May 1, 2024. Renton, WA.
- Restrepo-Osorio, A.; Puerta, M.; **Gomez-Maldonado, D.**; Peresin, M.S. **2024**. Composite cryogels from silk fibroin and

nanofibrillated cellulose: Effect of processing parameters on self-assembly and properties. In Environmentally Sustainable Materials and Technologies Based on Renewable Resources at the ACS Spring Meeting 2024 Many Flavors of Chemistry. 20 March 2024. New Orleans, LA.

- Bello, F.; Ponce, S.; **Gomez-Maldonado, D.**; Peresin, M.S. **2024**. Pectin-hemicellulose-nanolignin films with improved UV-barrier, moisture resistance and antioxidant properties. In Environmentally Sustainable Materials and Technologies Based on Renewable Resources at the ACS Spring Meeting 2024 Many Flavors of Chemistry. 19 March 2024. New Orleans, LA.
- Peresin, M.S.; Nan, Y.; Mayson, E.; Li, M.; Zhang, K.; **Gomez-Maldonado, D.** **2024**. Nanocellulose-based Sustainable 3-D Structural Adsorbents for Environment Remediation. In Anselme Payen Award Symposium: From Cellulose and Biopolymers to Nanomaterials: Preparation, Structure, and Properties at the ACS Spring Meeting 2024 Many Flavors of Chemistry. 19 March 2024. New Orleans, LA.
- Plaza, N.; Restrepo-Osorio, A.; **Gomez-Maldonado, D.**; Peresin, M.S.; Hunt, C. **2024**. Elucidating the Role of Hierarchical Structure of Soy Proteins in Adhesive Wet Strength. In Emerging Applications of Bio-Based Materials and Systems: Food and Environmental Applications at the ACS Spring Meeting 2024 Many Flavors of Chemistry. 18 March 2024. New Orleans, LA.
- Nan, Y.; **Gomez-Maldonado, D.**; Peresin, M.S. **2024**. Investigating interaction mechanisms between cellulose-polyethylenimine hydrogels and methyl blue dyes. In Cellulose and Other Carbohydrate Materials for Water and Air Purification. ACS Spring Meeting 2024 Many Flavors of Chemistry. 17 March 2024. 17 March 2024. New Orleans, LA, USA.
- Martínez Bello, L.I.; Vazquez Cuevas, V.Y.; **Gomez-Maldonado, D.**; Hernández-Guerrero, M. **2023**. Análisis de Necesidades de la Industria Alimentaria en Términos de Empaques y Posibilidades de Uso de Bioplásticos en Latinoamérica. At the V Simposio de las Licenciaturas y del Posgrado. 28 November, Cuajimalpa, Mexico City, MX.
- Amit, S.K.; **Gomez-Maldonado, D.**; Bish, B.; Peresin, M.S.; Davis, V.A. **2023**. Aptes-Molecularly Imprinted Polymer Modified Cellulose Nanocrystals for Carbofuran Detection. In Cellulose Nano Materials - Crystalline, Fibrous, Gels, Films and Foams for Broad Applications in Medical, Energy and the Environment from the Forest and Plant Bioproducts Division at the 2023 AIChE Annual Meeting. 7 November 2023. Orlando, FL.
- **Gomez-Maldonado, D.**; Yazdani, N.; Willits, R. **2023**. Polyethylene Glycol Microgel-Based Hydrogels for Neural Stem Cell Growth. In Regenerative Engineering Society II at the 2023 AIChE Annual Meeting. 6 November 2023. Orlando, FL.
- Cruz-Barrera, G.; Viguera-Ramírez, G.; **Gomez-Maldonado, D.**; Hernández-Guerrero, M. **2023**. Nanopapel de Celulosa Bacteriana con Potencial Aplicación en Ingeniería Energética. ID: CIE2023-073. 5° Congreso Internacional de Energía 2023. 22 September 2023. Zacatecas, Mx.
- López-Simeon, R.; **Gomez-Maldonado, D.**; Campos-Terán, J.; Hernández-Guerrero, M. **2023**. Incorporating Cellulose Isolated from Algae Residues into Polystyrene-based Honeycomb Structured Membranes. In Emerging Technologies and Applications of (Nano)Cellulose at ACS Fall 2023, Harnessing the power of data. 17 August 2023. San Francisco, CA. *presenter*
- **Gomez-Maldonado, D.**; Yazdani, N.; Zhang, A.; Willits, R. **2023**. Property tuning of PEG microgel-based hydrogels for neural tissue. In Sustainable Engineering and Nanofabrication of Polymers: Sustainable Polymers at ACS Fall 2023, Harnessing the power of data. 16 August 2023. San Francisco, CA
- **Gomez-Maldonado, D.**; Zea, F.; Plaza, N.Z., Houtman, C, Peresin, M.S.; Restrepo-Osorio, A. **2023**. Developing self-standing nanostructured silk fibroin films by spin coating processing and alcohol post treatment. In Advances in Renewable Materials at ACS Fall 2023, Harnessing the power of data. 15 August 2023. San Francisco, CA
- Phillips, S.; Ganji, N.; **Gomez-Maldonado, D.**; Vaidya, S.; Peresin, M.S.; White, J.; Fairbrother, H. **2023**. Gas-phase hydrophobic functionalization of glucose biopolymers for controlled nutrient release. In Materials Development to Address Environmental and Sustainability Challenges: Separation Chemistry/Agrochemistry at ACS Fall 2023, Harnessing the power of data. 13 August 2023. San Francisco, CA
- Cruz-Barrera, G.; **Gomez-Maldonado, D.**; Viguera-Ramírez, G.; Hernández-Guerrero, M. **2023**. Obtención de membranas de celulosa bacteriana con medios de cultivo estandarizados, no estandarizados y enriquecidos: análisis de rendimiento y características físicas. XIV Congreso Internacional de Docencia e investigación en Química. 6 July 2023. Mexico City, Mx.
- Nelson, M.; **Gomez-Maldonado, D.**; Peresin, M.S.; Mailen, R.W. **2023**. Photocatalytic pickering emulsion for coating applications in built space environments. In CPAC Summer Seminar Series at Auburn University. 27 June 2023. Auburn, AL.
- **Gomez-Maldonado, D.**; Zhang, A.; Yazdani, N.; Willits, R.K. **2023**. Characterization of PEG microgel-based hydrogels for tissue engineering. In Future Smart Materials Systems 2: Bioinspired and Biomimetic Materials (Lightning talk) at Northeastern Regional Meeting 2023 American Chemical Society - Chemistry: Crossing Intersections. June 15, 2023. Boston, MA.

- Araujo Legarda, J. C.; Restrepo-Osorio, A.; Peresin, M.S.; **Gomez-Maldonado, D.** 2023. Evaluación de Esponjas de Fibroina de Seda y Nanocelulosa. Programación V Encuentro Interno de Semilleros de Investigación. March 21-24. Medellín, Colombia and Virtual <https://www.youtube.com/watch?v=kc4QwlGrDzk>
- **Gomez Maldonado, D.**, Peresin, M.S. 2023. Cellulose beads composite-hydrogel systems for water remediation. In Celebrating Scientific & Engineering Research of Minority Chemists that Address the Grand Challenges of the 21st Century (Invited) at Spring meeting 2023 American Chemical Society Crossroads of Chemistry. March 27, 2023. Indianapolis, IN. *Invited Speaker* based on my work in regenerated cellulose and DEI efforts.
- Peresin, M.S.; **Gomez-Maldonado, D.**; Nan, Y. 2023. Natural polymer assemblies and their potential to alleviate global issues of environmental concern. In Biorefinery at the Crossroads at Spring meeting 2023 American Chemical Society Crossroads of Chemistry. March 28, 2023. Indianapolis, IN.
- Nan, Y.; **Gomez-Maldonado, D.**; Peresin, M.S. 2023. Polyethyleneimine (PEI) functionalized graphene oxide (GO)-TEMPO oxidized Cellulose nanofiber (COOH-CNF) composite hydrogel for removal of multiple water pollutants. In Addressing Environmental and Social Challenges with Engineered Renewable Materials at Spring meeting 2023 American Chemical Society Crossroads of Chemistry. March 29, 2023. Indianapolis, IN.
- Brake, S., **Gomez-Maldonado, D.**, Hummel, M., King, A., Zohdy, S., & Peresin, M.S. 2023. Sustainable alternative materials for long-lasting insecticide nets: interfacial interactions and insecticides stability in regenerated cellulose processing conditions. 2023 American Chemical Society. March 23, 2023. Indianapolis, IN.
- Amit, S.K.; **Gomez-Maldonado, D.**, Peresin, M.S., Davis, V.A. 2022. Hydrolytically stable films from 3-aminopropyl triethoxysilane (APTES) modified cellulose nanocrystals. In Chemical Modifications and Processing of Biomaterials II – 2022 AIChE Annual Meeting: Powering the Future at Phoenix, AZ, November 17, 2022
- Phillips, S., Deline, A., Sommerkamp, S., Peresin, M.S., **Gomez-Maldonado, D.**, Borgotta, J., White, J., Fairbrother, H. 2022. Hydrophobic functionalization of glucose polymers for nutrient release. In Environmental Chemistry & Polymer Science: Convergence at the Interface. ACS Fall 2022 Sustainability in a Changing World at Chicago, IL, August 21-25, 2022.
- Amit, S.K.; **Gomez-Maldonado, D.**, Peresin, M.S., Davis, V.A. 2022. Properties and applications of APTES modified cellulose nanocrystals. In Advances in Renewable Materials: Advances in Renewables – D. ACS Fall 2022 Sustainability in a Changing World at Chicago, IL, August 21-25, 2022.
- Amit, S.K., **Gomez-Maldonado, D.**, Ashurst, W.R., Peresin, M.S., Davis, V.A. 2022. Cellulose Nanocrystals: A Versatile Platform for the Detection of Allergens and Emerging Contaminants. Nanoscale Science and Engineering for Agriculture and Food Systems, Gordon Research Conference, June 19-24, 2022, Manchester, NH
- **Gomez Maldonado, D.**, Reynolds, A.M., Babu, R.J., Waters, M. N., Peresin, M.S. 2022. Use of β -cyclodextrin grafted chitosan immobilized onto delignified wood as an adsorbent in water remediation. TAPPI Nano Conference, June 13-17, 2022, Helsinki, Finland
- Peresin, M.S., Amit, S.K., **Gomez-Maldonado, D.**, Davis, V.A. 2022. Cellulose Nanocrystals for Adsorption and Sensing Applications. TAPPI Nano Conference, June 13-17, 2022, Helsinki, Finland
- Dickson, B.; Au, G.; **Gomez-Maldonado, D.**; Higgins, B.; Peresin, M.S. 2022. The antimicrobial efficacy of nanocellulose hydrogel-silver nanoparticle systems composed from different raw materials. In Student Research Symposium 2022 at Auburn University. Auburn, AL, March 28, 2022.
- Amit, S.K.; **Gomez-Maldonado, D.**; Peresin, M.S.; Davis, V. 2022. Detection of Water Contaminant and Food Allergen with Antibody Immobilized Cellulose Nanocrystals. In Student Research Symposium 2022 at Auburn University. Auburn, AL, March 28, 2022.
- Brake, S.; **Gomez-Maldonado, D.**; & Peresin, M.S. 2022. Surface Interactions of Common Insecticide Systems on Model Films Using Quartz Crystal Microbalance with Dissipation Monitoring (QCM-D) and Surface Plasmon Resonance (SPR). In Student Research Symposium 2022 at Auburn University. Auburn, AL, March 28, 2022.
- Nan, Y.; **Gomez-Maldonado, D.**; Iglesias, M.C.; & Peresin, M.S. 2022. Nanocellulose-based composites for removal methyl blue dyes in water. In Student Research Symposium 2022 at Auburn University. Auburn, AL, March 28, 2022.
- Brake, S.; **Gomez-Maldonado, D.**; & Peresin, M.S. 2022. Study on Surface Interactions of Pyrethroids on Model Surface Films Using Quartz Crystal Microbalance with Dissipation Monitoring (QCM-D) and Surface Plasmon Resonance (SPR). In Addressing Environmental and Social Challenges with Engineered Renewable Materials at Spring meeting 2022 American Chemical Society. San Diego, March 23, 2022.
- Nan, Y.; **Gomez-Maldonado, D.**; & Peresin, M.S. 2022. TEMPO cellulose nanofiber-based hydrogels for removal of methyl blue dyes in water. In Addressing Environmental and Social Challenges with Engineered Renewable Materials at Spring meeting 2022 American Chemical Society. San Diego, March 22, 2022.

- **Gomez-Maldonado, D.,** Reynolds, A.M., Burnett, D., Babu, J.R., Waters, M.N., & Peresin, M.S. **2022.** Delignified wood coated with cyclodextrin grafted chitosan as strategy for the removal of microcystin-LR. In Addressing Environmental and Social Challenges with Engineered Renewable Materials at Spring meeting 2022 American Chemical Society. San Diego, March 22, 2022.
- **Gomez-Maldonado, D.,** Reynolds, A.M., Babu, J.R., Waters, M.N., & Peresin, M.S. **2021.** Using cyclodextrin grafted chitosan as coating of delignified wood aerogels for the removal of microcystin-LR. In Engineering Solutions for Social Challenges: Renewable Materials and Resources at Southeastern Regional Meeting 2021 American Chemical Society. November 13, 2021. *Invited speaker.*
- Nan, Y., **Gomez-Maldonado, D.,** Whitehead, D., & Peresin, M.S. **2021.** Cellulose nanofiber-based hydrogel for removal methyl blue dyes in water resources. In Engineering Solutions for Social Challenges: Renewable Materials and Resources at Southeastern Regional Meeting 2021 American Chemical Society. November 13, 2021.
- Brake, S., **Gomez-Maldonado, D.,** Zohdy, S., & Peresin, M.S. **2021.** On the Road to Developing Sustainable Alternative Materials for Long-lasting Insecticide Nets: Cellulose-based Insecticidal Fiber Yarn for Malaria Control. In Engineering Solutions for Social Challenges: Renewable Materials and Resources at Southeastern Regional Meeting 2021 American Chemical Society. November 13, 2021.
- Reynolds, A.M., **Gomez-Maldonado, D.,** Ramapuram, J.B., Waters, M.N., Peresin, M.S. **2021.** Delignified wood aerogel as scaffolds coated with chitosan-cyclodextrin co-polymer for removal of microcystin-LR, ACS Spring 2021 Macromolecular chemistry: the second century, April 5-16, virtual at <https://acs.digitellinc.com/acs/live/8/page/18.com>.
- **Gomez-Maldonado, D.,** Vega Erramuspe, I.B., Filpponen, I., Johansson, L.-S., Ramapuram, J.B., Waters, M.N., Peresin, M.S. **2021.** Oriented β -cyclodextrin/chitosan polymer as an active coating on 2D and 3D nanocellulose surfaces and its efficiency in microcystin-LR capture, ACS Spring 2021 Macromolecular chemistry: the second century, April 5-16, virtual at <https://acs.digitellinc.com/acs/live/8/page/18.com>.
- Reynolds, A.M., **Gomez-Maldonado, D.,** Ramapuram, J.B., Waters, M.N., Peresin, M.S. **2021.** Cost efficient functionalized bio-based aerogels for microcystin L-R removal from surface water, 2021 AU Student Research Symposium, March 29-April 2, virtual at <https://auburn.app.box.com/s/0cmadgkk3wmqc61btxuj11tly2dek8me>. *School Undergraduate presentation award*
- **Gomez-Maldonado, D.,** Vega Erramuspe, I.B., Filpponen, I., Johansson, L.-S., Ramapuram, J.B., Waters, M.N., Peresin, M.S. **2021.** Bio-based active coatings for 2D and 3D nanocellulose surfaces and its efficiency in microcystin-LR capture, 2021 AU Student Research Symposium, March 29-April 2, virtual at <https://auburn.app.box.com/s/0cmadgkk3wmqc61btxuj11tly2dek8me>.
- **Gomez-Maldonado, D.,** Lombardo, S., Vega Erramuspe, I. B., Filpponen, I., Thielemans, W., Peresin, M. S. **2019.** Nanocellulose/ β -cyclodextrin polymer design for adsorption of microcystin-LR. 2019 Auburn Research Student Symposium, April 9, Auburn University, Alabama, US
- Nori, U. M., **Gomez-Maldonado, D.,** Peresin, M.S., Davis, V. **2019.** Synthesis of unique surface functionalized cellulose nanocrystals and their applications in cancer cell detection. 2019 Auburn Research Student Symposium, April 9, Auburn University, Alabama, US
- Vega Erramuspe, I. B., **Gomez-Maldonado, D.,** Filpponen, I., Auad, M.L., Peresin, M.S. **2019.** Propargylation and azidation of chitosan-cellulose pearls as a template for clickable substrates. Valorization of Renewable Resources & Residuals into New Materials & Multiphase Systems, 257th American Chemical Society National Meeting & Exposition, March 31- April 4, Orlando, Florida, US
- **Gomez-Maldonado, D.,** Saha, P., Nori, U.M., Ashurst, W.R., Peresin, M.S., Davis, V. **2019.** Preparation of cellulose nanocrystal sensors for antibody-antigen binding of model cancer biomarkers. Wood-Based Polymers: From Functional Structures to Applications, 257th American Chemical Society National Meeting & Exposition, March 31- April 4, Orlando, Florida, US
- **Gomez-Maldonado, D.,** Lombardo, S., Vega Erramuspe, I.B., Filpponen, I., King, A., Thielemans, W., Peresin, M.S. **2019.** Enhance adsorption of microcystin-LR on nanocellulose/ β -cyclodextrin polymer surfaces. Wood-Based Polymers: From Functional Structures to Applications, 257th American Chemical Society National Meeting & Exposition, March 31- April 4, Orlando, Florida, US
- Vaquero-Hernández, D., Francisco-Solano, E., **Gomez-Maldonado, D.,** Beltrán, N., Campos-Terán, J. **2019.** Alginate-chitosan scaffolds modified by gold nanoparticles for cardiac tissue engineering. Bio-Based Gels & Porous Materials, 257th American Chemical Society National Meeting & Exposition, March 31- April 4, Orlando, Florida, US
- **Gomez-Maldonado, D.,** Vega Erramuspe, I.B., Filpponen, I., Peresin, M.S. **2018.** Cellulose-based material for removal of microcystin from contaminated water sources. Bays & Bayous 2018 'Navigating waves of change', November 28-29, Mobile, AL, US

- **Gomez-Maldonado, D.**, Sanchez, D., Castro, C., Peresin, M.S. 2018. Vitamin B Complex Encapsulated on Bacterial Nanocellulose: A Model Study on Adsorption and Controlled Delivery System. **2018**. International Conference on Nanotechnology for Renewable Materials, June 11-14, Madison, Wisconsin, US
- **Gomez-Maldonado, D.**, Hornus, M., Vega Erramuspe, I. B., Filpponen, I., Wilson, A., Waters, M., Peresin, M. S. **2018**. Cellulose-based material for removal of microcystin from contaminated water sources. Forest Products Society 72nd International Convention, June 11-14, Madison, Wisconsin, US
- **Gomez-Maldonado, D.**, Lopez-Simeon, Topete Camacho, A., Campos-Teran, J. **2018**. Study of biopolymeric hydrogel interactions with photodynamic systems. Valorization of Renewable Resources & Residuals into New Materials & Multiphase Systems, 255th American Chemical Society National Meeting & Exposition, March 18, New Orleans, Louisiana, US
- **Gomez-Maldonado, D.**, Lopez-Simeon, Topete Camacho, A., Campos-Teran, J. **2017**. Adsorption and viscoelastic studies of gold Nanoparticles (NP_{Au}) and Bovine Serum Albumin (BSA) complexes at chitosan-alginate-cellulose films. Valorization of Renewable Resources & Residuals into New Materials & Multiphase Systems, 253rd American Chemical Society National Meeting & Exposition, April 2, San Francisco, California, US
- **Gomez-Maldonado, D.**, Lopez-Simeon, Iñárritu, I., Topete Camacho, A., Campos-Teran, J. **2016**. Study of interactions of hydrogels of cellulose, alginate, chitosan with photodynamic nanoparticles (Estudio sobre interacciones de hidrogeles de celulosa, alginato, quitosano con nanopartículas fotodinámicas). III Symposium of the Graduate Program in Natural Science and Engineering (III Simposio del Posgrado en Ciencias Naturales e Ingeniería), September 13, Universidad Autónoma Metropolitana, Cuajimalpa, Mexico City, Mx
- **Gomez-Maldonado, D.**, Lopez-Simeon, Iñárritu, I., Topete Camacho, A., Campos-Teran, J. **2016**. Adsorption of gold nanoparticles (NP_{Au}) and bovine serum albumin (BSA) complexes in algae cellulose films. Valorization of Renewable Resources & Residuals into New Materials & Multiphase Systems, 251st American Chemical Society National Meeting & Exposition, March 14, San Diego, California, US
- **Gomez-Maldonado, D.**, Lopez-Simeon, Topete Camacho, A., Campos-Teran, J. **2015**. Study of nanoparticles-protein conjugates and their interactions with surfaces (Estudio sobre conjugados de nanopartículas-proteínas y sus interacciones con superficies). First Symposium of the Bachelors of the Natural Science and Engineering Division (1er Simposio de las Licenciaturas de la División de Ciencias Naturales e Ingeniería), June 11. Universidad Autónoma Metropolitana, Cuajimalpa, Mexico city, MX

Poster Presentations (n = 35)

- Plaza, N.; Restrepo-Osorio, A.; **Gomez-Maldonado, D.**; Peresin, M.S.; Hunt, C. **2024**. Elucidating the Role of Hierarchical Structure of Soy Proteins in Adhesive Wet Strength. In SciMix poster session at the ACS Spring Meeting 2024 Many Flavors of Chemistry. 17 March 2024. New Orleans, LA, USA.
- Martínez Bello, L.I.; Vazquez Cuevas, V.Y.; **Gomez-Maldonado, D.**; Hernández-Guerrero, M. **2023**. Análisis de Necesidades de la Industria Alimentaria en Términos de Empaques y Posibilidades de Uso de Bioplásticos en Latinoamérica. In Poster session at the V Simposio de las Licenciaturas y del Posgrado. 29 November. Cuajimalpa, Mexico City, MX.
- **Gomez-Maldonado, D.** **2023**. Bio Soft Materials for Advance Applications. In Meet the Faculty and Post-Doc Candidates Poster Session at the 2023 AIChE Annual Meeting. 5 November 2023. Orlando, FL.
- **Gomez-Maldonado, D.**; Yazdani, N.; Zhang, A.; Willits, R.K. **2023**. Tailoring polyethylene glycol microgel properties for understanding neural cell processes. In Chemical Engineering Research Showcase at Northeastern University. September 19, 2023. Boston, MA. *1st prize postdoctoral competition*
- Shovmer, R.; **Gomez-Maldonado, D.**; Willits, R.K. **2023**. Impact of transcorneal electrical stimulation (TES) on a mice model of glaucoma. In Chemical Engineering Research Showcase at Northeastern University. September 19, 2023. Boston, MA. *People's choice award*
- López-Simeon, R.; **Gomez-Maldonado, D.**; Campos-Terán, J.; Hernández-Guerrero, M. **2023**. Incorporating cellulose isolated from algae residues into polystyrene-based honeycomb structured membranes. In SciMix poster session at ACS Fall 2023, Harnessing the power of data. 14 August 2023. San Francisco, CA.
- Zhang, A.; **Gomez-Maldonado, D.**; Willits, R.K. **2023**. Fabrication and characterization of amine-functionalized poly(ethylene glycol) microgels. In Poster Session 4 at Northeastern Regional Meeting 2023 American Chemical Society - Chemistry: Crossing Intersections. June 16, 2023. Boston, MA.
- **Gomez-Maldonado, D.**; Zhang, A.; Yazdani, N.; Willits, R.K. **2023**. Characterization of PEG microgel-based hydrogels for tissue engineering. In Poster Session 3 at Northeastern Regional Meeting 2023 American Chemical Society - Chemistry: Crossing Intersections. June 15, 2023. Boston, MA.

- Martínez Bello, L.I.; Vázquez Cuevas, V.Y.; **Gomez-Maldonado, D.**; Hernández-Guerrero, M. **2022**. ¿Sabes cuáles son los plásticos que más usas? Infographic session in the 5th week of Biological Engineering. December 1, Cuajimalpa, Mexico City, MX.
- Nan, Y., **Gomez-Maldonado, D.**, Peresin, M.S. **2022**. TEMPO oxidized nanofibrillated cellulose (CNF) /polyethylenimine (PEI) composite hydrogels for dyes removal from water. In ACS Fall 2022 Sustainability in a Changing World at Chicago, IL, August 21-25, 2022.
- McCallum, G., Nelson, M.; **Gomez-Maldonado, D.**, Peresin, M.S., Mailen, R. **2022**. Biopolymeric coating for photosynthetic optimization in space travel. In Student Research Symposium 2022 at Auburn University. Auburn, AL, March 28, 2022.
- Zea F.; Siwakoti, M.; **Gomez-Maldonado, D.**; Restrepo-Ososrio, A.; Mailen, R.; Hunt, C.G.; Peresin, M.S. **2022**. A fundamental study of soybean protein isolates (SPI) structures upon thermal processing. In Student Research Symposium 2022 at Auburn University. Auburn, AL, March 28, 2022.
- Nan, Y., **Gomez-Maldonado, D.**, Peresin, M.S. **2021**. Natural polymer-based nanocomposites for water remediation. Poster session 2021, School of Forestry and Wildlife Science, Auburn University, AL. July 13
- Brake, S., **Gomez-Maldonado, D.**, Zohdy, S., Peresin, M.S. **2021**. Cellulose-based Insecticidal Fiber Yarn for Malaria Control: A Sustainable Alternative to Long-lasting Insecticide Nets. Poster session 2021, School of Forestry and Wildlife Science, Auburn University, AL. July 13
- Au, G., **Gomez-Maldonado, D.**, Peresin, M.S. **2021**. Biosensing and Antimicrobial Applications of Biomaterials. Poster session 2021, School of Forestry and Wildlife Science, Auburn University, AL. July 13
- **Gomez-Maldonado, D.**, Peresin, M.S. **2021**. Understanding the surface phenomena for advanced materials. Poster session 2021, School of Forestry and Wildlife Science, Auburn University, AL. July 13
- Nan Y., **Gomez-Maldonado, D.**, Peresin, M.S. **2021**. Polyethyleneimine functionalized cellulose nanofiber hydrogel as an efficient adsorbent for toxic dyes removal from wastewater. 2021 AU Student Research Symposium, March 29- April 2, virtual at <https://auburn.app.box.com/s/0cmadgkk3wmqc61btuxj11tly2dek8me>. *School Graduate poster presentation award*
- **Gomez-Maldonado, D.**, Vega Erramuspe, I. B., Filpponen, I., Johansson, L. S., Lombardo, S., Zhu, J., Thielemans, W., & Peresin, M. S. **2020**. Cellulose-Cyclodextrin Co-Polymer for the Removal of Cyanotoxins on Water Sources. TAPPI Nano 2020 Virtual Conference, July 21-23. <https://www.tappinano.org/conferences/tappi-nano-2020-virtual-conference/>
- **Gomez-Maldonado, D.**, Vega Erramuspe, I.B., Filpponen, I., Johansson, L.-S., Waters, M.N., Peresin, M.S. **2020**. Design of Oriented β -cyclodextrin/chitosan co-polymer and its adsorption on nanocellulose surfaces as an active coating for molecule capture. Auburn Research: Virtual Student Symposium, June, <https://auburn.app.box.com/s/jm1sig4h5ilv87x3xit0entmzja52ajt>
- Camarano Eula, M. A., Stephens, H., Vega Erramuspe, I. B., **Gomez-Maldonado, D.**, Sutcliffe, A. C., Dotson, E. M., Peresin, M. S., Zohdy, S. **2019**. Ink-jet printable malaria surveillance: a sustainable, cost effective circumsporozoite detection assay. TropMed19 Annual Meeting of the American Society of Tropical Medicine and Hygiene, November 20-24, National Harbor, MD, USA
- Stephens, H., Camarano Eula, M. A., Vega Erramuspe, I. B., **Gomez-Maldonado, D.**, Sutcliffe, A. C., Dotson, E. M., Peresin, M. S., Zohdy, S. **2019**. Malaria surveillance on paper: a cost-effective, field-adaptable Plasmodium circumsporozoite ELISA. TropMed19 Annual Meeting of the American Society of Tropical Medicine and Hygiene, November 20-24, National Harbor, MD, USA
- **Gomez-Maldonado, D.**, Reynolds, A. M., Johansson, L-S., Waters, M., Vega Erramuspe, I.B., Peresin, M. S. **2019**. Fabrication of aerogels from β -cyclodextrin grafted-cellulose nanofibrils for capture of microcystin-LR for water remediation. Graduate Research Symposium, School of Forestry and Wildlife Science, Auburn University, Auburn, AL, USA
- **Gomez-Maldonado, D.**, Vega Erramuspe, I. B., Filpponen, I., Waters, M., Peresin, M. S. **2019**. Oriented β -cyclodextrin/Chitosan polymer adsorption on nanocellulose surfaces and its use on capture of microcystin-LR. This is Research: Student Symposium 2019, April 9, Auburn University Alabama, USA
- **Gomez-Maldonado, D.**, Vega Erramuspe, I. B., Filpponen, I., Peresin, M. S. **2019**. Development of cellulose-based materials for capture of microcystin-LR from analytical water sources. SESAF 2019 Annual Meeting “Managing Natural Resources at the Speed of Change”, January 27-29, Mobile, Alabama, USA *First place poster award*.
- **Gomez-Maldonado, D.**, Sánchez, D., Castro, C., Peresin, M. S. **2018**. Vitamin B complex encapsulated on bacterial nanocellulose: A model study on adsorption and controlled delivery system. This is Research: Student Symposium 2018, March 26, Auburn University Alabama, USA. *College poster Award*.

- **Gomez-Maldonado, D.**, Hornus, M., Vega Erramuspe, I. B., Filpponen, I., Wilson, A., Waters, M., Peresin, M. S. **2018**. Cellulose-based material for removal of microcystin from contaminated water sources. This is Research: Student Symposium 2018, March 26, Auburn University Alabama, USA
- **Gomez-Maldonado, D.**, Hornus, M., Vega Erramuspe, I. B., Filpponen, I., Wilson, A., Waters, M., Peresin, M. S. **2018**. Cellulose-cyclodextrin co-polymer for removal of microcystin on water remediation. General Poster Session. 255th American Chemical Society National Meeting & Exposition, March 18-22, New Orleans, Louisiana, USA
- **Gomez-Maldonado, D.**, Lopez Simeon, R., Topete Camacho, A., Campos Terán, J. **2017**. Study of biopolymeric hydrogel interactions with photodynamic systems. IV Symposium of the Graduate Program in Natural Science and Engineering (IV Simposio del Posgrado en Ciencias Naturales e Ingeniería), September 14, Universidad Autonoma Metropolitana, Cuajimalpa, Mexico City, Mx
- **Gomez-Maldonado, D.**, Hernández Castillo, J. R., Beltrán, N. E., Lopez Simeon, R., Topete Camacho, A., Campos Terán, J. **2016**. Study of the surface modification of alginate-chitosan hydrogels for tissue engineering (Estudio sobre modificación superficial de hidrogeles de alginato-quitosano para ingeniería de tejidos). Seventh Meeting of the Mexican Society of Tissue Engineering (7ma Reunión de la Sociedad de Ingeniería de Tejidos de México), Instituto Nacional de Rehabilitación (INR), September 9, Mexico City, Mx
- Hernandez-Castillo, J. R., **Gomez-Maldonado, D.**, Gonzalez de la Rosa, C. H., Arechaga, E., Hernandez Guerrero, M., Beltran-Vargas, N. E. **2016**. Alginate chitosan surfaces for cardiac cell culture. 38th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'16), August 17, Orlando, Florida, USA
- **Gomez-Maldonado, D.**, Hernandez Martinez, I., Betrán, N.E. **2014**. Cardiomyocyte implant as treatment of heart attack (Implante de Cardiomiocitos como Tratamiento al Infarto Isquémico). Second Week of Biological Engineering (2da Semana de Ingeniería Biológica), June 10-12, Universidad Autonoma Metropolitana, Cuajimalpa, Mexico city, Mx
- **Gomez-Maldonado, D.**, Hernandez Martinez, I., Betrán, N.E. Campos Terán, J. **2014**. Polymethylmetacrilate (PMMA) for the fabrication of artificial cornea (El Polimetilmetacrilato (PMMA) para Fabricación de Córneas Artificiales). Second Week of Biological Engineering (2da Semana de Ingeniería Biológica), June 10-12, Universidad Autonoma Metropolitana, Cuajimalpa, Mexico city, Mx
- Bautista, M., **Gomez-Maldonado, D.**, Hernandez Martinez, I., López, A., Betrán, N.E. **2014**. Factors that affect the medium arterial pressure of the students of UAM-C (Factores que afectan la presión arterial media en los alumnos de la UAM-C). Second Week of Biological Engineering (2da Semana de Ingeniería Biológica), June 10-12, Universidad Autonoma Metropolitana, Cuajimalpa, Mexico city, Mx
- **Gomez-Maldonado, D.** **2012**. Who makes whom: society makes materials or materials make the society? (¿Quién hace a quien: la sociedad a los materiales o los materiales a la sociedad?). First Week of Biological Engineering (1ª Semana de Ingeniería Biológica), May 28-30, Universidad Autónoma Metropolitana, Cuajimalpa, Mexico city, Mx
- **Gomez-Maldonado, D.** **2012**. A replacement for petroleum plastics: polylactate (PLA) (Un reemplazo para los plásticos derivados del petróleo: el polilactato (PLA)). First Week of Biological Engineering (1ª Semana de Ingeniería Biológica), May 28-30, Universidad Autónoma Metropolitana, Cuajimalpa, Mexico city, Mx

INTERNATIONAL AND STUDY ABROAD

- Department of Bioproducts and Biosystems, School of Chemical Engineering, Aalto University, Finland. (**May-June 2017**). (2 months research stay) Use of SPR for multilayer analysis as part of the experimental part for Master Thesis “Study of biopolymeric hydrogel interactions with photodynamic systems.”
Advisor: Orlando Rojas
- CultureWorks ESL, London, Ontario, Canada. (**August 2015**)
A Summer in Canada Program at King’s University College, Western University
- Academic Exchange in Bioengineering (**July 2014 – January 2015**)
Universidad de Mendoza, Mendoza, Argentina

CONTINUOUS EDUCATION

- ACS Reviewer Lab. American Chemical Society. Virtual course. **September 27, 2023**.
- Career Development and Inclusive Leadership Workshop, University of Washington Institute of Stem Cell and Regenerative Medicine. UW Medicine South Lake Union, Seattle, Washington. April 24-25, **2023**
- Building Racial & Cultural Literacy by Academic Impressions with Northeastern University. **November 8, 2022**. Online training.
- Protein Adhesives Workshop by Christopher Hunt at Forest Products Lab, Forest Service. **August 8-12, 2022**. Madison, Wisconsin, US

- Biomedical Science Responsible Conduct of Research training by The Collaborative Institutional Training Initiative (CITI Program). **January 2021**, Virtual training
- CNM Characterization Workshop – Primary Characterization by Robert Moon, TAPPI. At International Conference on Nanotechnology for Renewable Materials, **June 11, 2018**. Madison, Wisconsin, US
- Summer School: “Surface Plasmon Resonance in Life Sciences”. Organized by University of Tampere and BioNavis Ltd, University of Tampere. **May 29th – June 2nd, 2017**, Tampere, Finland
- Didactic: unlearn to learn-teach (Didáctica: desaprender para enseñar-aprender). Organized by Direction of the Program “Academic Support between Students”, Universidad Autonoma Metropolitana, **December 12 – 14, 2016**, Cuajimalpa, Mexico City, Mx
- Microteaching (Taller de Microenseñanza). Universidad Autonoma Metropolitana, **October 10 – 14, 2016**, Cuajimalpa, Mexico City, Mx
- Teaching abilities for students in b-learning (Taller de habilidades docentes para alumnos en modalidad mixta). Universidad Autonoma Metropolitana, **July-September, 2016**, Cuajimalpa, Mexico City, Mx
- Synthetic Biology. Universidad Autonoma Metropolitana, **June 11, 2014**, Cuajimalpa, Mexico City, Mx
- Metagenomic for Biological Systems. Organized by the Graduate Program in Biological Science and Health. Universidad Autonoma Metropolitana, **February 17-18, 2014**, Cuajimalpa, Mexico City, Mx
- Business Simulator. Organized by the 2nd Entrepreneur’s week committee. Universidad Autonoma Metropolitana, **May 17, 2013**, Cuajimalpa, Mexico City, Mx
- Technological Innovation. Organized by the 2nd Entrepreneur’s week committee. Universidad Autonoma Metropolitana, **May 13, 2013**, Cuajimalpa, Mexico City, Mx
- Didactic for “Spanish as written language”. Universidad Autonoma Metropolitana, **April 2013**, Cuajimalpa, Mexico City, Mx
- Black and White Photography. Organized by Active School of Photography. **April-June 2011**, Coyoacan, Mexico City, Mx

LANGUAGES

- Spanish: Native Proficiency
- English: Full Professional Proficiency
 - TOEFL iBT (Registration number: 0000 0000 3042 8610) (**April 2017**). *Total score: 105.*
 - A Summer in Canada Program at King’s University College, Western University –London, Ontario, Canada, (**August 2015**)
 - Cambridge ESOL Entry Level Certificate in ESOL International (Entry 3), Preliminary English Test (PET, B1) (**June 2008**). *Certificate No 0021710924*
- German: Intermediate Proficiency
 - B1 advance course. Colegio Italo-Calvino, Coyoacan, Mexico city, Mx (**July 2014**)
 - Österreichisches Sprachdiplom Deutsch A2 Grundstufe Deutsch 2” (**March 2012**). *Score. Gut Bestanden. Diplom No A2GD21200158*
- French: Intermediate Proficiency
 - A2 course, Universidad Autonoma Metropolitana, Cuajimalpa, Mexico City, Mx (**2011 -2013**)
- Italian: Intermediate Proficiency
 - Advance Course, National 6th High School, Universidad Nacional Autonoma de Mexico, Coyoacan, Mexico City, Mx (**2009 -2011**)