

Carter W. Reeb, Ph.D.

Patent Agent

+1 704 444 1441

carter.reeb@alston.com

Charlotte | One South at The Plaza, 101 South Tryon Street, Suite 4000 | Charlotte, NC 28280-4000



Carter Reeb focuses his practice on all aspects of U.S. and international patent prosecution, review, and counseling. Carter prosecutes patent applications in over 40 jurisdictions around the world, and regularly provides opinions regarding patentability, freedom-to-operate, invalidity, standard essentiality, non-infringement, patent valuation, and IP strategy during IPO, as well as for mergers & acquisitions.

Carter's professional experience includes R&D, engineering consulting, environmental engineering, and industrial facility management. Carter often handles IP related to software and computer science applications, 4G/LTE/5G, high fidelity audio applications, plastics and resin formulations, multimedia encoding and compression, cryptography, financial technologies, machine learning, IoT devices, 3D printing, metallurgy, batteries, robotics, safety equipment, and medical devices.

Carter received his Ph.D. and B.S. from North Carolina State University, where his research spanned thermochemical and biochemical fuels production, biorefinery design, computer modeling for chemical engineering applications, hydrocarbon remediation technologies, and remote environmental monitoring technologies. Before joining Alston & Bird, Carter worked as a patent agent in Boston, a senior consultant, an environmental engineer, an entrepreneur, and an adjunct professor.

Representative Experience

- Prosecuting patent portfolio of over 1,000 patent applications for international telecommunications company in over 40 international jurisdictions and provided actionable advice regarding patentability, filing strategy, and standard essentiality for new filings.
- Providing patent legal advice to an audio technologies company regarding patentability, the patent landscape, freedom to operate, non-infringement, filing strategy, standard essentiality, and new product engineering.
- Preparing and prosecuted patent applications related to safety equipment, IoT devices, sensors, gas detectors, and more for a global conglomerate.
- Managed the acquisition of IP and growth of a patent portfolio for a financial technologies company before, during, and after going public.

Research Universities

- Preparing and prosecuting patent applications related to additive manufacturing, machine learning, medical devices, software, electric vehicles, autonomous vehicles, batteries, fuel cells, robotics, long-range powering of off-planet rovers, and HVAC systems.
- Prepared and prosecuted patent applications related to metallurgy, analytical chemistry equipment, batteries, and medical devices.
- Provided patent legal advice regarding patent portfolio related to high-efficiency diesel engines.

Startups

- Prepared and prosecuted patent applications related to IoT devices.
- Prepared and prosecuted patent applications related to wearable health care technologies.
- Prepared and prosecuted patent applications related to lithium-ion batteries.
- Prepared and prosecuted patent applications related to lubricious surfaces.
- Prepared and prosecuted patent applications related to self-cleaning surfaces.
- Prepared and prosecuted patent applications related to endoscopic devices.
- Prepared and prosecuted patent applications related to on-chip medical testing equipment.

Publications & Presentations

Publications

- “Techno-economic Analysis of Various Biochemical Conversion Platforms for Biosugar Production: Trade-Offs of Co-Producing Biopower Versus Pellets for Either a Greenfield, Repurpose, or Co-Location Siting Context,” *Biofuels, Bioproducts & Biorefining*, Vol. 12, No. 3, February 19, 2018.
- “Environmental LCA and Financial Analysis to Evaluate the Feasibility of Bio-based Sugar Feedstock Biomass Supply Globally: Part 2. Application of Multi-Criteria Decision-Making Analysis as a Method for Biomass Feedstock Comparisons,” *BioResources*, Vol. 11, No. 3, 2016.
- “Environmental LCA and Financial Analysis to Evaluate the Feasibility of Bio-based Sugar Feedstock Biomass Supply Globally: Part 1. Supply Chain Analysis,” *BioResources*, Vol. 10, No. 4, 2015.
- “Environmental Life Cycle Impacts of Cellulosic Ethanol in the Southern U.S. Produced from Loblolly Pine, Eucalyptus, Unmanaged Hardwoods, Forest Residues, and Switchgrass Using a Thermochemical Conversion Pathway,” *Fuel Processing Technology*, Volume 138, October 2015.
- “Environmental Impacts of Bioethanol Using the NREL Biochemical Conversion Route: Multivariate Analysis and Single Score Results,” *Biofuels, Bioproducts & Biorefining*, Vol. 9, No. 5, May 1, 2015.
- “The NREL Biochemical and Thermochemical Ethanol Conversion Process: Financial and Environmental Analysis Comparison,” *BioResources*, Vol. 10, No. 3, 2015.
- “Supply Chain Analysis, Delivered Cost, and Life Cycle Assessment of Oil Palm Empty Fruit Bunch Biomass for Green Chemical Production in Malaysia,” *BioResources*, Vol. 9, No. 3, 2014.
- “Economics, Environmental Impacts, and Supply Chain Analysis of Cellulosic Biomass for Biofuels in the Southern US: Pine, Eucalyptus, Unmanaged Hardwoods, Forest Residues, Switchgrass, and Sweet Sorghum,” *BioResources*, Vol. 9, No. 1, 2014.
- “Impacts of Feedstock Composition on Alcohol Yields and Greenhouse Gas Emissions from the NREL Thermochemical Ethanol Conversion Process,” *BioResources*, Vol. 8, No. 4, 2013.
- “Novel Screening Technique: Integrated Combinatorial Green Chemistry & Life Cycle Analysis (CGC-LCA),” *BioResources*, Vol. 8, No. 2, 2013.

Education

- North Carolina State University (Ph.D., 2015)
- North Carolina State University (B.S., 2009)

Admitted to Practice

- U.S. Patent and Trademark Office

Related Services

Intellectual Property | Patent Litigation | Patent Prosecution, Counseling & Review | Electrical, Software & Computer Science Patents | Mechanical Patents | Technology