



Ling Du, Ph.D.

Associate

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Ling Du, Ph.D., is a USPTO-registered patent attorney who focuses her practice on IP procurement and portfolio management. She advises clients at all stages of domestic and foreign patent prosecution and manages their worldwide patent portfolios, helping them maximize protection across jurisdictions while minimizing costs.

Ling has a unique technical background in both polymer/chemistry and mechanical engineering. Leveraging more than 25 years experiences in science and research, she represents Global 500 companies, universities, and technology startups in a broad range of technical fields that include polymers, chemistry, food science, nutritional compositions, medical devices, pharmaceuticals, biotechnology, materials, tires and rubbers, and batteries.

Ling regularly advises clients regarding patentability, non-infringement, patent validity, freedom-to-operate and patent enforceability and drafts corresponding opinions. Ling also assists clients with patent licensing and supports their patent litigations.

Ling received her Ph.D. in Polymer Engineering from the University of Akron in the department of polymer engineering. Her doctoral work focused on proton exchange membrane fuel cells and carbon-based nanomaterials.

Before joining Marshall Gerstein, Ling was a patent associate at an international law firm. Before that, she had worked as a senior research engineer at the Goodyear Tire & Rubber Company for 8 years and was an inventor by herself with 13 granted patents. Her extensive research experience at Goodyear Tire & Rubber Company provides her a deep technical understanding to her client's polymer, chemistry, materials, mechanical and pharmaceutical-related patent portfolios. Ling worked very closely with the in-house patent counsels at Goodyear in drafting her own patent applications which inspired her to be a patent attorney by herself.

Practices

- Patent Prosecution

Industries

- Chemical Sciences

Representative Experience

Ling has managed patent portfolios and prepared and prosecuted patent applications in a wide variety of disciplines, including the following:

- Polymers
- Chemistry
- Food Science, Nutritional Compositions
- Targeted Radioisotope Pharmaceutical Therapy
- Medical Devices
- Pharmaceuticals
- Biotechnology
- Materials and Nanomaterials
- Tires and Rubbers
- Batteries

Background and Credentials

Prior to her legal career, Ling worked at Goodyear Tire & Rubber Company as a senior research engineer leading multiple research and development projects in creating functional polymers, tire compound formulations and other technologies to enhance the fuel efficiency, wet traction and tread-wear performances and conductivity of tires. She has secured 13 patents for her research and development work and published multiple papers in technical journals and books.

Education

- The University of Akron School of Law (J.D.)
- The University of Akron (Ph.D.)
 - Polymer Engineering
- Wuhan University of Technology (M.S.)
 - Mechanical Engineering
- East China University of Science and Technology (B.S.)
 - Polymer Science & Engineering

Bar Admissions

- Illinois
- U.S. Patent and Trademark Office

Publications and Presentations

2013

"Latex and two-roll mill processing of thermally-exfoliated graphite oxide/natural rubber nanocomposites"

Composites Science and Technology 74 (2013) 166–172

2013

"Highly Filled Graphite-Polymer Composites: Synthesis, Processing and Characterization"

Graphite, Graphene, and Their Polymer Nanocomposites, Prithu Mukhopadhyay and Rakesh K. Gupta (Ed.), CRC Press, Taylor & Francis Group

2012

"Processing–Morphology–Property Relationships and Composite Theory Analysis of Reduced Graphene Oxide/Natural Rubber Nanocomposites"

Macromolecules 45 (2012) 6045–6055

2008

"Highly Conductive Epoxy/Expanded Graphite Polymer Composite Bipolar Plates in Proton Exchange Membrane (PEM) Fuel Cells"

Univ. of Akron, Ph.D. Dissertation

2008

"Hygrothermal Effects on Properties of Highly Conductive Epoxy/ Graphite Composites for Appl. as Bipolar Plates"

J. Power Sources 182 (2008) 223-229

2007

"Highly Conductive Epoxy/Graphite Composites for Bipolar Plates in Proton Exchange Membrane fuel cells"

J. Power Sources 172 (2007) 734-741

Patents

- **Ling Du**, Ralf Mruk, Leena Nebhani, **US 10,005,896**, Rubber comprised of product of diene-based elastomer, branched PEI oligomer and reinforcing filler, and tire with component, 06/26/2018.
- **Ling Du**, **US 9,758,651**, Rubber composition and pneumatic tire, 09/12/2017.
- **Ling Du**, **CN 1053155517 B**, Rubber composition and pneumatic tire, 10/20/2017.
- **Ling Du**, **EP 2982708 B1**, Rubber composition and pneumatic tire, 02/22/2017.
- **Ling Du**, Xiaoping Yang, Carl T. R. Pulford, **US 9,757,983**, Tire with rubber component comprised of precipitated silica and functionalized graphene, 09/12/2017.
- **Ling Du**, David A. Benko, Paul H. Sandstrom, **US 9,574,066**, Rubber composition containing algae oil and tire with component, 02/21/2017.
- **Ling Du**, David A. Benko, Paul H. Sandstrom, **EP 3181624 B1**, Rubber composition containing algae oil and tire with component, 10/24/2018.
- **Ling Du**, Xiaoping Yang, Carl T.R. Pulford, **US 9,162,530 B2**, Tire with rubber tread containing precipitated silica and functionalized carbon nanotubes, 10/20/2015.
- **Ling Du**, Ralf Mruk, Annette Lechtenboehmer, Klaus Unseld, Claude E. F. Boes, Federic G.A. Siffer, Robert Roskamp, Leena Nebhani, **US 9,090,757 B2**, Preparation of Rubber Reinforced with at Least One of Graphene and Carbon Nanotubes with Specialized Coupling Agent and Tire with Component, 07/28/2015.
- **Ling Du**, Xiaoping Yang, Carl T. R. Pulford, **US 9,090,756 B2**, Tire with Component Comprised of Rubber Composition Containing Silica and Graphene Platelet Reinforcement, 07/28/2015.
- **Ling Du**, Ralf Mruk, Leena Nebhani, William P. Francik, Tang H. Wong, **US 9,045,627 B2**, Rubber Composition and Pneumatic Tire, 06/02/2015.
- **Ling Du**, Kuo-Chih Hua, **US 8,415,426 B1**, Tire with rubber component containing combination of carbon black, silica and functionalized mineral, 04/09/2013.
- **Ling Du**, Kuo-Chih Hua, **EP 2607421 B1**, Tire with rubber component containing combination of carbon black, silica and functionalized mineral, 08/07/2013.