



## WEN LIAO, PH.D.

**ASSOCIATE**  
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Wen Liao draws on her extensive engineering background to assist clients in safeguarding their intellectual property assets.

She drafts patent applications and responds to office actions on a wide range of technologies, including medical devices, batteries, AI robotics, mechanical components, polymers and biomedical materials. She conducts prior art searches, analyzes the patentability of inventions, and coordinates with foreign associates to oversee the foreign prosecution of patents.

Wen is also experienced in trademark and licensing law, including the drafting of trademark and copyright licensing agreements and the preparation of cease-and-desist letters and assignment agreements.

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### BACKGROUND

Prior to joining Armstrong Teasdale, Wen served as an associate at an Indianapolis law firm focused on intellectual property law.

Before going to law school, Wen earned her Ph.D. in Chemical Engineering from the University of Texas at Austin, where her research focused on advancing nanotechnology and semiconductors in electronic devices. Her thesis, "Controlling Nucleation and Growth of Ultra-Thin Ruthenium Films in Chemical Vapor Deposition," involved developing deposition methods for ultra-thin and smooth diffusion barriers to prevent copper diffusion and reduce electron scattering. She also has experience in polymer synthesis and directed block copolymers to create chemically patterned surfaces beyond the resolution limits of current nanolithography tools.

### EDUCATION

- Indiana University School of Law (J.D., 2022)
- University of Texas at Austin (Ph.D., 2016)
  - Chemical Engineering
- University of Wisconsin-Madison (B.S., 2010)
  - Chemical Engineering

### LANGUAGES

### SERVICES AND INDUSTRIES

Intellectual Property  
Manufacturing and Innovation  
Technology

### ADMISSIONS

Indiana  
U.S. Patent and Trademark  
Office

- Chinese

## THOUGHT LEADERSHIP

2016

**Precursor Dependent Nucleation and Growth of Ruthenium Films During Chemical Vapor Deposition**

Journal of Vacuum Science & Technology

2016

**Materials Science of Ru and Ru Alloy Thin Films For Barrier Applications**

Interconnect Technology Conference

2016

**Ru Nucleation and Thin Film Smoothness Improvement With Ammonia During Chemical Vapor Deposition**

Journal of Vacuum Science & Technology

2015

**Growth of Ultra-Thin Ruthenium and Ruthenium Alloy Films for Copper Barriers**

Advanced Metallization Conference

2013

**Effect of CO on Ru Nucleation and Ultra-Smooth Thin Film Growth by Chemical Vapor Deposition at Low Temperature**

Chemistry of Materials

2011

**Three-Dimensional Directed Assembly of Block Copolymers Together With Two-Dimensional Square and Rectangular Nanolithography**

Advanced Materials

2011

**Domain Orientation and Grain Coarsening in Cylinder-Forming Poly(styrene-B-Methyl Methacrylate) Films**

Macromolecules

2010

**Block Copolymers: A Generalized Approach To Controlling the Wetting Behavior of Block Copolymer Thin Films**

Macromolecules