

David D. Hsu, Ph.D.

SHAREHOLDER

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A client creates. David Hsu translates. His role: turning the technical language of breakthrough innovations into enforceable patents that support business strategy. A registered patent attorney with a Ph.D. in chemical engineering and experience in both research and industry, he brings deep technical fluency and strategic perspective to every engagement across sectors like biotechnology, software and advanced materials.

David's practice spans the full spectrum of patent work, including freedom-to-operate and other opinions, preparation and prosecution, opposition proceedings and strategic counseling that aligns IP protection with business objectives. He works directly with inventors, in-house counsel and C-level executives to align patent strategies with commercial objectives — helping startups and Fortune 500 companies alike secure protection that withstands both litigation challenges and opposition proceedings.

Drawing on his background in chemical engineering, David advises clients across a wide range of sectors, including biotechnology, bioinformatics, renewable energy, semiconductors, advanced materials, artificial intelligence and machine learning. He's well-versed in cutting-edge transformer architectures with AI researchers, novel DNA sequencing methods with molecular biologists, or next-generation semiconductor processes with materials scientists. This technical fluency, combined with strategic legal counsel, allows him to distill complex innovation into strong, resilient IP assets. His experience spans technologies such as:

- Biotechnology & Life Sciences
 - Drug Discovery & Development
 - Bioinformatics
 - DNA Sequencing Technologies
- Materials & Chemical Engineering
 - Semiconductors
 - Microfluidics
 - Polymer Materials
 - Building Materials & Thermal Insulation
- Renewable Energy & Clean Technology
 - Biofuels and Bioproducts

Capabilities

- Intellectual Property
- Patent Preparation & Prosecution
- Patent Filings & Strategy
- Intellectual Property Counseling & Opinions
- Electrical Engineering & Computer Science Patent Prosecution
- Chemical Manufacturing
- Biotechnology & Life Sciences Patent Prosecution
- Artificial Intelligence & Machine Learning

- Solar Photovoltaic Systems
- Energy Storage Systems
- Battery Materials & Lithium-Ion Technologies
- Artificial Intelligence & Machine Learning
 - Neural Networks & Transformers
 - Reinforcement Learning
 - Language Models
 - Financial Technology Systems

David has prosecuted patents that formed the basis of successful infringement litigation and settlement, rescued mishandled applications from prior counsel by securing broad claims where others failed, and guided clients through complex opposition proceedings.

Earlier in his career, David worked as a senior engineer for the National Renewable Energy Laboratory (NREL), where he analyzed technical, economic and sustainability issues related to cellulosic biofuels, solar photovoltaic generation systems and other renewable energy processes. David published several widely cited technical papers on biofuels and was frequently an invited speaker on the topic. Before working at NREL, David served as a senior process engineer for Intel Corporation, helping develop both front-end and back-end processes for manufacturing next generation microprocessors. His doctoral research at the University of California, Berkeley focused on high-pressure microplasmas.

Education

- University of Colorado Law School (J.D., *Order of the Coif*, 2013)
- University of California, Berkeley (Ph.D., 2003)
 - Chemical Engineering
- Massachusetts Institute of Technology (B.S., 1998)
 - Chemical Engineering

Bar Admissions

- Colorado
- Admitted to practice before the United States Patent and Trademark Office

Memberships

- Colorado Bar Association
 - Intellectual Property Section Executive Council, 2024-25
- Boulder County (Colorado) Planning Commission
 - Commissioner, 2021-2024
 - Vice Chair, 2024
- City of Louisville (Colorado) Planning Commission
 - Commissioner, 2016-2017, 2018-2019
 - Vice Chair, 2018-2019
- MIT Educational Council
 - Member, 2005-2012
- Denver Museum of Nature and Science
 - Volunteer Exhibit Interpreter, 2015-Present

Recognition

- Selected for inclusion in *Best Lawyers in America*® for Patent Law, 2026
- Listed No. 43 on the list of the Top 100 Best Performing Attorneys in Biotech,

Patexia's Patent Prosecution Intelligence Report, 2025 Edition

- Named one of *Best Lawyers: Ones to Watch® in America* in:
 - Intellectual Property Law, 2025
 - Patent Law, 2025
- Ranked 30th Best Performing Patent Prosecution Attorney in Bio Tech in 2023 out of over 11,000 patent attorneys by *Patexia's Patent Intelligence*
- Named one of *Law Week Colorado's* "Up and Coming Lawyers" in 2018

Languages

- Mandarin

Matters

Strategic Patent Portfolio Development

- Drafted and prosecuted a portfolio of patent applications on DNA sequencing techniques using machine learning. The patents became the foundation of an infringement lawsuit against a leading sequencing company, later resulting in a settlement.

Biotechnology & Life Sciences

- Represent major pharmaceutical and diagnostics companies in patent prosecution matters involving bioinformatics, microfluidics, and drug discovery technologies.
- Counsel university technology transfer offices on patent strategy and prosecution for innovations in chemical engineering, electrical engineering, and life sciences.
- Drafted patent applications protecting next-generation DNA sequencing methods and genetic analysis technologies for biotechnology clients.

Artificial Intelligence & Machine Learning

- Prepared patent applications covering transformer-based neural networks and machine learning models prior to public release of large language models.

Renewable Energy & Advanced Materials

- Counsel battery materials and energy storage companies on patent protection strategies.
- Prepared patent applications for advanced materials including polymer composites and insulation technologies.

Problem-Solving & Patent Rescue

- Successfully corrected and prosecuted patent applications that had been mishandled by prior counsel for multiple clients, securing broad and enforceable patent claims efficiently and within budget constraints.

Strategic IP Counseling

- Provided freedom-to-operate opinions for cleantech and life sciences companies evaluating commercialization strategies.

- Coordinated with outside counsel to advise clients on worldwide patent strategy, including transition to the European Unified Patent Court and Unitary Patent system.

Publications

January 8, 2026

Polsinelli Life Sciences Spotlight - Volume 3 - Turning Insight into Action: A Life Sciences Playbook for 2026