STITES & HARBISON PLLC

Youngmin Lee Ph.D.

Title: Patent Agent

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Youngmin Lee, Ph.D. is a Patent Agent who concentrates her practice on nanochemistry and renewable energy systems such as batteries and fuel cells, while her analytics experience spans across the areas of chemistry/polymer, advanced materials, chemical/mechanical engineering, biotechnology, food/beverage, telecommunications, optics, consumer goods, medical devices, electronics, loT, and artificial intelligence. She has a Ph.D. in inorganic chemistry from Brown University, and post-doctoral research experience at MIT and NIST focused on sustainable energy systems.

Beyond patent drafting and prosecution experience, Youngmin led or participated in numerous IP consulting projects including IP landscaping, portfolio development, risk analysis, technology scouting, prior art search, and due diligence as an IP analyst. She also led technology transfer (licensing agreement negotiation) and patent strategy development at a bio-startup.

CAPABILITIES

Practice Areas

- Biotechnology/Life Sciences
- Environmental, Energy & Sustainability
- Intellectual Property & Technology
- Patent Prosecution & Protection
- Chemistry & Materials

BAR ADMISSIONS

- United States Patent and Trademark Office

RECENT NEWS, ARTICLES & SPEAKING ENGAGEMENTS

- Global Strategies for Expedited Patent Examination

  ,with Grant M. Ehrlich Ph.D. Stites & Harbison Client Alert, July 22, 2025

- Patent Strategies in Response to Recent U.S. Developments: Expected Changes and Filing Strategies

  ,with Grant M. Ehrlich Ph.D. Stites & Harbison Client Alert, June 10, 2025

- Southeast-based law firm poaches Cantor Colburn attorneys as part of CT, Northeast expansion

  by Harriet Jones, *Hartford Business Journal*, October 14, 2024 *,with Grant M. Ehrlich Ph.D., Helena M. Lovick Ph.D., Samantha Page Ph.D., Kimberly Vines Ph.D. and Wanli Wu*

- Stites & Harbison Eyes Conn. Office With Patent Team Pickup

  by Martin Bricketto, *Law360*, September 12, 2024 *,with Grant M. Ehrlich Ph.D., Helena M. Lovick Ph.D., Samantha Page Ph.D., Kimberly Vines Ph.D. and Wanli Wu*

- Talk of the Town: Stites & Harbison Expands Intellectual Property Practice With Addition of New Attorneys and Patent Agents

  by Editor, *Attorney At Law Magazine*, September 11, 2024 *,with Grant M. Ehrlich Ph.D., Helena M. Lovick Ph.D., Samantha Page Ph.D., Kimberly Vines Ph.D. and Wanli Wu*

- IP Seminar for Korean Companies Entering the U.S.

  Invited speaker, Korea Intellectual Property Protection Agency under the Korean Intellectual Property Office, Atlanta, GA, May 20, 2024

- Ph.D. Career Beyond Academia Series

  Invited alumni speaker, Brown University, Career Center, Providence, RI, May 4, 2024

- Patent Agent as a Career Presentation

  Invited speaker, Georgia State University Chemistry Club, Atlanta, GA, March 20, 2023

- Deconvoluting the Influences of 3D Structure on the Performance of Photoelectrodes for Solar-Driven Water Splitting

  co-author with D.V. Esposito, H.P. Toon, P.M. Haney, N.Y. Labrador, T. Moffat, A.A. Talin, and V.A. Szalai, *Sust. Energy Fuels*, 1, 154, 2017

- Design Considerations for Enhancing Absorpotion in Semiconductors on Metals Through Surface Plasmon Polaritron

  co-author with C.D. Bohn, A. Agrawal, C.J. Choi, M.S. Davis, P.M. Haney, H.J. Lezec and V.A. Szalai, *Phys. Chem. Chem. Phys.*, 16, 6084, 2014

- High-Resolution Photocurrent Microscopy Using Near-Field Cathodoluminescence of Quantum Dots

  co-author with H.P. Yoon, C.D. Bohn, S.H. Ko, A.G. Gianfrancesco, J.S. Steckel, S. Coe-Sullivant, A.A. Talin, and N.B. Zhitenev, *AIP Adv.*, 3, 062112, 2013

- Photoelectrochemical Water-Splitting with Plasmonic Al-based Nanostructures

  Speaker, 20th Annual Sigma Xi Postdoctoral Poster Presentation, National Institute of Standards and Technology, Gaithersburg, MD, February 27, 2013

- Plasmonically Enhanced Photoelectrochemical Water-Splitting with Al-based Nanostructures

  Speaker, 68th IUVSTA Workshop (Multifunctional Surface Engineering for Advanced Energy Applications, City University of Hong Kong, December 9-13, 2012

- Synthesis and Activities of Rutile IrO2 and RuO2 Nanoparticles for Oxygen Evolution in Acid and Alkaline Solutions

  co-author with J. Suntivich, K.J. May, E.E. Perry, and Y. Shao-Horn, *J. Phys. Chem. Lett.*, 3, 399, 2012

- Self-Standing Positive Electrodes of Oxidized Few-Walled Carbon Nanotubes for Light-Weight and High-Power Lithium Batteries

  co-author with S.W. Lee, B.M. Gallant, N. Yoshida, D.Y. Kim, Y. Yamada, S. Noda, A. Yamada, and Y. Shao-Horn, *Energy Environ. Sci.*, 5, 5437, 2012

- Non-Crystallographic Atomic Arrangement Driven Enhancement of the Catalytic Activity of Au Nanoparticles

  co-author with V. Patkov, S. Sun, and Y. Ren, *J. Phys. Chem. C.*, 116, 26668, 2012

- Development of Composite Nanocatalysts and Their Enhanced Electrocatalytic Activity

  Speaker, Materials Research Society (MRS) 2010 Fall Meeting, Boston, MA, Nov.29-Dec. 3, 2010

- Synthetic Tuning of the Catalytic Properties of Au-Fe304 Nanoparticles

  co-author with M.A. Garcia, N.A.F. Huls, and S. Sun, *Angew. Chem. Int. Ed.*, 49, 1271, 2010

- Surface- and Structure-Dependent Catalytic Activity of Au Nanoparticles for Oxygen Reduction Reaction

  Co-author with A. Loew and S. Sun, *Chem. Mater.*, 22, 755, 2010

- Structurally Ordered FePt Nanoparticles and Their Enhanced Catalysis for Oxygen Reduction Reaction

  co-author with J. Kim and S. Sun, *J. Am. Chem. Soc.*, 132, 4996

- Recent Development of Active Nanoparticle Catalysts for Fuel Cell Reactions

  Co-author with V. Mazumder and S. Sun, *Adv. Funct. Mater.*, 20, 1224

- Synthesis of Composite Nanoparticles and their Electrocatalytic Applications

  Speaker, Gordon Research Conference (Electrochemistry) 2010, Ventura, CA, January 10-15, 2010

- Synthesis of Monodisperse Au, Au-Fe304 Composite Nanoparticles and their Applications

  Speaker, Materials Research Society (MRS) 2009 Spring Meeting, San Fransisco, CA, April 13-17, 2009

- From Core/Shell Structured FePt/Fe304/MgO to Ferromagnetic FePt Nanoparticles

  co-author with J. Kim, C. Rong, J. Liu and S. Sun, *Chem. Mater.*, 20, 7242, 2008

- Synthesis of Dumbbell-like Au-Fe304 Nanoparticles and their Applications

  Speaker, IEEE Magnetic Society Summer School 2008, University of Colorado at Colorado Springs, CO, August 3-9, 2008

- A Facile Synthesis of Monodisperse Au Nanoparticles and Their Catalysis for CO Oxidation
  co-author with S. Peng, C. Wang, H. Yin, S. Dai and S. Sun, Nano Res., 1, 229, 2008
- Synthesis of Fe304-NM (NM: Au, Ag, AuAg) Dumbbell-like Nanoparticles
  Speaker, Materials Research Society (MRS) 2007 Fall Meeting, Boston, MA, November 26-30, 2007
- Synthesis of Monocubes and Their Enhanced Catalysis for Oxygen Reduction
  co-author with C. Wang, H. Dalmon, J. Kim and S. Sun, *J. Am. Chem. Soc.*, 129, 6974, 2007

MEMBERSHIPS

- Intellectual Property Owners Association (IPO)
- SEMI

EDUCATION

- Brown University Ph.D., Inorganic Chemistry, 2010
- Korea University B.S., Chemistry, 2006
- National Institute of Standards and Technology (NIST) NRC Post-doctoral Research, 2014
- Massachusetts Institute of Technology (MIT) Post-doctoral Research, 2011
- University of British Columbia, Canada Exchange Student, 2004-05

BESIDES STITES & HARBISON

Prior to joining Stites & Harbison, Youngmin worked as a Patent Agent at a large intellectual property firm based in Hartford, CT (2022-24); Director of Strategy and Patent Technology at a bio startup focused on organ-on-a-chip manufacture and drug delivery, Atlanta, GA (2020-22); and Intellectual Property Analytics Leader at an IP consulting firm, Atlanta, GA (2014-19). Beyond her IP practice, Youngmin has eight years of research experience including her doctoral research at Brown University centered on functional nanomaterial synthesis and applications, postdoctoral research at the Massachusetts Institute of Technology (MIT) and at the National Institute of Standards and Technology (NIST) on Li-ion/Li-air batteries, fuel cells, and solar-to-hydrogen water-splitting systems.

LANGUAGES

Korean *Non-attorney

ACCOLADES

- National Research Council (NRC) Research Associate Fellowship (NIST), 2011-13
- Best Poster Award (2nd prize), 68th International Union of Vacuum Science Technique and Applications (IUVSTA) Workshop, 2012