



## Youngmin Lee Ph.D.

Title: Non-Attorney

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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, IoT, 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

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### Practice Areas

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

## BAR ADMISSIONS

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- United States Patent and Trademark Office

## RECENT NEWS, ARTICLES & SPEAKING ENGAGEMENTS

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- Southeast-based law firm poaches Cantor Colburn attorneys as part of CT, Northeast expansion  
by Harriet Jones, *Hartford Business Journal*, October 14, 2024
- Stites & Harbison Eyes Conn. Office With Patent Team Pickup  
by Martin Bricketto, *Law360*, September 12, 2024
- 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
- 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 Absorption in Semiconductors on Metals Through Surface Plasmon Polariton  
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-Sullivan, 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 IUVESTA Workshop (Multifunctional Surface Engineering for Advanced Energy Applications, City University of Hong Kong, December 9-13, 2012
- Synthesis and Activities of Rutile IrO<sub>2</sub> and RuO<sub>2</sub> 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-Fe<sub>304</sub> 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-Fe<sub>304</sub> Composite Nanoparticles and their Applications  
Speaker, Materials Research Society (MRS) 2009 Spring Meeting, San Francisco, CA, April 13-17, 2009
- From Core/Shell Structured FePt/Fe<sub>304</sub>/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-Fe<sub>304</sub> 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 Fe<sub>304</sub>-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

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- Intellectual Property Owners Association (IPO) , Member
- SEMI , Member

## EDUCATION

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Brown University Ph.D., Inorganic Chemistry 2010

- Department of Energy Research Assistantship (2009-10)
- Graduate Assistance in Areas of National Needs (GAANN) Fellowship, U.S. Department of Education, (2007-09)
- Teaching assistant for undergraduate level general chemistry laboratory (2006) and graduate level inorganic chemistry laboratory (2007)

Korea University B.S., Chemistry 2006

- Scholarship for Excellence in Academic Studies (2002-03)
- Scholarship for Studying Abroad as an Exchange Student (2004-05)

University of British Columbia, Canada Exchange Student 2004-05

## BESIDES STITES & HARBISON

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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

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Korean

\*Non-attorney

## ACCOLADES

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- 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