



## **Noble C. Woo, Ph.D.**

**Senior Patent Agent**

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**PRACTICES** AI and Deep Learning, Chemical, AI and Technology, Medical Device and Technology, Energy, Power and Natural Resources, Vehicle Electrification, Quantum Technologies, Healthcare and Life Sciences, Intellectual Property

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Noble C. Woo is a senior patent agent in the Intellectual Property Practice Group in the Orange County office of Haynes Boone.

Noble specializes in prosecution of foreign and domestic patent applications in a number of technical areas, including biotechnology, digital cell biology, wearable devices and digital health, medical devices for cell/gene therapy, 3D printing of artificial organs and tissues, medical imaging including X-ray, ultrasound, and MRI technologies, robotics, artificial intelligence based technologies including AI-based diagnostic/prognostic algorithms and machine learning, remote surgeries and clinical operations, computer-user graphical interface for various technical fields, semiconductor processing and engineering, microelectronics, flexible electronics, photonics, micro-electro-mechanical systems, thin film coatings, display technologies, signal processing and networking, materials science and nanotechnology, metal 3D printing, petrochemical engineering and drilling technologies, clean and renewable technologies, energy storage technologies, including lithium ion battery and various electrochemical systems. Technical areas of expertise include device physics, nanotechnologies, medical instrumentation and analytical tools, materials physics, semiconductor physics and chemistry, inorganic chemistry, physical chemistry, electrochemical systems, laser and optical systems, magnetic technologies, thin films and devices, microelectronics, micro-electromechanical systems, microfluidics, and materials science and engineering.

Prior to becoming a patent agent, Noble was an Associate Principal at CAMX Power / TIAX LLC and conducted research in Li-ion battery materials and technologies. Before leaving for industry, Noble was a postdoctoral researcher and studied microstructure-property relationship in various nanotechnology areas at Harvard University in Cambridge, Massachusetts and the Swiss Federal Institute of Technology in Zurich, Switzerland.

For his Ph.D. dissertation, Noble designed and built a high-throughput combinatorial measurement system to investigate material properties of micro- and nanostructure films. Noble also studied transition metal chemistry using time-of-flight spectroscopy to understand chemical reactivity in cross-molecular beam experiments.

Prior to graduate school, Noble was a staff scientist at Sandia National Laboratories and worked on microfluidics devices for protein separation. In addition, Noble investigated various plasma sources for

generating Extreme Ultra Violet light for EUV lithography.

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## QUALIFICATIONS

### EDUCATION

- Ph.D., Applied Physics/Materials Science, Cornell University, 2007
- M.S., Physical Chemistry/Materials Science, Cornell University, 2005
- B.S., Physics, University of California San Diego, 2001

### ADMISSIONS

- U.S. Patent and Trademark Office