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Lacie Hirayama is a patent agent in the Intellectual Property Practice Group in the firm's Silicon Valley office.

#### **Areas of Practice**

Dr. Hirayama assists attorneys in preparing and prosecuting U.S. and foreign patent applications in the chemical, pharmaceutical, medical device and nanotechnology arenas.

She is a graduate of UCSC, where her research was largely directed toward the development of novel asymmetric methodologies for the synthesis of chiral small molecules. In addition, she was a member of a team who focused on the development of an in-vivo fluorescent hydrogel-based glucose-sensing ensemble. Dr. Hirayama's areas of scientific experience include organic, organometallic and polymer chemistry.

#### **Articles**

- "Direct Synthesis of B-Allyl and B-Allenyldiisopinocampheylborane Reagents Using Allyl or Propargyl Halides and Indium Metal Under Barbier-Type Conditions," J. Org. Chem., 2012, 77(9), 4342–4353.
- "Indium-Mediated Asymmetric Barbier-Type Propargylations: Additions to Aldehydes and Ketones and Mechanistic Investigation of the Organoindium Reagents," J. Org. Chem., 2012, 77(2), 889-898.
- "Indium-Mediated Asymmetric Barbier-Type Allylations: Additions to Aldehydes and Ketones and Mechanistic Investigation of the Organoindium Reagents," J. Org. Chem., 2010, 75(3), 642-649.
- "Exploring the use of APTS as a fluorescent reporter dye for continuous glucose sensing," *Org. Biomol. Chem.*, 2009, 7, 1461-1470.
- "Asymmetric indium-mediated Barbier-type allylation reactions with ketones to form homoallylic alcohol products," *Tetrahedron Lett.*, 2008, 49(3), 508-511.
- "Boronic acid-based bipyridinium salts as tunable receptors for monosaccharides and-hydroxycarboxylates," *J. Am. Chem. Soc.*, 2007, 129(5), 1278-1286.
- "Asymmetric indium-mediated synthesis of homopropargylic alcohols," *Tetrahedron Lett.*, 2006, 47(29), 5173-5176.
- "Enantioselective alkynylations of aromatic and aliphatic aldehydes catalyzed by terpene derived chiral amino alcohols," *Tetrahedron: Asymm.*, 2005, 16(10), 1829-1835.
- "Indium-mediated Barbier-type allylation of aldehydes as a convenient method for the highly enantioselective synthesis of homoallylic alcohols," *Tetrahedron Lett.*, 2005, 46(13), 2315-2318.

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■ "A facile and efficient method for the kinetic separation of commercially available cis- and trans-limonene epoxide," *Tetrahedron: Asymm.*, 2002, 13(21), 2359-2363.

### **Practices**

Intellectual Property

### **Industries**

Life Sciences

### **Education**

Ph.D., Organic Chemistry, University of California, Santa Cruz, 2007 B.S., Chemistry, University of California, Santa Cruz, 2002

### **Admissions**

U.S. Patent and Trademark Office