

# Erica L. Lai

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<b>Education</b>	<b>Massachusetts Institute of Technology</b> Cambridge, MA Candidate for BS degree in Materials Science and Engineering, June 2014. GPA 5.0/5.0. <i>Relevant courses:</i> Fundamentals of Materials Science and Engineering (3.012), Materials Laboratory (3.014), Mathematical Methods for Materials Scientists and Engineers (3.016), Introduction to Solid State Chemistry (3.091). <i>Others include:</i> Microeconomic Theory & Public Policy (14.03), Microeconomics (14.01), Differential Equations (18.03).
	<b>Holmdel High School</b> Holmdel, NJ June 2010. GPA 4.7/5.0. Salutatorian.
<b>Research Experience</b>	<b>Undergraduate Research Opportunities Program with Group Sadoway</b> Cambridge, MA May 2011 – present, in MIT’s Department of Materials Science and Engineering. Implementing signal processing and analysis tools for the development of unique electrochemical measurement methods. Developing a new experimental tool for electrolysis experiments at 1600°C. Applying both projects to synthesizing steel without carbon for more environmentally friendly steel production.
	<b>Undergraduate Research Opportunities Program with Hamad-Schifferli Group</b> Cambridge, MA January-May 2011, in MIT’s Department of Mechanical Engineering. Analyzed the size, shape, and structure of new bimetallic nanoparticles to increase the kinetics of fuel cell and Li-Air battery reactions.
	<b>Simons Summer Research Program</b> Stony Brook, NY June-August 2009, at Stony Brook University, Department of Physics and Astronomy. Simulated water using molecular dynamics; analyzed water systems via novel “nanobubbles” approach to further understand water’s anomalous properties. Awarded Siemens Competition Semifinalist and Intel Talent Search Semifinalist for research paper, “Density and size effects in liquid water: the formation of nanobubbles, source of water anomalies.”
<b>Work Experience</b>	<b>MIT Educational Council Office</b> Cambridge, MA September-December 2010. Intern. Reply to emails and phone calls regarding interviews for the MIT application process.
	<b>York Telecom Corporation</b> Eatontown, NJ Summer 2010 Information Management intern. Created informative dashboards for use within the corporation. Independently implemented the capability to host line charts, legends, and diagonal labels. Used Java and Google Web Toolkit.
<b>Top Honors and Awards</b>	<b>2011 iCampus Technology Innovation Student Prize, First Round Winner</b> , one of five teams – April 2011. <b>Intel Science Talent Search Semifinalist</b> – January 2010. <b>Siemens Competition Semifinalist</b> – October 2009. <b>2010 National Merit® Scholarship Winner</b> – May 2010. <b>2010 U.S. Presidential Scholars Program Semifinalist</b> – April 2010. <b>2010 National Youth Science Camp, New Jersey Delegate</b> – Summer 2010. <b>ACT® Perfect Score</b> , one of five in NJ, one of 268 in nation – April 2009. <b>National AP Scholar</b> – May 2010. <b>Congressional Award Gold Medal</b> – October 2009.
<b>Activities</b>	<b>MIT Next House Housing Chair</b> – May 2011 – present. <b>MIT Next Act Pit Orchestra</b> , Musical Director – May 2011 – present; flutist – January-April 2011. <b>MIT Educational Studies Program (ESP) Teacher for “Playing with Polymers and Putty”</b> – Summer 2011. <b>Society of Women Engineers (SWE) Keys to Empowering Youth (KEYs) Mentor</b> – February 2011 – present. <b>MIT Next House Wing Representative</b> – September 2010 – May 2011.
<b>Skills</b>	<b>Computer:</b> Java, Fortran, LabVIEW, Linux, Unix; MS Word, Excel, and PowerPoint. <b>Other:</b> machining