ISABEL YANG

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1470 Graywood Dr.,
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EDUCATION

University of California, Berkeley
Regents' and Chancellor's Scholar

B.S., Materials Science and Engineering
(Graduation: May 2017)
Minor: EECS

Relevant Coursework:
MSE | Properties of Materials. Crystallography. Materials Characterization. Materials in Energy Technology. Electronic Materials. Thin Films. Phase Transformations and Kinetics.

EECS | Circuits. Signals and Systems. Data Structures.

ME | Thermodynamics. Mechanical Behavior of Materials. Materials in Manufacturing. Interactive Device Design.

SKILLS

3D CAD | NX, Solidworks

Material Characterization | SEM/EDS, Optical Microscopy, Metallography, Rockwell/Vickers Hardness, Focus Ion Beam, X-Ray Fluorescence, X-Ray Diffraction, Electron Backscatter Diffraction

Manufacturing | CNC, Waterjet, Laser-cutting, 3D Printing

Programming | Java, Python

Data Analysis | JMP, MATLAB

WORK EXPERIENCE

Apple Inc. | Cupertino, CA — Summer 2015, 2016
Product Design Intern

- Characterized cosmetic/mechanical properties of developing aluminum alloys
- Studied microstructural properties of various metal manufacturing methods
- Conducted failure analysis of cosmetic and mechanical defects observed on internal and external metal components for iPhone, Mac, and Watch
- Compared component performance variations between part vendors and manufacturing processes

Sandia National Laboratories | Livermore, CA — Summer 2014
Metallurgical Undergraduate Intern

- Studied the process-optimization of Gas Tungsten Arc welding on 2219 Aluminum in order to create a material suitable to replace stainless steel in hydrogren storage applications
- Analyzed the effects of heat treatments on 316L stainless steel forgings through microscopy, ASTM grain size calculations and Rockwell hardness testing
- Characterized aging tempers on bismuth telluride thermoelectric material

Lockheed Martin Space Systems | Sunnyvale, CA — Summer 2012
Technical Intern, Product Quality Assurance

- Worked with software and hardware test engineers to optimize new database implementation for testing equipment
- Inspected company clean rooms and electro-static discharge laboratories

RESEARCH EXPERIENCE

Advanced Manufacturing for Energy | Berkeley, CA — September 2015 - Present
Undergraduate Researcher

- Developing and improving Zn/MnO_2 rechargeable battery compositions for screenprinted, flexible electronics
- Analyzing and testing various flexible battery encasuplation methods

Hybrid Ecologies Research Group | Berkeley, CA — September 2015 - August 2016
Undergraduate Researcher

- Prototyping and testing circuit design software that allows makers and artists to explore non-traditional circuit design
- Prototyping and testing temporary tattoos fabricated with conductive traces containing electronic components, including integration of flexible batteries

Medical Polymers Group | Berkeley, CA — August 2014 - January 2016
Undergraduate Researcher

- Conducted failure analysis of retrieved shoulder implants from the University of California, San Francisco (UCSF)
- Developed scoring method for severity of different damage modes on cobalt chrome glenospheres
- Perform mechanical testing of different grades and compositions of Ultra High Molecular Weight Polyethylene

PUBLICATIONS

Joanne C. Lo, Cesar Torres, **Isabel Yang**, Jasper O'Leary, Danny Kaufman, Wilmot Li, Eric Paulos, Mira Dontcheva, "Aesthetic Electronics: Designing, Sketching, and Fabricating through Digital Exploration", User Interface Software and Technology Symposium, Japan, October 2016

S. Chou, **I. Yang**, N. Bonnheim, F. Ansari, MS, S. Gunther, MD, T. Norris, MD, M. Ries, MD, L. Pruitt, PhD, "Damage Analysis Of Metallic And Polymeric Bearings Used In Reverse Total Shoulder Arthroplasty", Summer Biomechanics, Bioengineering, and Biotransport Conference, Podium Presentation, June 2014

LEADERSHIP

E98 Introduction to Engineering Seminar | Berkeley, CA — August 2016 - Present
Instructor

Dept. of Materials Science & Engineering | Berkeley, CA — August 2015 - Present
Reader for MSE 104: Materials Characterization (Spring 2016)
Reader for E 45: Properties of Materials (Fall 2015, Fall 2016)

Society of Women Engineers | Berkeley, CA — August 2013 - Present
Alumni Chair (Fall 2016), Treasurer (2015-2016), Public Relations (2014-2015)