ISABEL YANG

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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.

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

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

SKILLS

3D CAD | NX, Solidworks, Fusion 360
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, Lasercutting, 3D Printing
Programming | Java, Python
Data Analysis | JMP, MATLAB