

**2017 Undergraduate Summer Research Program**

***Water desalination through reactive extraction***

**Madeleine Hamrick, *chemical & petroleum engineering***

**Advisor:** Eric Beckman, chemical engineering

***Pittsburgh Water Microbiome***

**Austin Kuntz, bioengineering**

**Advisor:** Kyle Bibby, civil & environmental engineering

**Additive manufacturing of energy-saving and energy producing materials**

**Colleen Hilla, materials science & engineering**

**Advisor:** Markus Chmielus, mechanical engineering & materials science

***Development of Next Generation Nano-Antimicrobials***

**Cole D’Aurizio, mechanical engineering**

**Advisor:** Leanne Gilbertson, civil & environmental engineering

***Unlocking energetically efficient water oxidation for ozone disinfectants***

**Angela Leo, chemical & petroleum engineering**

**Advisor:** John Keith, chemical & petroleum engineering

***Machine Learning Blueprints for Green Chelating Agents***

**Ethan Henderson, chemical & petroleum engineering**

**Advisor:** John Keith, chemical & petroleum engineering

***Black silicon etching for solar cells***

**Maxwell Lindsay, materials science & engineering**

**Rafael Rodriguez, materials science & engineering**

**Advisor:** Paul Leu, industrial engineering

***Electrochemistry for sustainable energy conversion and storage***

**James Hughes, chemical & petroleum engineering**

**Dean Miller, chemical & petroleum engineering**

**Advisor:** James McKone, chemical engineering

**Integrating Sustainable Design in Engineering Education**

**Kaleigh Smith, mechanical engineering**

**Advisor:** David Sanchez, civil & environmental engineering

***Desalination using polymer crystallization***

**Joseph Hamm, *chemical & petroleum engineering***

**Advisor:** Sachin Velankar, chemical engineering

***Feeding a Growing World:  Towards a Novel Process for Ammonia Synthesis***

**Eric McElhinny, chemical & petroleum engineering**

**Kendra LaVallee, chemical & petroleum engineering**

**Advisor:** Goetz Veser, chemical & petroleum engineering

***Automated growth of two-dimensional materials for green electronics***

**Joji Bronner, computer engineering**

**Advisor:** Feng Xiong, electrical and computer engineering

***2-D and nanomaterials for Energy Applications***

**Connor Herring, chemical & petroleum engineering**

**Advisor:** Minhee Yun, electrical and computer engineering