Shivani Patel

Student, Dr. Ronald E. McNair Academic High School

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E-Portfolio

INTENDED MAJOR(S)

Chemistry (Specifically Organic or Polymers and Materials chemistry)

SKILLS

Experience using advanced equipment such as the NMR, the GC-MS, the GPC, the Schlenk line, rotary evaporator, glove box

Laboratory skills and techniques include: hydrogenation, borylation, polymerization, filtration, paper chromatography, silica and aluminum oxide gel chromatography, titration, calorimetry, collection of gas, preparing solutions, various lab calculations

General Skills: teamwork and interpersonal skills, communication skills, leadership skills

Proficient in ChemDraw; formatting; Microsoft Word, Powerpoint; Google Docs, Google Slides

Languages: Fluent English and Gujarati; Conversational (Moderate) Spanish

CPR Certified

EXPERIENCE & WORK

Rutgers University, Newark - *Intern under the Jäkle Group*

Summer of 2016

- Intensive research in the field of organic chemistry
- Research project: synthesis of borane-functionalized polymers for use in Lewis acid catalysis
- Objectives: synthesize new polymers with triarylborane functionalities, explore supramolecular assembly, and use the polymer in catalysis such as hydrosilation of ketones or imines or hydrogenation
- Research submitted to the Hudson County Science Fair and The New Jersey Junior Science and Humanities Symposium at Rutgers University, New Brunswick.

EDUCATION

Dr. Ronald E. McNair Academic High School, Jersey City

Currently in 11th grade

GPA: 4.1; Advanced Placement Courses (A.P. Score): Chemistry (5), Physics (Currently Taking), Statistics (Currently Taking), U.S. History (4), World History (4)

Proyecto Science, New Jersey City University

Completed 3 summers (2013, 2014, 2015)

Rigorous math and science program; Please refer to *Awards & Honors* for achievements during the program.

AWARDS & HONORS

Bronze Medal Hudson County Science Fair (Microbiology), 2015

A.P. Scholar Award, 2016

Honor Roll and Perfect Attendance

Salutatorian of Proyecto Science, 2013 and 2014

Valedictorian of Proyecto Science, 2015

2nd Place for Tata Robotics Challenge

Highest Average in A.P. Chemistry, Spanish 2H, and Algebra 2/Trigonometry (2015-2016 school year)

Featured on Liberty Lines (Online Newsletter of the JCBOE) for my internship at Rutgers University

Selected to apply to The New Jersey Governor's School in the Sciences

Accepted as a poster presenter for The New Jersey Junior Science and Humanities Symposium at Rutgers University, New Brunswick

EXTRACURRICULAR ACTIVITIES

Science Research (2014-17)

Moody's Math Competition (2017): Team Leader

The National Honor Society (2016-17): Treasurer

Participant in the 66th Annual State Science Day (May 19, 2016)

Key Club (2014-17)

Environmental Club (2015-17)

Girl Up (2016-17)

Epsilon Club (2016-17)

The World Food Program (2016-17)

The Big Dig (Volunteer for park cleanup: 2012-14)

Indoor Track and Field (Winter of 2014)

Volunteer at the Fountain of Salvation Church (11/23/16)

Junior Class Committee (2016-17)