

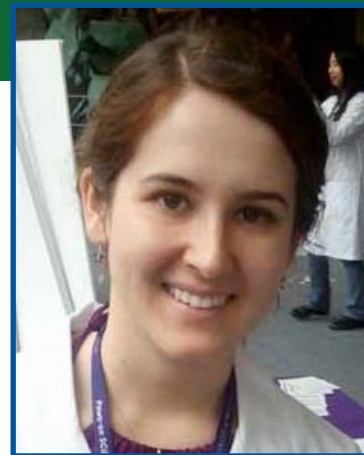
# Carolyn Valdez

**Graduate Institution:** University of Washington

**Graduate Discipline:** Chemistry

**Hometown:** Littlerock, CA

**Relevant SC Research:** Basic Energy Sciences



## Research Interest:

I was trained as a synthetic organic/inorganic chemist, but now focus on understanding larger scale materials that may have applications in catalysis and energy storage. The appeal of creating new molecules has always led me towards chemistry, but I feel that an inorganic chemists' contribution to the scientific community is to understand reactions and processes. Currently I study semiconductor nanoparticles and their reactivity for proton-coupled electron transfer (PCET), which provides an opportunity to bridge two parallel, but infrequently overlapping, fields. A fundamental understanding of semiconductor and solution interfaces from a chemical perspective (e.g. oxidation and reduction, pH dependence) along with an understanding of the physical chemistry of these systems (e.g. band structures, Fermi levels) will aid the design of new and more efficient systems.

## About Me:

I will be starting my third year as a graduate student with Professor Jim

Mayer at UW, and enjoy the freedom and experience provided by working in a lab. After I graduate, I would love to continue with research, hopefully a combination of fundamental and applied, as well as find an opportunity to teach either undergraduates or other researchers. Recently at the Pacific Science Center, colleagues and I assisted with CENTC's "Paws on Science", a program designed to give school age children exposure to how science is actually conducted.

Outside of work, I enjoy the beautiful weather of Seattle by cycling and running. When I have time, I indulge my fondness for espresso, chocolate and baking.



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