

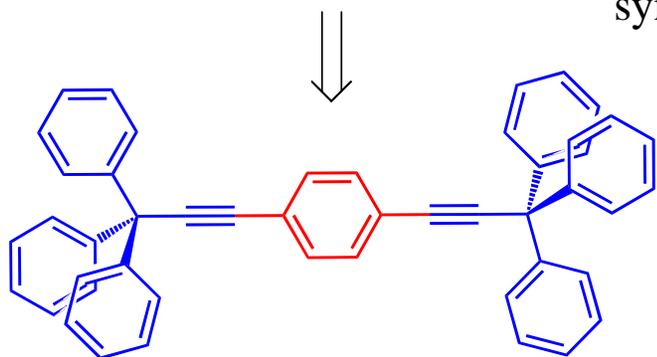
Greener Approaches to Chemistry Through Research and Education

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Through this opportunity I am combining three areas of interest (green chemistry, molecular machines and science education) into a fellowship.

In the research lab, I am combining my knowledge of photoactive molecules with the work of Professor Miguel Garcia-Garibay. I am synthesizing and studying the new molecular machines. I will create new molecular rotors (nanoscale gyroscopes^{1,2}). I also focus on developing greener synthetic techniques.



Teachers in urban, inner-city schools, generally, lack the supplies and infrastructure to implement hands on curriculum with their students. I am developing inquiry lessons based on the principles of green chemistry to make hands-on lessons available to high school students. These lessons are environmentally benign (very little waste) and readily available (usually lower cost). An integral part of my fellowship is my participation in implementation of these lessons with teachers from the Los Angeles Unified School District. I have an on-going collaboration with the NSF funded GK-12 program at UCLA to match with teachers and education resources.

¹ <http://www.chem.ucla.edu/dept/Faculty/mgghome/>

² Dominguez, Z.; Dang, H.; Strouse, M.J.; Garcia-Garibay, M.A.; *J. Am. Chem. Soc.*, 124 (11), **2002**, 2398